



# Transformer Rectifier Data Sheet

## GENERAL

In impressed current cathodic protection systems, DC current shall be impressed to ground beds and cathodic structures. This DC current are supplied by transformer rectifiers.

## GENERAL INFORMATION

<b>STANDARD</b>	IPS-M-EL-155: Material and Equipment Standard for Transformer Rectifiers for Cathodic Protection Paintig: BS 381C, IPS-E-TP-100, PR-01-84, SSPC		
<b>REFERENCES DOCUMENT</b>	MTO for Cathodic Protection		
1	<b>Site Condition</b>	Max. Ambient Temperature:	+50 °C
		Min. Ambient Temperature:	-20 °C
		Altitude Above sea level:	1600 m max
		Relative Humidity:	90% max
		Service Location:	Indoor <input type="checkbox"/> Outdoor <input checked="" type="checkbox"/>
2	<b>Degree of Ingress Protection</b>	- <b>Explosion Proof</b>	<b>Class:</b>
		<input checked="" type="checkbox"/> <b>Safe</b>	<b>Group:</b>
			<input checked="" type="checkbox"/> <b>IP</b>
			55
3	<b>Mounting</b>	<input type="checkbox"/> Pole Mounted	<input checked="" type="checkbox"/> Pad Mounted
		<input type="checkbox"/> Wall Mounted	<input type="checkbox"/> Universal Type for Wall & Pole
4	<b>Color Finishing</b>	Color: Gray	Thickness of Color: 270 micron
		RAL: 7035	No. of Color Layer: 3 Layer
		Type of color : As Per As Attachment	
5	<b>Dimension &amp; Weight (Without Sunshade)</b>	Height: 1500 mm	Depth: 1580 mm
		Width: 850 mm	Weight: 900 kg
		Housing Type: O6	
6	<b>Cooling System</b>	<input checked="" type="checkbox"/> Oil Immersed (ONAN)	
		<input type="checkbox"/> Air Natural (AN)	
		<input type="checkbox"/> Air Forced (AF)	
7	Transformer Oil	Oil capacity : 680 Liter	



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MEASUREMENT INSTRUMENT				
1	<b>Mechanical Measurement Device</b>	<input checked="" type="checkbox"/>	Dial Type Thermometer Scaled From 0 to 120°C	
		<input checked="" type="checkbox"/>	Oil Gage	
2	<b>Electrical Measurement Device</b>	<input checked="" type="checkbox"/> Analog	<input type="checkbox"/> AC Input Voltmeter Scaled from	to
			<input type="checkbox"/> AC Input Ammeter Scaled from	-- to --
			<input checked="" type="checkbox"/> DC Output Voltmeter Scaled from	0 to 75
			<input checked="" type="checkbox"/> DC Output Ammeter Scaled from	0 to 450
			<input type="checkbox"/> Reference Cell Voltage Scaled from	to
		<input type="checkbox"/> Digital	<input type="checkbox"/> AC Input Voltmeter	-- to --
			<input type="checkbox"/> AC Input Ammeter	-- to --
			<input type="checkbox"/> DC Output Voltmeter	-- to --
<input type="checkbox"/> DC Output Ammeter	-- to --			
ELECTRICAL CHARACTERISTICS				
1	AC Input Rating	Phase:	3Ph+N	Voltage: 400 V $\pm$ 10%
		Frequency:	50 Hz $\pm$ 5%	Current: 39.66 A
2	DC Output Rating	Output No: 1 No.		
		<input checked="" type="checkbox"/> Output No 1:	Voltage:	50 V
			Current:	400 A
			Max Ripple(in full load):	%
3	Output Control Modes	<input checked="" type="checkbox"/> Manual	<input type="checkbox"/> 63 Steps (With fine,Medium & Course Selectors)	<input checked="" type="checkbox"/> Constant Current <input checked="" type="checkbox"/> Constant Voltage <input type="checkbox"/> Constant Potential
			<input checked="" type="checkbox"/> Amp-O-Matic	
			<input type="checkbox"/> Regavolt	
			<input type="checkbox"/> Amp-O-Matic/Regavolt	
		<input type="checkbox"/> Smart	<input type="checkbox"/> Constant Potential (1Reference Electrode)	
			<input type="checkbox"/> Micro Processor Control(...Reference Electrode)	
4	Timer Circuit	Continues	Time Switch	<input checked="" type="checkbox"/> 1.5-120 Sec ON 1.5-120 Sec OFF <input type="checkbox"/> 15-300 Sec ON 15-300 Sec OFF



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## ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS							
5	Rectifying Unit	Stack Elements	<input checked="" type="checkbox"/> SCR		<input checked="" type="checkbox"/> Silicon		<input type="checkbox"/> Selenium
		Rectifier Mode	<input type="checkbox"/> 1 Phase			<input checked="" type="checkbox"/> 3 Phase	
		Rectification Type	<input checked="" type="checkbox"/> Full Wave thyristor Controlled Bridge				
			<input type="checkbox"/> Full Wave Full Diode Bridge				
		Circuit	1	2	3	4	5
		Current Rating:	450 A				
		Peak Inverse Voltage (PIV):	1200 V				
6	Power Transformer Rating	Vector Group: <b>Dd0</b>					
		Temperature Class: <b>B</b>					
		Winding Insulation: <b>B</b>					
		Efficiency: <b>95%</b>					

## PROTECTIONS

1	AC Input Rating	<input checked="" type="checkbox"/> HRC Fuse	50 A	<input checked="" type="checkbox"/> 3 Phase Monitoring Relay
		<input type="checkbox"/> MCB	A	<input checked="" type="checkbox"/> Surge Protection
		<input checked="" type="checkbox"/> Rectifier Fuse	350 A	
2	DC Output Rating	<input checked="" type="checkbox"/> Output No 1:	<input checked="" type="checkbox"/> Semiconductor Fuse	450 A
			<input checked="" type="checkbox"/> Surge Protection	
			<input checked="" type="checkbox"/> Voltmeter Fuse	
			<input type="checkbox"/> Output MCCB	-- A

## FITTING REQUIRED

<input checked="" type="checkbox"/> Oil Breather	<input checked="" type="checkbox"/> Sun Shade
<input checked="" type="checkbox"/> Oil Drain Cock	<input checked="" type="checkbox"/> Lifting Lugs
<input checked="" type="checkbox"/> Oil Level Site Gage	<input checked="" type="checkbox"/> Pad Lock For Insulating Means



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## Type of Surface Preparation

☐ Manual Cleaning

☒ Blast Cleaning

☐ Chemical Cleaning

Standard SIS 055900

Cleaning System Sa 2 1/2

## Color Finishing

Color Gray

Ral Code 7035

Type of Primer Type Red Lead Primer

No .Of layer 1 Layer

Pre Paint Thickness 70 microns min

Type of Second coat Alkyd Paint

No .of layer 1 layer

Thickness of Second coat 100 microns min

Type of Finish coat Alkyd

No .of layer 1 layer

Thickness of Finish coat 100 microns min

Total thickness of painting 270 microns min