IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860334	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.722	2.722	2.721	0.00164	0.00161	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.95			
Io2 (A)	6.07	Po (W)	759.85	Passed
Io3(A)	8.14			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4226.88	4.51	12.30	Passed
Pt=(870+4000)+10% (W)		4986.73	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/05*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Basic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860313	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.739	2.742	0.00164	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.42			
Io2 (A)	4.60	Po (W)	733.88	Passed
Io3(A)	6.60			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4237.58	4.48	12.39	Passed
Pt=(870+4000)+10% (W)		4971.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: *Stamp:* *Date :* *2024/05/29*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860304	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.726	2.731	2.724	0.00161	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.23	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.44			
Io2 (A)	4.63	Po (W)	743.79	Passed
Io3(A)	6.57			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4205.09	4.42	12.55	Passed
Pt=(870+4000)+10% (W)		4948.88	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/01*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860538	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.773	2.777	2.762	0.00161	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.36	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.24			
Io2 (A)	6.02	Po (W)	755.53	Passed
Io3(A)	8.37			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4220.15	4.52	12.28	Passed
Pt=(870+4000)+10% (W)		4975.68	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/10

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Electric Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860559	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.751	2.751	2.749	0.00158	0.00156	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.18	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.30			
Io2 (A)	5.10	Po (W)	738.45	Passed
Io3(A)	7.25			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4198.64	4.50	12.35	Passed
Pt=(870+4000)+10% (W)		4937.09	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/10

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860557	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.758	2.754	2.739	0.00159	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.37			
Io2 (A)	5.97	Po (W)	757.34	Passed
Io3(A)	8.43			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4204.74	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	4962.08	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860553	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.743	2.735	2.735	0.00159	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.31	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.98			
Io2 (A)	5.85	Po (W)	748.17	Passed
Io3(A)	8.01			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4176.45	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4924.62	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: *Stamp:* *Date :* 2024/07/08

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860551	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.743	2.749	2.743	0.00156	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.08			
Io2 (A)	5.92	Po (W)	749.74	Passed
Io3(A)	8.11			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4197.77	4.52	12.27	Passed
Pt=(870+4000)+10% (W)		4947.51	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/10

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860339	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.770	2.758	2.761	0.00165	0.00163	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.72			
Io2 (A)	5.42	Po (W)	761.05	Passed
Io3(A)	7.86			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4287.34	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	5048.39	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/06

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Bharat Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860337	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.758	2.755	2.755	0.00160	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.34	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.27			
Io2 (A)	5.80	Po (W)	760.71	Passed
Io3(A)	8.28			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4214.16	4.56	12.17	Passed
Pt=(870+4000)+10% (W)		4974.87	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/24*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Electric Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860341	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.752	2.741	2.745	0.00159	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.11	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.96			
Io2 (A)	5.89	Po (W)	779.23	Passed
Io3(A)	8.12			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4196.49	4.54	12.22	Passed
Pt=(870+4000)+10% (W)		4975.72	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/06

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Electric Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860345	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.737	2.728	2.726	0.00158	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.23			
Io2 (A)	5.07	Po (W)	745.94	Passed
Io3(A)	7.13			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4185.64	4.57	12.15	Passed
Pt=(870+4000)+10% (W)		4931.58	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/15

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Basic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860347	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.724	2.723	0.00161	0.00160	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.85			
Io2 (A)	5.82	Po (W)	751.91	Passed
Io3(A)	7.89			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4219.85	4.53	12.24	Passed

Pt=(870+4000)+10% (W)	4971.76	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/05

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860346	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.784	2.765	2.766	0.00162	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.20	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.28			
Io2 (A)	5.38	Po (W)	763.30	Passed
Io3(A)	7.33			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4300.57	4.57	12.14	Passed

Pt=(870+4000)+10% (W)	5063.87	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/06*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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SHERKATE SAHAMI AAM

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Serial Number :	K3860348	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.730	2.728	2.728	0.00158	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.75			
Io2 (A)	4.67	Po (W)	730.47	Passed
Io3(A)	6.78			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4172.63	4.56	12.17	Passed
Pt=(870+4000)+10% (W)		4903.10	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/15

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860352	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.705	2.706	2.703	0.00163	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.35	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.31			
Io2 (A)	5.76	Po (W)	779.57	Passed
Io3(A)	8.44			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4207.81	4.47	12.42	Passed

Pt=(870+4000)+10% (W)	4987.38	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860356	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.729	2.730	2.729	0.00164	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.34	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.15			
Io2 (A)	5.87	Po (W)	764.16	Passed
Io3(A)	8.28			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4248.33	4.53	12.26	Passed
Pt=(870+4000)+10% (W)		5012.49	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/05

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860550	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.772	2.783	2.766	0.00162	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.18	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.11			
Io2 (A)	5.34	Po (W)	739.10	Passed
Io3(A)	7.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4240.45	4.55	12.20	Passed

Pt=(870+4000)+10% (W)	4979.55	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/09

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860542	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.758	2.754	2.757	0.00159	0.00156	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.38	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.54			
Io2 (A)	5.99	Po (W)	754.25	Passed
Io3(A)	8.50			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4217.05	4.53	12.24	Passed

Pt=(870+4000)+10% (W)	4971.30	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/10

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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Serial Number :	K6670070	Rated Power (kVA) :	400
Order Number :	V140115132	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.0(°C) and Low Voltage Resistances are measured at 20.0(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.735	2.734	2.729	0.00164	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.68			
Io2 (A)	4.85	Po (W)	775.03	Passed
Io3(A)	6.76			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4237.61	4.41	12.58	Passed

Pt=(870+4000)+10% (W)	5012.64	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/04/16

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860565	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.760	2.760	2.758	0.00160	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.31	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.76			
Io2 (A)	6.26	Po (W)	747.38	Passed
Io3(A)	7.76			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4205.58	4.58	12.13	Passed
Pt=(870+4000)+10% (W)		4952.96	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/07/09*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860567	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.767	2.757	2.766	0.00161	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.67			
Io2 (A)	5.44	Po (W)	745.32	Passed
Io3(A)	7.75			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4214.29	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4959.61	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/09

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860568	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.757	2.758	2.793	0.00161	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.69			
Io2 (A)	6.13	Po (W)	752.64	Passed
Io3(A)	7.89			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4220.55	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4973.19	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/09

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860581	Rated Power (kVA) :	400
Order Number :	V140115185	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.759	2.757	2.752	0.00161	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.31	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.81			
Io2 (A)	5.92	Po (W)	746.41	Passed
Io3(A)	8.08			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4220.99	4.51	12.30	Passed

Pt=(870+4000)+10% (W)	4967.40	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: **A.Mohammadi**

Stamp:

Date : *2024/07/10*

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860359	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.716	2.716	2.716	0.00163	0.00165	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.23	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.57			
Io2 (A)	5.29	Po (W)	746.87	Passed
Io3(A)	7.61			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4237.10	4.53	12.24	Passed

Pt=(870+4000)+10% (W)	4983.97	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860160	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.745	2.773	2.767	0.00158	0.00155	0.00154	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.19	0.19	
Three	11000	45.80	0.13	0.13	0.11	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.05	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.52			
Io2 (A)	4.74	Po (W)	743.09	Passed
Io3(A)	6.25			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4205.16	4.52	12.29	Passed
Pt=(870+4000)+10% (W)		4948.25	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860150	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.748	2.749	2.748	0.00162	0.00163	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.44			
Io2 (A)	4.73	Po (W)	745.76	Passed
Io3(A)	6.49			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4232.51	4.54	12.22	Passed
Pt=(870+4000)+10% (W)		4978.27	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860250	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.746	2.747	2.741	0.00162	0.00162	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.19	0.19	
Three	11000	45.80	0.11	0.11	0.11	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.56			
Io2 (A)	4.68	Po (W)	743.76	Passed
Io3(A)	6.37			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4210.97	4.50	12.35	Passed
Pt=(870+4000)+10% (W)		4954.73	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

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Serial Number :	K3860393	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.716	2.716	2.721	0.00159	0.00152	0.00152	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.28	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.76			
Io2 (A)	5.73	Po (W)	752.77	Passed
Io3(A)	7.84			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4168.92	4.58	12.11	Passed

Pt=(870+4000)+10% (W)	4921.69	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation, Factory No.3

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Serial Number :	K3860403	Rated Power (kVA) :	400
Order Number :	V140115178	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.750	2.751	2.750	0.00158	0.00165	0.00165	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.14	0.14	0.14	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.85			
Io2 (A)	5.46	Po (W)	754.68	Passed
Io3(A)	7.60			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4250.50	4.54	12.24	Passed
Pt=(870+4000)+10% (W)		5005.18	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/23

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Serial Number :	K3860427	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.715	2.714	2.714	0.00159	0.00159	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.38	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.58			
Io2 (A)	5.88	Po (W)	765.35	Passed
Io3(A)	8.55			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4157.88	4.53	12.25	Passed
Pt=(870+4000)+10% (W)		4923.23	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

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Serial Number :	K3860533	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.754	2.746	2.736	0.00158	0.00156	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.35	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.28			
Io2 (A)	5.87	Po (W)	743.89	Passed
Io3(A)	8.26			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4184.08	4.53	12.25	Passed
Pt=(870+4000)+10% (W)		4927.97	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

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Serial Number :	K3860530	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.734	2.733	2.741	0.00160	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.64			
Io2 (A)	5.62	Po (W)	744.00	Passed
Io3(A)	7.69			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4182.11	4.47	12.42	Passed
Pt=(870+4000)+10% (W)		4926.11	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/07/08*

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Serial Number :	K3860433	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.764	2.757	2.756	0.00158	0.00154	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.56			
Io2 (A)	4.82	Po (W)	715.51	Passed
Io3(A)	6.61			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4201.47	4.58	12.11	Passed
Pt=(870+4000)+10% (W)		4916.98	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: **A.Mohammadi**

Stamp:

Date : *2024/07/07*

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

REVIEWED

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860436	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.756	2.758	2.755	0.00160	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.17	0.17	
Three	11000	45.80	0.09	0.09	0.11	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.92			
Io2 (A)	5.70	Po (W)	760.47	Passed
Io3(A)	7.95			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4213.33	4.68	11.86	Passed

Pt=(870+4000)+10% (W)	4973.80	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860438	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.745	2.750	2.737	0.00159	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.14	0.17	
Three	11000	45.80	0.09	0.09	0.11	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.24	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.53			
Io2 (A)	5.58	Po (W)	751.59	Passed
Io3(A)	7.58			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4191.77	4.54	12.22	Passed
Pt=(870+4000)+10% (W)		4943.36	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860320	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.762	2.745	2.736	0.00161	0.00158	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.16			
Io2 (A)	5.15	Po (W)	755.81	Passed
Io3(A)	7.16			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4242.20	4.55	12.20	Passed

Pt=(870+4000)+10% (W)	4998.01	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: *Stamp:* *Date :* *2024/06/06*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860317	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.713	2.716	2.710	0.00165	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.21	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.40			
Io2 (A)	5.40	Po (W)	760.52	Passed
Io3(A)	7.40			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4225.91	4.53	12.25	Passed

Pt=(870+4000)+10% (W)	4986.43	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/02

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860336	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.724	2.726	2.720	0.00168	0.00163	0.00166	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.21	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.38			
Io2 (A)	5.35	Po (W)	743.27	Passed
Io3(A)	7.37			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4262.62	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	5005.89	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/12*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860443	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.732	2.729	2.731	0.00168	0.00166	0.00166	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.44	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.83			
Io2 (A)	6.20	Po (W)	763.91	Passed
Io3(A)	8.89			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4251.41	4.51	12.32	Passed
Pt=(870+4000)+10% (W)		5015.32	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/07

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860445	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.742	2.737	2.739	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.17	0.17	
Three	11000	45.80	0.09	0.09	0.11	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.51			
Io2 (A)	5.79	Po (W)	767.26	Passed
Io3(A)	8.58			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4187.17	4.52	12.27	Passed
Pt=(870+4000)+10% (W)		4954.43	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860408	Rated Power (kVA) :	400
Order Number :	V140115178	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.730	2.730	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.05			
Io2 (A)	5.77	Po (W)	767.03	Passed
Io3(A)	8.12			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4198.71	4.56	12.19	Passed
Pt=(870+4000)+10% (W)		4965.74	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/18

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860448	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.745	2.743	2.726	0.00159	0.00158	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.14	0.17	
Three	11000	45.80	0.09	0.09	0.09	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.87			
Io2 (A)	5.80	Po (W)	760.96	Passed
Io3(A)	7.91			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4175.23	4.53	12.26	Passed

Pt=(870+4000)+10% (W)	4936.19	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860449	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.727	2.737	0.00159	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.17	0.17	
Three	11000	45.80	0.06	0.09	0.11	Passed
Five	10450	43.51	0.00	0.00	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.18	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.20			
Io2 (A)	5.15	Po (W)	757.02	Passed
Io3(A)	7.25			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4179.62	4.49	12.36	Passed
Pt=(870+4000)+10% (W)		4936.64	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860463	Rated Power (kVA) :	400
Order Number :	V140115180	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.743	2.735	0.00159	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.28	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.87			
Io2 (A)	5.48	Po (W)	755.58	Passed
Io3(A)	7.98			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4192.68	4.57	12.15	Passed
Pt=(870+4000)+10% (W)		4948.26	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/30

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860564	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.781	2.786	2.785	0.00163	0.00160	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.11	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.78			
Io2 (A)	4.94	Po (W)	730.55	Passed
Io3(A)	6.79			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4248.99	4.57	12.16	Passed
Pt=(870+4000)+10% (W)		4979.54	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: **A.Mohammadi**

Stamp:

Date : *2024/07/09*

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860369	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.751	2.750	2.745	0.00169	0.00166	0.00166	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.17	0.17	
Three	11000	45.80	0.09	0.11	0.09	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.11	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.74			
Io2 (A)	4.76	Po (W)	735.57	Passed
Io3(A)	6.91			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4307.28	4.53	12.26	Passed
Pt=(870+4000)+10% (W)		5042.85	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/30

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860382	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.751	2.738	2.748	0.00161	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.20	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.22			
Io2 (A)	5.54	Po (W)	734.08	Passed
Io3(A)	7.29			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.46	4.50	12.34	Passed

Pt=(870+4000)+10% (W)	4952.54	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/24

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860389	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.738	2.733	2.734	0.00165	0.00162	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.18	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.17			
Io2 (A)	5.33	Po (W)	731.64	Passed
Io3(A)	7.10			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4269.95	4.56	12.17	Passed

Pt=(870+4000)+10% (W)	5001.59	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/18*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860395	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.735	2.728	0.00157	0.00155	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.85			
Io2 (A)	5.65	Po (W)	763.33	Passed
Io3(A)	7.90			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4171.42	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	4934.75	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/16*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

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Serial Number :	K3860396	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.736	2.736	0.00160	0.00158	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.45	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.00			
Io2 (A)	6.28	Po (W)	768.31	Passed
Io3(A)	8.82			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4235.77	4.55	12.20	Passed
Pt=(870+4000)+10% (W)		5004.08	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: **A.Mohammadi**

Stamp:

Date : 2024/06/18

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

REVIEWED

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860394	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.731	2.729	2.734	0.00158	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.67			
Io2 (A)	5.44	Po (W)	752.63	Passed
Io3(A)	7.75			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4187.05	4.54	12.22	Passed

Pt=(870+4000)+10% (W)	4939.68	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/18

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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IRAN-TRANSFO
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Serial Number :	K3860432	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.741	2.750	2.737	0.00159	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.17	0.17	
Three	11000	45.80	0.09	0.09	0.11	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.19			
Io2 (A)	5.72	Po (W)	762.38	Passed
Io3(A)	8.00			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4179.13	4.52	12.28	Passed
Pt=(870+4000)+10% (W)		4941.51	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=---- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860397	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.766	2.761	2.754	0.00160	0.00157	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.58			
Io2 (A)	5.30	Po (W)	750.46	Passed
Io3(A)	7.60			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4221.77	4.58	12.13	Passed
Pt=(870+4000)+10% (W)		4972.23	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/24

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K6670144	Rated Power (kVA) :	400
Order Number :	V140115135	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.747	2.749	2.751	0.00165	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.62			
Io2 (A)	4.82	Po (W)	831.44	Passed
Io3(A)	6.65			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4260.76	4.42	12.57	Passed

Pt=(870+4000)+10% (W)	5092.20	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/04/22

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860331	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.729	2.725	2.725	0.00160	0.00160	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.96	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.77			
Io2 (A)	4.31	Po (W)	747.80	Passed
Io3(A)	5.93			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4226.65	4.52	12.29	Passed
Pt=(870+4000)+10% (W)		4974.45	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860329	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.741	2.745	0.00161	0.00158	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.68			
Io2 (A)	4.89	Po (W)	769.43	Passed
Io3(A)	6.63			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4219.20	4.42	12.55	Passed
Pt=(870+4000)+10% (W)		4988.63	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/29

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860325	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.745	2.743	2.744	0.00162	0.00164	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.28	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.84			
Io2 (A)	5.60	Po (W)	748.01	Passed
Io3(A)	7.80			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4262.72	4.51	12.30	Passed
Pt=(870+4000)+10% (W)		5010.73	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/06/06*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860323	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.726	2.721	2.717	0.00158	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.13	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.87			
Io2 (A)	4.93	Po (W)	739.72	Passed
Io3(A)	7.10			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4166.94	4.48	12.39	Passed
Pt=(870+4000)+10% (W)		4906.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/15

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860322	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.746	2.740	2.738	0.00167	0.00165	0.00164	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.95	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.79			
Io2 (A)	4.27	Po (W)	751.09	Passed
Io3(A)	5.77			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4280.76	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	5031.85	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/02

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860023	Rated Power (kVA) :	400
Order Number :	V140115162	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.704	2.704	2.713	0.00160	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.14			
Io2 (A)	4.53	Po (W)	766.70	Passed
Io3(A)	6.14			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4160.63	4.54	12.23	Passed
Pt=(870+4000)+10% (W)		4927.33	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/11

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Hall

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Serial Number :	K3860036	Rated Power (kVA) :	400
Order Number :	V140115163	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.784	2.774	2.785	0.00160	0.00162	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.15	Passed
Five	10450	43.51	0.00	0.02	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.12	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.80			
Io2 (A)	5.05	Po (W)	745.70	Passed
Io3(A)	6.76			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4250.19	4.54	12.21	Passed
Pt=(870+4000)+10% (W)		4995.89	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation , Factory No.3

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860037	Rated Power (kVA) :	400
Order Number :	V140115163	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.763	2.771	2.764	0.00158	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.13	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.78			
Io2 (A)	5.06	Po (W)	747.27	Passed
Io3(A)	6.91			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4204.64	4.57	12.16	Passed

Pt=(870+4000)+10% (W)	4951.91	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/27

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Serial Number :	K3860078	Rated Power (kVA) :	400
Order Number :	V140115165	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.753	2.766	2.752	0.00162	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.12			
Io2 (A)	4.38	Po (W)	736.61	Passed
Io3(A)	6.29			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4240.85	4.52	12.29	Passed
Pt=(870+4000)+10% (W)		4977.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860126	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.727	2.711	2.718	0.00161	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.04	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.30			
Io2 (A)	4.80	Po (W)	750.64	Passed
Io3(A)	6.22			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4187.03	4.47	12.43	Passed

Pt=(870+4000)+10% (W)	4937.67	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/05/27

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Serial Number :	K3860127	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.744	2.731	2.723	0.00163	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.96	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.81			
Io2 (A)	4.30	Po (W)	755.62	Passed
Io3(A)	5.92			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4225.85	4.49	12.36	Passed
Pt=(870+4000)+10% (W)		4981.47	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860133	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.731	2.741	2.732	0.00164	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.19	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.79			
Io2 (A)	4.68	Po (W)	752.02	Passed
Io3(A)	6.71			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4237.78	4.56	12.17	Passed

Pt=(870+4000)+10% (W)	4989.80	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860136	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.725	2.723	2.718	0.00162	0.00160	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.99	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.85			
Io2 (A)	4.45	Po (W)	777.37	Passed
Io3(A)	6.19			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4209.27	4.52	12.28	Passed
Pt=(870+4000)+10% (W)		4986.64	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860137	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.734	2.735	2.737	0.00162	0.00160	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.07	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.42			
Io2 (A)	4.82	Po (W)	734.03	Passed
Io3(A)	6.61			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4231.94	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4965.97	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=---- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860140	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.741	2.731	2.732	0.00163	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.27	0.29	0.29	
Three	11000	45.80	0.22	0.22	0.22	Passed
Five	10450	43.51	0.14	0.14	0.14	

No Load Test

Phase	Io (A)	Io (%)	1.31	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.09			
Io2 (A)	5.80	Po (W)	760.32	Passed
Io3(A)	7.97			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4203.03	4.48	12.38	Passed
Pt=(870+4000)+10% (W)		4963.35	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/23

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860149	Rated Power (kVA) :	400
Order Number :	V140115167	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.728	2.715	2.715	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.20			
Io2 (A)	5.23	Po (W)	758.50	Passed
Io3(A)	7.09			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4190.78	4.40	12.60	Passed

Pt=(870+4000)+10% (W)	4949.28	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/05/28

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860151	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.705	2.706	2.705	0.00163	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.07	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.55			
Io2 (A)	4.70	Po (W)	764.07	Passed
Io3(A)	6.53			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4206.68	4.49	12.36	Passed

Pt=(870+4000)+10% (W)	4970.75	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date :
2024/05/15

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Serial Number :	K3860153	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.737	2.738	2.734	0.00163	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.14			
Io2 (A)	4.42	Po (W)	737.19	Passed
Io3(A)	6.22			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4220.11	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4957.30	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

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Date : 2024/05/28

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Serial Number :	K3860154	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.741	2.748	2.740	0.00159	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.73			
Io2 (A)	5.58	Po (W)	745.60	Passed
Io3(A)	7.72			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4184.20	4.58	12.12	Passed

Pt=(870+4000)+10% (W)	4929.80	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/23

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Serial Number :	K3860166	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.744	2.742	2.737	0.00161	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.16	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.12			
Io2 (A)	4.93	Po (W)	763.07	Passed
Io3(A)	7.26			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4204.61	4.53	12.24	Passed
Pt=(870+4000)+10% (W)		4967.68	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation, Factory No.3

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Serial Number :	K3860202	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.742	2.743	0.00163	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.03	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.20			
Io2 (A)	4.61	Po (W)	740.81	Passed
Io3(A)	6.32			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4204.23	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4945.04	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

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Serial Number :	K3860218	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.753	2.736	2.725	0.00161	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.27	0.29	0.29	
Three	11000	45.80	0.22	0.22	0.22	Passed
Five	10450	43.51	0.14	0.14	0.14	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.90			
Io2 (A)	6.09	Po (W)	765.05	Passed
Io3(A)	8.24			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.65	4.50	12.35	Passed

Pt=(870+4000)+10% (W)	4958.70	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/23

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860219	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.722	2.713	2.721	0.00163	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.04	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.29			
Io2 (A)	4.58	Po (W)	731.10	Passed
Io3(A)	6.37			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4203.93	4.40	12.63	Passed

Pt=(870+4000)+10% (W)	4935.03	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860220	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.710	2.709	2.702	0.00161	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.14	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.99			
Io2 (A)	5.04	Po (W)	762.80	Passed
Io3(A)	7.00			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4173.08	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	4935.88	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/05/25

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Serial Number :	K3860221	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.713	2.707	2.710	0.00165	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.86			
Io2 (A)	5.68	Po (W)	751.53	Passed
Io3(A)	7.92			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4186.36	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4937.89	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/23

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860222	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.3(°C) and Low Voltage Resistances are measured at 21.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.724	2.722	2.724	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.61			
Io2 (A)	4.95	Po (W)	741.90	Passed
Io3(A)	6.77			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4158.96	4.49	12.35	Passed

Pt=(870+4000)+10% (W)	4900.86	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

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Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/05/23

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Serial Number :	K3860223	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.766	2.760	2.756	0.00163	0.00162	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.64			
Io2 (A)	5.07	Po (W)	743.09	Passed
Io3(A)	6.64			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4268.37	4.51	12.30	Passed

Pt=(870+4000)+10% (W)	5011.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860225	Rated Power (kVA) :	400
Order Number :	V140115170	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.732	2.717	2.723	0.00162	0.00163	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.03	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.21			
Io2 (A)	4.57	Po (W)	751.73	Passed
Io3(A)	6.38			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4220.34	4.40	12.61	Passed
Pt=(870+4000)+10% (W)		4972.07	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860226	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.3(°C) and Low Voltage Resistances are measured at 21.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.732	2.730	2.731	0.00160	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.95	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.84			
Io2 (A)	4.14	Po (W)	726.49	Passed
Io3(A)	5.77			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4168.57	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4895.06	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860228	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.754	2.752	2.752	0.00166	0.00163	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.69			
Io2 (A)	5.28	Po (W)	769.91	Passed
Io3(A)	7.47			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4239.55	4.49	12.36	Passed

Pt=(870+4000)+10% (W)	5009.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Date : 2024/05/26

Iran Transfo Corporation — Quality Assurance — H.V. Test Hall

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860232	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.723	2.720	2.725	0.00158	0.00155	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.94	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.71			
Io2 (A)	4.27	Po (W)	719.19	Passed
Io3(A)	5.69			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4162.87	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	4882.06	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860233	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.742	2.720	2.725	0.00162	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.67			
Io2 (A)	4.85	Po (W)	751.20	Passed
Io3(A)	6.57			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4190.33	4.48	12.38	Passed
Pt=(870+4000)+10% (W)		4941.53	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/05/19

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Serial Number :	K3860234	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.744	2.744	2.740	0.00162	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.14			
Io2 (A)	4.46	Po (W)	735.00	Passed
Io3(A)	6.28			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4238.93	4.52	12.28	Passed
Pt=(870+4000)+10% (W)		4973.93	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860236	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.3(°C) and Low Voltage Resistances are measured at 21.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.744	2.730	2.731	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.01			
Io2 (A)	5.41	Po (W)	756.80	Passed
Io3(A)	7.07			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4189.30	4.53	12.26	Passed

Pt=(870+4000)+10% (W)	4946.10	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/23

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Serial Number :	K3860241	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.3(°C) and Low Voltage Resistances are measured at 21.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.731	2.734	2.734	0.00159	0.00156	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.97	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.92			
Io2 (A)	4.42	Po (W)	723.59	Passed
Io3(A)	5.80			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4171.44	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4895.03	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Panel

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Serial Number :	K3860245	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.727	2.721	2.723	0.00161	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.21			
Io2 (A)	4.64	Po (W)	738.18	Passed
Io3(A)	5.97			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.98	4.45	12.48	Passed

Pt=(870+4000)+10% (W)	4932.16	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/05/27

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860246	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.746	2.730	2.733	0.00161	0.00158	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.23	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.60			
Io2 (A)	4.96	Po (W)	754.30	Passed
Io3(A)	6.74			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4194.81	4.47	12.41	Passed

Pt=(870+4000)+10% (W)	4949.11	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Hall

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Date : 2024/05/26

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Serial Number :	K3860247	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.747	2.751	2.748	0.00162	0.00163	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.45			
Io2 (A)	4.81	Po (W)	768.64	Passed
Io3(A)	6.67			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4265.89	4.44	12.51	Passed

Pt=(870+4000)+10% (W)	5034.53	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860255	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.757	2.756	2.757	0.00163	0.00162	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.92	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.52			
Io2 (A)	4.26	Po (W)	724.38	Passed
Io3(A)	5.54			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4247.28	4.50	12.34	Passed
Pt=(870+4000)+10% (W)		4971.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860256	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.701	2.729	2.731	0.00161	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.52			
Io2 (A)	5.27	Po (W)	778.20	Passed
Io3(A)	7.64			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4191.79	4.48	12.38	Passed

Pt=(870+4000)+10% (W)	4969.99	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860257	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.735	2.731	2.723	0.00163	0.00160	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.11	0.11	0.11	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	0.91	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.47			
Io2 (A)	4.17	Po (W)	762.46	Passed
Io3(A)	5.53			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4216.14	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	4978.60	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860258	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.738	2.734	2.744	0.00163	0.00161	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.58			
Io2 (A)	4.93	Po (W)	739.83	Passed
Io3(A)	6.62			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4231.46	4.53	12.25	Passed

Pt=(870+4000)+10% (W)	4971.29	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/27

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Serial Number :	K3860259	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.755	2.761	2.730	0.00163	0.00158	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.14	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.68			
Io2 (A)	4.76	Po (W)	741.12	Passed
Io3(A)	6.53			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.35	4.46	12.45	Passed

Pt=(870+4000)+10% (W)	4934.47	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/23

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Serial Number :	K3860260	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.734	2.733	2.734	0.00158	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.07			
Io2 (A)	5.61	Po (W)	762.51	Passed
Io3(A)	8.00			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4170.22	4.51	12.30	Passed

Pt=(870+4000)+10% (W)	4932.73	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860261	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.701	2.701	2.701	0.00159	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.17	0.19	
Three	11000	45.80	0.09	0.09	0.11	Passed
Five	10450	43.51	0.02	0.02	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.37			
Io2 (A)	6.04	Po (W)	797.26	Passed
Io3(A)	8.35			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4140.27	4.40	12.60	Passed
Pt=(870+4000)+10% (W)		4937.53	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860262	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.727	2.725	0.00161	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.17	0.19	
Three	11000	45.80	0.09	0.11	0.13	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.42			
Io2 (A)	4.63	Po (W)	740.93	Passed
Io3(A)	6.64			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.13	4.46	12.45	Passed
Pt=(870+4000)+10% (W)		4934.06	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860263	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.764	2.756	2.761	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.65			
Io2 (A)	4.82	Po (W)	752.87	Passed
Io3(A)	6.69			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4238.78	4.53	12.24	Passed

Pt=(870+4000)+10% (W)	4991.65	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860264	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.732	2.732	2.731	0.00166	0.00162	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.03	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.38			
Io2 (A)	4.60	Po (W)	742.85	Passed
Io3(A)	6.22			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4266.26	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	5009.11	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date : 2024/05/26

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860265	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.689	2.690	2.689	0.00160	0.00159	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.86			
Io2 (A)	5.53	Po (W)	777.61	Passed
Io3(A)	7.83			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4184.15	4.48	12.38	Passed

Pt=(870+4000)+10% (W)	4961.76	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860267	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.734	2.730	2.732	0.00165	0.00163	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.15	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.81			
Io2 (A)	5.30	Po (W)	754.71	Passed
Io3(A)	7.02			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4230.90	4.41	12.60	Passed

Pt=(870+4000)+10% (W)	4985.61	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/05/28*

A.Mohammadi ***Manufactured by Iran Transfo Corporation , Factory No.3***

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860269	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.697	2.697	2.699	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.35	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.31			
Io2 (A)	5.75	Po (W)	762.85	Passed
Io3(A)	8.48			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4199.06	4.51	12.30	Passed

Pt=(870+4000)+10% (W)	4961.91	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Date : 2024/06/16

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Bhalla Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860270	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.773	2.769	2.773	0.00161	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.23	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.02	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.11			
Io2 (A)	4.46	Po (W)	751.68	Passed
Io3(A)	6.34			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4234.34	4.54	12.22	Passed
Pt=(870+4000)+10% (W)		4986.02	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=---- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/29

Manufactured by Iran Transfo Corporation, Factory No.3

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860272	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.711	2.714	2.712	0.00160	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.19	0.19	
Three	11000	45.80	0.09	0.11	0.11	Passed
Five	10450	43.51	0.00	0.02	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.46			
Io2 (A)	4.63	Po (W)	734.52	Passed
Io3(A)	6.58			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4163.14	4.40	12.62	Passed
Pt=(870+4000)+10% (W)		4897.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860273	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.728	2.735	0.00161	0.00164	0.00164	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.03	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.25			
Io2 (A)	4.46	Po (W)	743.11	Passed
Io3(A)	6.45			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4246.79	4.48	12.38	Passed
Pt=(870+4000)+10% (W)		4989.90	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860274	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.725	2.735	2.739	0.00161	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.19	
Three	11000	45.80	0.11	0.13	0.15	Passed
Five	10450	43.51	0.02	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.04	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.26			
Io2 (A)	4.70	Po (W)	745.44	Passed
Io3(A)	6.28			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4197.99	4.51	12.30	Passed
Pt=(870+4000)+10% (W)		4943.43	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860275	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.759	2.757	2.756	0.00164	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.19	0.19	
Three	11000	45.80	0.09	0.11	0.11	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.02	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.18			
Io2 (A)	4.58	Po (W)	746.40	Passed
Io3(A)	6.30			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4240.82	4.49	12.38	Passed

Pt=(870+4000)+10% (W)	4987.22	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation , Factory No.3

REVIEWED

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860278	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 23.5(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.733	2.729	2.742	0.00162	0.00161	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.65			
Io2 (A)	4.85	Po (W)	746.37	Passed
Io3(A)	6.70			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4228.57	4.49	12.35	Passed
Pt=(870+4000)+10% (W)		4974.94	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

REVIEWED

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860279	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.755	2.749	2.751	0.00160	0.00158	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.28	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.78			
Io2 (A)	5.63	Po (W)	756.59	Passed
Io3(A)	7.89			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4207.36	4.57	12.14	Passed
Pt=(870+4000)+10% (W)		4963.95	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860280	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 21.9(°C) and Low Voltage Resistances are measured at 21.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.753	2.744	2.740	0.00161	0.00160	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.03	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.22			
Io2 (A)	4.74	Po (W)	739.21	Passed
Io3(A)	6.27			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4219.03	4.49	12.37	Passed

Pt=(870+4000)+10% (W)	4958.24	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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SHERKATE SAHAMI AAM

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Serial Number :	K3860282	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.751	2.752	2.747	0.00162	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.07	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.48			
Io2 (A)	4.83	Po (W)	749.76	Passed
Io3(A)	6.56			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4247.36	4.54	12.21	Passed

Pt=(870+4000)+10% (W)	4997.12	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

REVIEWED

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

IRAN-TRANSFO
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Serial Number :	K3860306	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.735	2.737	0.00159	0.00159	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.24	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.52			
Io2 (A)	5.67	Po (W)	745.39	Passed
Io3(A)	7.48			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4192.52	4.54	12.22	Passed

Pt=(870+4000)+10% (W)	4937.91	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date : 2024/06/24

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860307	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.708	2.708	2.709	0.00158	0.00155	0.00154	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.76			
Io2 (A)	5.43	Po (W)	755.29	Passed
Io3(A)	7.57			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4145.32	4.58	12.13	Passed
Pt=(870+4000)+10% (W)		4900.61	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/16

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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SHERKATE SAHAMI AAM

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Serial Number :	K3860312	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.739	2.729	2.726	0.00155	0.00155	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.13	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.89			
Io2 (A)	4.96	Po (W)	736.81	Passed
Io3(A)	6.97			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4164.98	4.55	12.20	Passed

Pt=(870+4000)+10% (W)	4901.79	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/15

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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SHERKATE SAHAMI AAM

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Serial Number :	K3860314	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.701	2.701	2.691	0.00162	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.36	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.28			
Io2 (A)	5.93	Po (W)	769.16	Passed
Io3(A)	8.47			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4180.70	4.49	12.35	Passed
Pt=(870+4000)+10% (W)		4949.86	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/05

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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IRAN-TRANSFO
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Serial Number :	K3860315	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.690	2.685	2.682	0.00162	0.00159	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.09	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.16	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.10			
Io2 (A)	5.12	Po (W)	740.65	Passed
Io3(A)	7.11			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4176.82	4.50	12.33	Passed
Pt=(870+4000)+10% (W)		4917.47	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

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Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/15

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860316	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.704	2.704	2.704	0.00162	0.00162	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.24	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.70			
Io2 (A)	5.38	Po (W)	745.08	Passed
Io3(A)	7.56			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4177.78	4.47	12.41	Passed

Pt=(870+4000)+10% (W)	4922.86	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/06/05

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Serial Number :	K3860318	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.749	2.745	2.744	0.00164	0.00161	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.17	0.23	
Three	11000	45.80	0.15	0.09	0.15	Passed
Five	10450	43.51	0.07	0.02	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.35	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.26			
Io2 (A)	5.81	Po (W)	785.08	Passed
Io3(A)	8.44			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4233.62	4.56	12.16	Passed

Pt=(870+4000)+10% (W)	5018.70	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860319	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.704	2.702	2.702	0.00163	0.00160	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.65			
Io2 (A)	4.98	Po (W)	743.18	Passed
Io3(A)	6.72			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4195.83	4.51	12.31	Passed
Pt=(870+4000)+10% (W)		4939.01	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Date : 2024/06/02

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860321	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.707	2.711	2.708	0.00162	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.79			
Io2 (A)	5.56	Po (W)	756.83	Passed
Io3(A)	7.81			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.98	4.52	12.28	Passed

Pt=(870+4000)+10% (W)	4950.81	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/05

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860324	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.719	2.720	2.706	0.00163	0.00161	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.63			
Io2 (A)	5.71	Po (W)	752.75	Passed
Io3(A)	7.79			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4203.86	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4956.61	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/06/05

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Serial Number :	K3860326	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.696	2.697	2.700	0.00162	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.31	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.98			
Io2 (A)	5.73	Po (W)	755.51	Passed
Io3(A)	8.16			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4188.99	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4944.50	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/06/05

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Serial Number :	K3860327	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.719	2.727	0.00163	0.00161	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.79			
Io2 (A)	5.48	Po (W)	748.07	Passed
Io3(A)	7.75			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.32	4.50	12.32	Passed

Pt=(870+4000)+10% (W)	4966.39	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/06/06

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Serial Number :	K3860328	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.720	2.714	2.709	0.00164	0.00162	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.40	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.54			
Io2 (A)	6.12	Po (W)	773.10	Passed
Io3(A)	8.69			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4215.47	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	4988.57	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation Quality Assurance H.V. Test Hall

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Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860330	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.725	2.721	2.726	0.00159	0.00156	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.31			
Io2 (A)	6.04	Po (W)	776.35	Passed
Io3(A)	8.45			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4160.73	4.54	12.22	Passed

Pt=(870+4000)+10% (W)	4937.08	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/15

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860332	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.730	2.730	2.730	0.00163	0.00155	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.65			
Io2 (A)	5.39	Po (W)	740.19	Passed
Io3(A)	7.51			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4195.41	4.50	12.32	Passed

Pt=(870+4000)+10% (W)	4935.60	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/06

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860333	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.737	2.735	2.730	0.00164	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.09			
Io2 (A)	5.75	Po (W)	763.19	Passed
Io3(A)	8.33			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4238.72	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	5001.91	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/06

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860335	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.739	2.727	0.00163	0.00161	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.01			
Io2 (A)	5.78	Po (W)	762.03	Passed
Io3(A)	8.16			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4234.94	4.49	12.36	Passed

Pt=(870+4000)+10% (W)	4996.97	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/06

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Serial Number :	K3860340	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.706	2.702	2.700	0.00158	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.28	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.78			
Io2 (A)	5.55	Po (W)	754.34	Passed
Io3(A)	7.94			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4144.09	4.49	12.35	Passed

Pt=(870+4000)+10% (W)	4898.43	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Date : 2024/06/15

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860342	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.699	2.695	2.695	0.00160	0.00158	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.28			
Io2 (A)	5.84	Po (W)	756.78	Passed
Io3(A)	7.95			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4171.68	4.49	12.36	Passed

Pt=(870+4000)+10% (W)	4928.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/05

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860343	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.728	2.728	2.727	0.00161	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.69			
Io2 (A)	5.65	Po (W)	763.39	Passed
Io3(A)	7.81			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4213.05	4.54	12.22	Passed

Pt=(870+4000)+10% (W)	4976.44	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date :
2024/06/06

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Serial Number :	K3860344	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.718	2.721	2.714	0.00158	0.00155	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.85			
Io2 (A)	5.72	Po (W)	762.29	Passed
Io3(A)	7.99			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4157.47	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4919.76	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Bodhi Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860351	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.719	2.720	2.724	0.00160	0.00158	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.05			
Io2 (A)	5.29	Po (W)	741.23	Passed
Io3(A)	7.14			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4187.67	4.50	12.34	Passed
Pt=(870+4000)+10% (W)		4928.90	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date : 2024/06/23

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860350	Rated Power (kVA) :	400
Order Number :	V140115175	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.721	2.715	2.713	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.93			
Io2 (A)	5.97	Po (W)	757.23	Passed
Io3(A)	8.07			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4202.96	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4960.19	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date :
2024/06/05

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860353	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.691	2.708	2.697	0.00162	0.00159	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.36			
Io2 (A)	6.07	Po (W)	771.60	Passed
Io3(A)	8.34			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4183.91	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4955.51	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
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Serial Number :	K3860354	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.701	2.704	2.698	0.00160	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.41			
Io2 (A)	6.15	Po (W)	777.11	Passed
Io3(A)	8.31			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4172.95	4.47	12.41	Passed

Pt=(870+4000)+10% (W)	4950.06	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/05

Iran Transfo Corporation Quality Assurance H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860357	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.729	2.706	2.731	0.00162	0.00160	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.72			
Io2 (A)	5.47	Po (W)	747.58	Passed
Io3(A)	7.75			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4211.29	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	4958.87	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/06

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860358	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.702	2.706	2.706	0.00159	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.92			
Io2 (A)	5.53	Po (W)	773.77	Passed
Io3(A)	8.08			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4154.32	4.54	12.22	Passed

Pt=(870+4000)+10% (W)	4928.09	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/29

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860360	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.725	2.725	2.726	0.00163	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.95			
Io2 (A)	5.70	Po (W)	750.47	Passed
Io3(A)	7.95			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4219.36	4.53	12.24	Passed

Pt=(870+4000)+10% (W)	4969.83	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Plant

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/05

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Serial Number :	K3860361	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.720	2.720	2.711	0.00163	0.00160	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.42	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.69			
Io2 (A)	6.17	Po (W)	782.89	Passed
Io3(A)	8.83			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4205.03	4.51	12.30	Passed
Pt=(870+4000)+10% (W)		4987.92	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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SHERKATE SAHAMI AAM

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Serial Number :	K3860362	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.694	2.688	2.688	0.00162	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.66	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	10.32			
Io2 (A)	6.95	Po (W)	834.43	Passed
Io3(A)	10.30			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4176.44	4.48	12.39	Passed

Pt=(870+4000)+10% (W)	5010.87	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/11

Iran Transfo Corporation — Quality Assurance — H.V. Test Fac.

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SHERKATE SAHAMI AAM

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Serial Number :	K3860363	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.709	2.704	2.708	0.00158	0.00155	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.83			
Io2 (A)	5.59	Po (W)	762.39	Passed
Io3(A)	7.66			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4145.55	4.52	12.29	Passed

Pt=(870+4000)+10% (W)	4907.94	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/15

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

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Serial Number :	K3860364	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.727	2.727	2.727	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.01			
Io2 (A)	5.59	Po (W)	774.16	Passed
Io3(A)	8.10			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4212.38	4.48	12.39	Passed

Pt=(870+4000)+10% (W)	4986.54	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/06

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860365	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.738	2.744	2.736	0.00159	0.00159	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.42			
Io2 (A)	6.06	Po (W)	761.11	Passed
Io3(A)	8.40			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4196.16	4.57	12.14	Passed

Pt=(870+4000)+10% (W)	4957.27	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/06/23

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Serial Number :	K3860367	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.740	2.743	2.753	0.00159	0.00162	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.38	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.41			
Io2 (A)	6.04	Po (W)	767.84	Passed
Io3(A)	8.55			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.79	4.54	12.24	Passed

Pt=(870+4000)+10% (W)	4986.63	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860368	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.729	2.725	2.731	0.00158	0.00154	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.38	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.53			
Io2 (A)	5.91	Po (W)	774.71	Passed
Io3(A)	8.52			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4169.22	4.58	12.13	Passed

Pt=(870+4000)+10% (W)	4943.93	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860370	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.735	2.727	0.00159	0.00155	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.02	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.95			
Io2 (A)	5.81	Po (W)	765.48	Passed
Io3(A)	8.22			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4171.28	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	4936.76	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860371	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.748	2.721	2.718	0.00159	0.00158	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.41	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.49			
Io2 (A)	6.21	Po (W)	777.46	Passed
Io3(A)	8.80			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4178.19	4.49	12.35	Passed

Pt=(870+4000)+10% (W)	4955.65	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Tested

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Bodhi Testing India Pvt. Ltd.

Date :
2024/06/16

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Serial Number :	K3860373	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.749	2.749	2.739	0.00160	0.00159	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.47	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.05			
Io2 (A)	6.35	Po (W)	790.77	Passed
Io3(A)	9.10			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4211.44	4.56	12.17	Passed

Pt=(870+4000)+10% (W)	5002.21	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/16

Iran Transfo Corporation — Quality Assurance — H.V. Test Lab

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860375	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.722	2.715	2.719	0.00156	0.00154	0.00153	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.07			
Io2 (A)	4.72	Po (W)	746.63	Passed
Io3(A)	6.08			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4141.60	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4888.23	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date : 2024/06/15

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Serial Number :	K3860376	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.723	2.728	2.725	0.00161	0.00159	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.41			
Io2 (A)	4.67	Po (W)	737.75	Passed
Io3(A)	6.51			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4182.25	4.45	12.48	Passed

Pt=(870+4000)+10% (W)	4920.00	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/06/16

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Serial Number :	K3860377	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.712	2.718	2.708	0.00165	0.00163	0.00165	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.61	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	10.00			
Io2 (A)	6.90	Po (W)	807.69	Passed
Io3(A)	9.88			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4228.94	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	5036.63	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test field

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/16

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Serial Number :	K3860378	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.717	2.718	2.721	0.00155	0.00155	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.50			
Io2 (A)	4.78	Po (W)	720.98	Passed
Io3(A)	6.39			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4157.30	4.46	12.43	Passed

Pt=(870+4000)+10% (W)	4878.28	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860383	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.681	2.680	2.694	0.00160	0.00154	0.00154	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.13			
Io2 (A)	5.15	Po (W)	741.96	Passed
Io3(A)	7.21			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4134.96	4.55	12.19	Passed
Pt=(870+4000)+10% (W)		4876.92	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/26

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Serial Number :	K3860384	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.708	2.712	2.701	0.00159	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.71			
Io2 (A)	5.31	Po (W)	751.84	Passed
Io3(A)	7.77			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4160.67	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	4912.51	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Lab

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/29

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Serial Number :	K3860385	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.707	2.715	2.710	0.00158	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.24	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.59			
Io2 (A)	5.42	Po (W)	759.95	Passed
Io3(A)	7.60			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4173.66	4.49	12.35	Passed

Pt=(870+4000)+10% (W)	4933.61	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/29

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860387	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.738	2.739	2.731	0.00166	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.45	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.02			
Io2 (A)	6.23	Po (W)	768.76	Passed
Io3(A)	8.90			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4208.90	4.56	12.17	Passed

Pt=(870+4000)+10% (W)	4977.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/18

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860391	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.735	2.731	0.00168	0.00160	0.00165	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.70			
Io2 (A)	5.48	Po (W)	751.89	Passed
Io3(A)	7.71			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4254.11	4.55	12.21	Passed

Pt=(870+4000)+10% (W)	5006.00	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date : 2024/06/18

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860398	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.705	2.705	2.704	0.00155	0.00155	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.65			
Io2 (A)	5.56	Po (W)	747.94	Passed
Io3(A)	7.68			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4137.72	4.50	12.34	Passed

Pt=(870+4000)+10% (W)	4885.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860399	Rated Power (kVA) :	400
Order Number :	V140115177	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.729	2.740	2.729	0.00154	0.00154	0.00154	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.35	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.23			
Io2 (A)	5.97	Po (W)	770.57	Passed
Io3(A)	8.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4156.50	4.53	12.25	Passed

Pt=(870+4000)+10% (W)	4927.07	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860402	Rated Power (kVA) :	400
Order Number :	V140115178	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.681	2.672	2.681	0.00160	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.46			
Io2 (A)	5.85	Po (W)	775.04	Passed
Io3(A)	8.45			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4122.26	4.53	12.27	Passed

Pt=(870+4000)+10% (W)	4897.30	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date :
2024/06/26

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Serial Number :	K3860407	Rated Power (kVA) :	400
Order Number :	V140115178	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.719	2.714	2.712	0.00164	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.09			
Io2 (A)	5.76	Po (W)	763.24	Passed
Io3(A)	8.13			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4223.25	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	4986.49	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation , Factory No.3

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860428	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.697	2.739	2.700	0.00162	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.42			
Io2 (A)	5.94	Po (W)	773.70	Passed
Io3(A)	8.45			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4145.11	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4918.81	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/06/26

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Serial Number :	K3860429	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.708	2.723	2.723	0.00159	0.00159	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.82			
Io2 (A)	5.48	Po (W)	742.86	Passed
Io3(A)	7.51			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4167.53	4.50	12.32	Passed

Pt=(870+4000)+10% (W)	4910.39	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp: Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/06/24

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860430	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.721	2.721	2.721	0.00159	0.00157	0.00153	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.73			
Io2 (A)	5.63	Po (W)	754.39	Passed
Io3(A)	7.83			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4175.75	4.57	12.16	Passed

Pt=(870+4000)+10% (W)	4930.14	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860435	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.712	2.746	2.711	0.00159	0.00153	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.05			
Io2 (A)	5.65	Po (W)	750.12	Passed
Io3(A)	8.00			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4159.63	4.52	12.29	Passed

Pt=(870+4000)+10% (W)	4909.75	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860440	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.738	2.739	2.738	0.00159	0.00152	0.00152	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.91			
Io2 (A)	5.40	Po (W)	749.81	Passed
Io3(A)	7.78			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4174.20	4.63	12.00	Passed

Pt=(870+4000)+10% (W)	4924.01	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Baltic Testing India Pvt. Ltd.

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Serial Number :	K3860446	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.740	2.739	2.739	0.00160	0.00160	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.02	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.52	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.46			
Io2 (A)	6.60	Po (W)	769.63	Passed
Io3(A)	9.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4190.06	4.55	12.21	Passed

Pt=(870+4000)+10% (W)	4959.69	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860447	Rated Power (kVA) :	400
Order Number :	V140115179	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.696	2.714	2.693	0.00159	0.00156	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.22	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.51			
Io2 (A)	5.36	Po (W)	752.27	Passed
Io3(A)	7.52			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4142.33	4.52	12.27	Passed
Pt=(870+4000)+10% (W)		4894.60	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation Quality Assurance R.V.Test Dept.

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Serial Number :	K3860452	Rated Power (kVA) :	400
Order Number :	V140115180	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.703	2.702	2.698	0.00158	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.11	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.94			
Io2 (A)	5.56	Po (W)	754.68	Passed
Io3(A)	8.13			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4151.31	4.50	12.35	Passed

Pt=(870+4000)+10% (W)	4905.99	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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SHERKATE SAHAMI AAM

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Serial Number :	K3860453	Rated Power (kVA) :	400
Order Number :	V140115180	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.734	2.734	2.727	0.00159	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.43	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.69			
Io2 (A)	6.30	Po (W)	772.25	Passed
Io3(A)	8.83			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4173.12	4.52	12.29	Passed

Pt=(870+4000)+10% (W)	4945.37	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/24

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860465	Rated Power (kVA) :	400
Order Number :	V140115180	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.705	2.711	2.703	0.00159	0.00156	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.18			
Io2 (A)	5.61	Po (W)	757.79	Passed
Io3(A)	8.34			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4146.59	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	4904.38	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/06/29

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860488	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.776	2.774	2.761	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.19	0.19	
Three	11000	45.80	0.09	0.11	0.13	Passed
Five	10450	43.51	0.02	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.45	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.87			
Io2 (A)	6.31	Po (W)	758.95	Passed
Io3(A)	8.92			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.95	4.57	12.15	Passed
Pt=(870+4000)+10% (W)		4977.90	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860491	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.749	2.744	2.743	0.00155	0.00155	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.26	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.63			
Io2 (A)	5.70	Po (W)	750.55	Passed
Io3(A)	7.63			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4201.60	4.50	12.34	Passed

Pt=(870+4000)+10% (W)	4952.15	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/12

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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SHERKATE SAHAMI AAM

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Serial Number :	K3860493	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.743	2.745	2.743	0.00166	0.00166	0.00164	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.08			
Io2 (A)	5.63	Po (W)	758.51	Passed
Io3(A)	8.02			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4270.53	4.52	12.28	Passed

Pt=(870+4000)+10% (W)	5029.04	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/07/07

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860497	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.754	2.747	2.746	0.00158	0.00156	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.31	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.85			
Io2 (A)	5.78	Po (W)	758.19	Passed
Io3(A)	8.14			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4192.06	4.57	12.15	Passed

Pt=(870+4000)+10% (W)	4950.25	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation Quality Assurance H.V. Test Field

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Date : 2024/07/07

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Serial Number :	K3860498	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.768	2.760	2.761	0.00160	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.17	0.17	
Three	11000	45.80	0.09	0.11	0.11	Passed
Five	10450	43.51	0.02	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.15	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.05			
Io2 (A)	4.97	Po (W)	736.03	Passed
Io3(A)	7.15			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4217.24	4.57	12.15	Passed

Pt=(870+4000)+10% (W)	4953.27	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860508	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.729	2.733	2.717	0.00166	0.00163	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.28	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.79			
Io2 (A)	5.62	Po (W)	750.77	Passed
Io3(A)	7.84			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.32	4.53	12.24	Passed

Pt=(870+4000)+10% (W)	4969.09	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp: Iran Transfo Corporation — Quality Assurance — H.V. Test Room

Date : 2024/07/07

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Serial Number :	K3860515	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.726	2.724	2.711	0.00164	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.19	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.24			
Io2 (A)	5.21	Po (W)	742.72	Passed
Io3(A)	7.29			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4213.72	4.53	12.26	Passed

Pt=(870+4000)+10% (W)	4956.44	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/07

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860524	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.746	2.745	2.747	0.00156	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.83			
Io2 (A)	5.70	Po (W)	744.82	Passed
Io3(A)	7.91			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4187.28	4.55	12.20	Passed

Pt=(870+4000)+10% (W)	4932.10	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/07

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860547	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.745	2.748	2.750	0.00161	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.32	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.96			
Io2 (A)	5.97	Po (W)	749.10	Passed
Io3(A)	8.07			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4191.88	4.48	12.38	Passed

Pt=(870+4000)+10% (W)	4940.98	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by:

A.Mohammadi

Stamp:

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Date :
2024/07/12

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Serial Number :	K3860548	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.772	2.777	2.773	0.00160	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.29	0.21	
Three	11000	45.80	0.13	0.22	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.16	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.08			
Io2 (A)	5.16	Po (W)	729.72	Passed
Io3(A)	7.12			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4209.19	4.57	12.15	Passed
Pt=(870+4000)+10% (W)		4938.91	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/09

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860549	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.772	2.770	2.768	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.17	0.17	
Three	11000	45.80	0.09	0.09	0.09	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.41	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.69			
Io2 (A)	6.17	Po (W)	769.43	Passed
Io3(A)	8.63			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.01	4.56	12.18	Passed
Pt=(870+4000)+10% (W)		4987.44	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860552	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.8(°C) and Low Voltage Resistances are measured at 26.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.746	2.741	2.738	0.00161	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.17	0.17	
Three	11000	45.80	0.09	0.11	0.09	Passed
Five	10450	43.51	0.02	0.02	0.00	

No Load Test

Phase	Io (A)	Io (%)	1.57	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.65			
Io2 (A)	6.76	Po (W)	785.07	Passed
Io3(A)	9.77			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4204.33	4.47	12.43	Passed
Pt=(870+4000)+10% (W)		4989.40	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860554	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.767	2.767	2.764	0.00160	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.17	0.17	
Three	11000	45.80	0.09	0.11	0.11	Passed
Five	10450	43.51	0.02	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.25			
Io2 (A)	5.78	Po (W)	757.31	Passed
Io3(A)	8.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4211.79	4.54	12.23	Passed
Pt=(870+4000)+10% (W)		4969.10	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860558	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.763	2.771	2.759	0.00160	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.14	0.19	0.19	
Three	11000	45.80	0.09	0.09	0.11	Passed
Five	10450	43.51	0.00	0.02	0.02	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.18			
Io2 (A)	5.91	Po (W)	764.07	Passed
Io3(A)	8.11			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4209.24	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	4973.31	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/08

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860573	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.743	2.744	2.738	0.00161	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.63			
Io2 (A)	5.67	Po (W)	743.09	Passed
Io3(A)	7.59			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4178.99	4.47	12.43	Passed

Pt=(870+4000)+10% (W)	4922.08	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

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Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/07/12

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Serial Number :	K3860574	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.736	2.735	2.735	0.00160	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.37	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.32			
Io2 (A)	6.12	Po (W)	757.92	Passed
Io3(A)	8.41			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4170.61	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	4928.53	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

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Date : 2024/07/09

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Serial Number :	K3860577	Rated Power (kVA) :	400
Order Number :	V140115185	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.726	2.727	2.719	0.00159	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.02			
Io2 (A)	5.59	Po (W)	732.45	Passed
Io3(A)	6.95			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4161.64	4.48	12.38	Passed

Pt=(870+4000)+10% (W)	4894.09	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp: Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/07/09

Manufactured by Iran Transfo Corporation, Factory No.3

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Serial Number :	K6670098	Rated Power (kVA) :	400
Order Number :	V140115133	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.3(°C) and Low Voltage Resistances are measured at 20.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.725	2.728	2.726	0.00160	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.11	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.84			
Io2 (A)	4.87	Po (W)	800.27	Passed
Io3(A)	6.82			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4182.22	4.48	12.38	Passed
Pt=(870+4000)+10% (W)		4982.49	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Date : 2024/04/13

Iran Transfo Corporation Quality Assurance H.V. Test Field

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Serial Number :	K3860297	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.718	2.724	2.719	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.17	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.75			
Io2 (A)	4.74	Po (W)	737.93	Passed
Io3(A)	6.75			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.14	4.39	12.64	Passed
Pt=(870+4000)+10% (W)		4931.07	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860296	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.709	2.722	2.725	0.00166	0.00165	0.00165	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.90			
Io2 (A)	4.63	Po (W)	761.10	Passed
Io3(A)	6.22			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4254.40	4.54	12.23	Passed
Pt=(870+4000)+10% (W)		5015.50	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/29

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860295	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.794	2.790	2.791	0.00160	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.32			
Io2 (A)	4.73	Po (W)	741.31	Passed
Io3(A)	6.52			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4232.71	4.60	12.06	Passed

Pt=(870+4000)+10% (W)	4974.02	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860293	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.746	2.746	2.744	0.00158	0.00158	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.06	Passed
Five	10450	43.51	0.04	0.04	0.12	

No Load Test

Phase	Io (A)	Io (%)	0.95	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.70			
Io2 (A)	4.24	Po (W)	729.26	Passed
Io3(A)	5.89			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4202.97	4.50	12.32	Passed
Pt=(870+4000)+10% (W)		4932.23	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860302	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.732	2.705	2.727	0.00160	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.11	0.11	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	0.90	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.49			
Io2 (A)	4.15	Po (W)	768.49	Passed
Io3(A)	5.43			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4190.62	4.49	12.35	Passed

Pt=(870+4000)+10% (W)	4959.11	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860301	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.720	2.725	2.711	0.00161	0.00159	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.13	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.04	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.38			
Io2 (A)	4.61	Po (W)	733.20	Passed
Io3(A)	6.30			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4182.32	4.50	12.34	Passed
Pt=(870+4000)+10% (W)		4915.52	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/01

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860303	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.733	2.740	2.732	0.00162	0.00162	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.09	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.57			
Io2 (A)	4.75	Po (W)	749.81	Passed
Io3(A)	6.76			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4240.90	4.49	12.37	Passed

Pt=(870+4000)+10% (W)	4990.71	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/05/28*

A.Mohammadi

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860289	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.721	2.726	2.730	0.00163	0.00162	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.01	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.11			
Io2 (A)	4.42	Po (W)	734.75	Passed
Io3(A)	6.26			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.34	4.38	12.68	Passed
Pt=(870+4000)+10% (W)		4953.09	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860290	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.0(°C) and Low Voltage Resistances are measured at 20.0(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.762	2.769	2.768	0.00161	0.00162	0.00163	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.45			
Io2 (A)	4.88	Po (W)	739.56	Passed
Io3(A)	6.58			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4284.88	4.51	12.30	Passed
Pt=(870+4000)+10% (W)		5024.44	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860292	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.719	2.710	2.714	0.00161	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.05	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.32			
Io2 (A)	4.72	Po (W)	733.22	Passed
Io3(A)	6.48			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4181.24	4.53	12.25	Passed
Pt=(870+4000)+10% (W)		4914.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: *Stamp:* *Date :* *2024/05/29*

A.Mohammadi

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860287	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.0(°C) and Low Voltage Resistances are measured at 20.0(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.761	2.755	2.750	0.00159	0.00159	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.02	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.18			
Io2 (A)	4.58	Po (W)	742.69	Passed
Io3(A)	6.29			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4209.84	4.51	12.31	Passed
Pt=(870+4000)+10% (W)		4952.53	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860286	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.9(°C) and Low Voltage Resistances are measured at 22.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.731	2.720	2.735	0.00165	0.00163	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.61			
Io2 (A)	4.72	Po (W)	766.58	Passed
Io3(A)	6.65			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4223.07	4.40	12.61	Passed

Pt=(870+4000)+10% (W)	4989.65	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860288	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.9(°C) and Low Voltage Resistances are measured at 23.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.753	2.740	2.745	0.00163	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.07	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.45			
Io2 (A)	4.91	Po (W)	733.91	Passed
Io3(A)	6.53			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4220.71	4.44	12.51	Passed

Pt=(870+4000)+10% (W)	4954.62	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860163	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.753	2.750	2.743	0.00163	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.07	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.61			
Io2 (A)	4.61	Po (W)	745.80	Passed
Io3(A)	6.55			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4224.26	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	4970.06	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/25

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860196	Rated Power (kVA) :	400
Order Number :	V140115169	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.780	2.776	2.780	0.00159	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.07	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.47			
Io2 (A)	4.85	Po (W)	752.95	Passed
Io3(A)	6.43			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4205.54	4.60	12.08	Passed

Pt=(870+4000)+10% (W)	4958.49	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/27

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Final

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Serial Number :	K3860311	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.725	2.735	2.728	0.00161	0.00158	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.12	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.83			
Io2 (A)	4.91	Po (W)	753.51	Passed
Io3(A)	6.83			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4200.50	4.52	12.28	Passed

Pt=(870+4000)+10% (W)	4954.01	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

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Date :
2024/05/29

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Serial Number :	K3860310	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.700	2.702	2.690	0.00160	0.00158	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.84			
Io2 (A)	5.64	Po (W)	753.59	Passed
Io3(A)	7.93			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4167.07	4.46	12.45	Passed

Pt=(870+4000)+10% (W)	4920.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/06/05

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Serial Number :	K3860284	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.700	2.695	2.697	0.00164	0.00161	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.51	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.30			
Io2 (A)	6.37	Po (W)	809.26	Passed
Io3(A)	9.47			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.01	4.49	12.35	Passed

Pt=(870+4000)+10% (W)	5002.27	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/11

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860276	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.740	2.738	2.737	0.00166	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.09	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.43			
Io2 (A)	4.86	Po (W)	743.99	Passed
Io3(A)	6.38			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4222.87	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4966.86	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by:

A.Mohammadi

Stamp:

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date :
2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860294	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.740	2.741	2.737	0.00163	0.00162	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.05	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.37			
Io2 (A)	4.67	Po (W)	732.89	Passed
Io3(A)	6.44			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4219.32	4.43	12.52	Passed

Pt=(870+4000)+10% (W)	4952.21	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/29

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Fi...

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Serial Number :	K3860298	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.730	2.744	2.736	0.00162	0.00161	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.40			
Io2 (A)	4.65	Po (W)	753.72	Passed
Io3(A)	6.58			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4209.84	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4963.56	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/05/29

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Serial Number :	K3860299	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.720	2.712	2.711	0.00161	0.00161	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.11	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.21	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.27			
Io2 (A)	5.33	Po (W)	760.64	Passed
Io3(A)	7.47			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4188.46	4.38	12.66	Passed

Pt=(870+4000)+10% (W)	4949.10	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date :
2024/05/29

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Serial Number :	K3860308	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.747	2.734	2.744	0.00163	0.00160	0.00162	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.43			
Io2 (A)	4.63	Po (W)	749.43	Passed
Io3(A)	6.63			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4219.16	4.48	12.40	Passed

Pt=(870+4000)+10% (W)	4968.59	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Date : 2024/06/02

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Serial Number :	K3860305	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.733	2.721	2.728	0.00163	0.00160	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.03			
Io2 (A)	5.22	Po (W)	746.77	Passed
Io3(A)	7.31			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4190.17	4.46	12.44	Passed

Pt=(870+4000)+10% (W)	4936.94	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/28

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860309	Rated Power (kVA) :	400
Order Number :	V140115174	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.712	2.704	2.704	0.00156	0.00154	0.00154	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.30	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.07			
Io2 (A)	5.63	Po (W)	759.66	Passed
Io3(A)	7.88			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4130.19	4.50	12.35	Passed

Pt=(870+4000)+10% (W)	4889.85	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Room

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/15

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Serial Number :	K3860300	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.715	2.714	2.714	0.00159	0.00154	0.00154	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.12	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.77			
Io2 (A)	4.93	Po (W)	753.10	Passed
Io3(A)	6.91			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4133.36	4.42	12.56	Passed
Pt=(870+4000)+10% (W)		4886.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/28

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Serial Number :	K3860165	Rated Power (kVA) :	400
Order Number :	V140115168	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.734	2.733	2.727	0.00160	0.00159	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.11	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.76			
Io2 (A)	4.94	Po (W)	753.70	Passed
Io3(A)	6.79			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4168.83	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	4922.53	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

REVIEWED

Baltic Testing India Pvt. Ltd.

Date : 2024/05/25

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860281	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.735	2.731	2.725	0.00164	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.03	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.19			
Io2 (A)	4.63	Po (W)	731.79	Passed
Io3(A)	6.32			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4218.81	4.50	12.34	Passed

Pt=(870+4000)+10% (W)	4950.60	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/26

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Serial Number :	K3860285	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.0(°C) and Low Voltage Resistances are measured at 20.0(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.754	2.758	2.752	0.00161	0.00160	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.12	0.21	
Three	11000	45.80	0.13	0.06	0.15	Passed
Five	10450	43.51	0.04	0.05	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.71			
Io2 (A)	4.86	Po (W)	740.57	Passed
Io3(A)	6.78			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4191.72	4.46	12.45	Passed

Pt=(870+4000)+10% (W)	4932.29	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860271	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.752	2.754	2.741	0.00162	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.10	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.90			
Io2 (A)	4.76	Po (W)	758.51	Passed
Io3(A)	6.71			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4223.93	4.53	12.26	Passed

Pt=(870+4000)+10% (W)	4982.44	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by:

A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date :
2024/05/26

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Serial Number :	K3860268	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.768	2.760	2.760	0.00162	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.57			
Io2 (A)	4.81	Po (W)	746.11	Passed
Io3(A)	6.64			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4230.01	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4976.12	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/05/27

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Serial Number :	K3860266	Rated Power (kVA) :	400
Order Number :	V140115172	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.737	2.734	2.734	0.00158	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.55	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.43			
Io2 (A)	6.69	Po (W)	800.25	Passed
Io3(A)	9.62			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4189.72	4.53	12.25	Passed

Pt=(870+4000)+10% (W)	4989.97	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/06/16

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860291	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.3(°C) and Low Voltage Resistances are measured at 24.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.709	2.705	2.701	0.00164	0.00161	0.00161	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.15	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.97			
Io2 (A)	4.91	Po (W)	751.46	Passed
Io3(A)	7.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4199.00	4.52	12.27	Passed

Pt=(870+4000)+10% (W)	4950.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Date : 2024/06/02

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860355	Rated Power (kVA) :	400
Order Number :	V140115176	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.3(°C) and Low Voltage Resistances are measured at 25.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.713	2.717	2.704	0.00161	0.00159	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.29	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.80			
Io2 (A)	5.73	Po (W)	761.70	Passed
Io3(A)	7.89			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4181.14	4.51	12.32	Passed

Pt=(870+4000)+10% (W)	4942.84	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/06/05

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Serial Number :	K3860283	Rated Power (kVA) :	400
Order Number :	V140115173	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 20.9(°C) and Low Voltage Resistances are measured at 20.9(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.754	2.756	2.751	0.00158	0.00159	0.00160	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.06	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.30			
Io2 (A)	4.85	Po (W)	743.44	Passed
Io3(A)	6.50			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4229.33	4.50	12.35	Passed
Pt=(870+4000)+10% (W)		4972.77	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/26

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860464	Rated Power (kVA) :	400
Order Number :	V140115180	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 26.3(°C) and Low Voltage Resistances are measured at 26.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.723	2.724	2.724	0.00160	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.23	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.62			
Io2 (A)	4.82	Po (W)	727.37	Passed
Io3(A)	6.54			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4165.45	4.52	12.29	Passed

Pt=(870+4000)+10% (W)	4892.82	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

Date : 2024/07/04

Baltic Testing India Pvt. Ltd.

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SHERKATE SAHAMI AAM

ایران ترانسفو
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Serial Number :	K3860544	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.732	2.732	2.725	0.00159	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.13	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.12			
Io2 (A)	5.89	Po (W)	759.90	Passed
Io3(A)	8.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4162.06	4.46	12.43	Passed

Pt=(870+4000)+10% (W)	4921.96	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Hall

WITNESSED

Baltic Testing India Pvt. Ltd.

Date : 2024/07/09

IRAN-TRANSFO
SHERKATE SAHAMI AAM

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Serial Number :	K3860248	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 23.3(°C) and Low Voltage Resistances are measured at 23.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.692	2.692	2.698	0.00159	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	0.98	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	5.90			
Io2 (A)	4.48	Po (W)	719.68	Passed
Io3(A)	5.98			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4135.36	4.44	12.49	Passed

Pt=(870+4000)+10% (W)	4855.04	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

WITNESSED

Baltic Testing India Pvt. Ltd.

Date : 2024/05/23

IRAN-TRANSFO
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Serial Number :	K3860242	Rated Power (kVA) :	400
Order Number :	V140115171	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 22.3(°C) and Low Voltage Resistances are measured at 22.3(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.726	2.727	2.726	0.00160	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.08	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.53			
Io2 (A)	4.74	Po (W)	740.90	Passed
Io3(A)	6.70			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4189.44	4.52	12.28	Passed
Pt=(870+4000)+10% (W)		4930.34	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	---
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	---
	---	---	
Polarity			---
Leak Testing With Pressure (Tightness Test) :			---

Certified by: A.Mohammadi

Stamp:

Date : 2024/05/23

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860575	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.763	2.737	2.737	0.00159	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.36			
Io2 (A)	6.11	Po (W)	741.27	Passed
Io3(A)	7.38			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4173.33	4.55	12.21	Passed

Pt=(870+4000)+10% (W)	4914.60	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation, Factory No.3

Date : 2024/07/09

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860543	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.761	2.761	2.761	0.00159	0.00159	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.47	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	9.05			
Io2 (A)	6.30	Po (W)	762.33	Passed
Io3(A)	9.10			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4193.34	4.54	12.23	Passed

Pt=(870+4000)+10% (W)	4955.67	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/07/08

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Serial Number :	K3860506	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.731	2.729	2.730	0.00159	0.00158	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.52			
Io2 (A)	5.35	Po (W)	744.04	Passed
Io3(A)	7.55			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4191.33	4.50	12.34	Passed

Pt=(870+4000)+10% (W)	4935.37	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/07/07

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Serial Number :	K3860528	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 28.2(°C) and Low Voltage Resistances are measured at 28.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.753	2.753	2.755	0.00160	0.00156	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.23	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.07			
Io2 (A)	5.24	Po (W)	735.14	Passed
Io3(A)	7.14			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4187.52	4.52	12.27	Passed
Pt=(870+4000)+10% (W)		4922.66	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
	---	---	
Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

Date : 2024/07/07

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Serial Number :	K3860583	Rated Power (kVA) :	400
Order Number :	V140115185	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.750	2.742	2.749	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.23	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.44	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.79			
Io2 (A)	6.29	Po (W)	761.42	Passed
Io3(A)	8.90			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4215.63	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4977.05	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/12

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860483	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.755	2.755	2.756	0.00161	0.00159	0.00159	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.13	0.13	0.11	Passed
Five	10450	43.51	0.04	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.25	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.50			
Io2 (A)	5.71	Po (W)	736.49	Passed
Io3(A)	7.65			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4215.39	4.48	12.40	Passed
Pt=(870+4000)+10% (W)		4951.88	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: **A.Mohammadi**

Stamp:

Date : 2024/07/13

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860518	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.775	2.774	2.767	0.00160	0.00154	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.19	
Three	11000	45.80	0.13	0.13	0.11	Passed
Five	10450	43.51	0.04	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.33	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.04			
Io2 (A)	5.85	Po (W)	746.57	Passed
Io3(A)	8.20			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4215.36	4.55	12.20	Passed
Pt=(870+4000)+10% (W)		4961.93	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/13

Manufactured by Iran Transfo Corporation , Factory No.3

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Serial Number :	K3860527	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)		
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N
2.781	2.763	2.764	0.00159	0.00156	0.00158

NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N
One	11550	48.09	0.19	0.19	0.19
Three	11000	45.80	0.13	0.13	0.13
Five	10450	43.51	0.04	0.04	0.04

NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).

Passed

No Load Test

Phase	Io (A)	Io (%)	1.31
Io1(A)	7.89		
Io2 (A)	5.84	Po (W)	743.17
Io3(A)	8.15		

NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%

Passed

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)
4217.90	4.58	12.13

NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.

Passed

Pt=(870+4000)+10% (W)	4961.07	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/13

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Serial Number :	K3860495	Rated Power (kVA) :	400
Order Number :	V140115181	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 24.8(°C) and Low Voltage Resistances are measured at 24.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.791	2.771	2.776	0.00159	0.00157	0.00158	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.19	
Three	11000	45.80	0.13	0.13	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.23	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.51			
Io2 (A)	5.40	Po (W)	738.86	Passed
Io3(A)	7.62			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4225.62	4.51	12.31	Passed

Pt=(870+4000)+10% (W)	4964.48	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

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Serial Number :	K3860525	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)		
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N
2.757	2.757	2.760	0.00158	0.00156	0.00155

NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N
One	11550	48.09	0.19	0.21	0.21
Three	11000	45.80	0.13	0.11	0.13
Five	10450	43.51	0.04	0.07	0.04

NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).

Passed

No Load Test

Phase	Io (A)	Io (%)	1.34
Io1(A)	8.09		
Io2 (A)	6.01	Po (W)	753.87
Io3(A)	8.19		

NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%

Passed

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)
4210.05	4.60	12.06

NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.

Passed

Pt=(870+4000)+10% (W)	4963.92	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

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Serial Number :	K3860466	Rated Power (kVA) :	400
Order Number :	V140115180	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.763	2.750	2.753	0.00158	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.13	0.15	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.40	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.51			
Io2 (A)	6.24	Po (W)	761.76	Passed
Io3(A)	8.59			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4210.47	4.47	12.42	Passed
Pt=(870+4000)+10% (W)		4972.23	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/13

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Serial Number :	K3860590	Rated Power (kVA) :	400
Order Number :	V140115185	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.749	2.752	2.749	0.00157	0.00156	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.04	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.15	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	6.89			
Io2 (A)	5.31	Po (W)	728.10	Passed
Io3(A)	6.93			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4186.57	4.55	12.19	Passed

Pt=(870+4000)+10% (W)	4914.67	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

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Serial Number :	K3860580	Rated Power (kVA) :	400
Order Number :	V140115185	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.738	2.740	2.726	0.00158	0.00154	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.21	0.21	
Three	11000	45.80	0.15	0.13	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.10			
Io2 (A)	5.31	Po (W)	729.29	Passed
Io3(A)	7.05			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4175.11	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4904.40	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	– – –
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	– – –
	---	---	
Polarity			– – –
Leak Testing With Pressure (Tightness Test) :			– – –

Certified by: A.Mohammadi

Stamp:

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Date : 2024/07/13

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شرکت سهامی عام

Serial Number :	K3860588	Rated Power (kVA) :	400
Order Number :	V140115185	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.764	2.764	2.766	0.00159	0.00157	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.19	0.21	
Three	11000	45.80	0.13	0.15	0.15	Passed
Five	10450	43.51	0.04	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.17	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.13			
Io2 (A)	5.19	Po (W)	724.25	Passed
Io3(A)	7.21			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4217.87	4.50	12.33	Passed
Pt=(870+4000)+10% (W)		4942.12	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
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Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/13

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Baltic Testing India Pvt. Ltd.

IRAN-TRANSFO
SHERKATE SAHAMI AAM

ایران ترانسفو
شرکت سهامی عام

Serial Number :	K3860536	Rated Power (kVA) :	400
Order Number :	V140115183	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.764	2.769	2.766	0.00157	0.00157	0.00155	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.21	
Three	11000	45.80	0.13	0.11	0.13	Passed
Five	10450	43.51	0.04	0.04	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.34	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	8.20			
Io2 (A)	6.07	Po (W)	754.10	Passed
Io3(A)	8.05			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4225.81	4.60	12.07	Passed

Pt=(870+4000)+10% (W)	4979.91	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
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Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/13

Manufactured by Iran Transfo Corporation , Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860561	Rated Power (kVA) :	400
Order Number :	V140115184	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz):	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 27.2(°C) and Low Voltage Resistances are measured at 27.2(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.749	2.744	2.751	0.00158	0.00156	0.00156	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.21	0.19	0.21	
Three	11000	45.80	0.15	0.15	0.15	Passed
Five	10450	43.51	0.07	0.07	0.07	

No Load Test

Phase	Io (A)	Io (%)	1.27	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.80			
Io2 (A)	5.50	Po (W)	743.46	Passed
Io3(A)	7.80			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4185.00	4.50	12.33	Passed

Pt=(870+4000)+10% (W)	4928.46	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	— — —
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	— — —
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Polarity			— — —
Leak Testing With Pressure (Tightness Test) :			— — —

Certified by: A.Mohammadi

Stamp:

Date : 2024/07/13

Manufactured by Iran Transfo Corporation, Factory No.3

Iran Transfo Corporation — Quality Assurance — H.V. Test Field

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Serial Number :	K3860522	Rated Power (kVA) :	400
Order Number :	V140115182	Rated Voltages (V) :	11000.0 / 416.0
Transformer Type :	401D1	Rated Currents (A) :	21.00 / 555.10
Vector Group :	Dyn11	Voltage Taps :	11000.0 ± 5.00 % in 5 Step
Installation :	Outdoor	Frequency (Hz) :	50
Cooling Method :	ONAN	Short Circuit Duration :	5s

Resistance Value at 20°C

H.V. (Ω)			L.V. (Ω)			NOTE: High Voltage Resistances are meassured at 25.8(°C) and Low Voltage Resistances are measured at 25.8(°C) and corrected to 20(°C).
1U-1V	1V-1W	1W-1U	2U-2N	2V-2N	2W-2N	
2.760	2.766	2.766	0.00159	0.00157	0.00157	

Turn Ratio and Vector Group Test (error in percent)

Tap	Voltage	Rated	1U-1V/2U-2N	1V-1W/2V-2N	1W-1U/2W-2N	NOTE: According to IEC 60076-1 acceptable tolerance of turn ratio test on nominal tap is 0.45 (%).
One	11550	48.09	0.19	0.21	0.23	
Three	11000	45.80	0.13	0.13	0.11	Passed
Five	10450	43.51	0.04	0.07	0.04	

No Load Test

Phase	Io (A)	Io (%)	1.21	NOTE: According to IEC 60076-1guaranteed value for Po is Po=870.0+15%
Io1(A)	7.45			
Io2 (A)	5.21	Po (W)	735.85	Passed
Io3(A)	7.45			

Load Loss & Short Circuit Impedance at 75°C

Pk (W)	Uk (%)	Isc (kA)	NOTE: According to IEC 60076-1guaranteed values for Pk and Uk(%) are Pk= 4000 +15% & Uk(%)=4.5 ±10%.
4213.93	4.49	12.36	Passed

Pt=(870+4000)+10% (W)	4949.78	Passed

Dielectric Tests

Induced Voltage Duration= 40 s	L.V.	V=832 V f= 150Hz	Passed
Withstand Voltage Duration= 60 s	L.V./Core	V= 3kV f= 50Hz	Passed
	H.V./L.V. Core	V=28kV f= 50Hz	
Auxiliary Wiring Insulation Test Duration= 60 s		Vac=----- ---	- - -
Core and Frame Insulation Duration= 60 s		Vdc= 500 V	Passed

Ratio and Polarity of Built - in current Transformer

Ratio	Rated	N1/N2	- - -
	---	---	
Polarity			- - -
Leak Testing With Pressure (Tightness Test) :			- - -

Certified by: **A.Mohammadi**

Stamp:

Date : 2024/07/13

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