



# 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

STANDARD		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						
REFERENCES DOCUMENT		MTO for Cathodic Protection						
1	Site Condition	Max. Ambient Temperature:		+50 °C				
		Min. Ambient Temperature:		-20 °C				
		Altitude Above sea level:		1600 max				
		Relative Humidity:		90% max				
		Service Location:			Indoor	<input checked="" type="checkbox"/> Outdoor		
2	Degree of Ingress Protection	-	Explosion Proof		Class:		Group:	
		<input checked="" type="checkbox"/>	Safe	<input checked="" type="checkbox"/> IP		55		
				<input checked="" type="checkbox"/> Weather Proof				
				<input checked="" type="checkbox"/> Corrosion Resistant				
				<input checked="" type="checkbox"/> General Propose				
3	Mounting	<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	Color Finishing	Color: Gray			Thickness of Color: 270 micron			
		RAL: 7035			No. of Color Layer: 3 Layer			
		Type of color : As Per As Attachment						
5	Dimension & Weight (Without Sunshade)	Height: 1500 mm			Depth: 1580 mm			
		Width: 850 mm			Weight: 900 kg			
		Housing Type: O6						
6	Cooling System	<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	Mechanical Measurement Device	<input checked="" type="checkbox"/>	Dial Type Thermometer Scaled From 0 to 120°C	
		<input checked="" type="checkbox"/>	Oil Gage	
2	Electrical Measurement Device	<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 350
			<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: 29.74 A
2	DC Output Rating	Output No: 1 No.		
		<input checked="" type="checkbox"/> Output No 1:	Voltage:	50 V
			Current:	300 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(6 pulse)				
			<input type="checkbox"/> Full Wave Full Diode Bridge				
		Circuit	1	2	3	4	5
		Current Rating:	400 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	<b>35 A</b>	<input checked="" type="checkbox"/> 3 Phase Monitoring Relay
		<input type="checkbox"/> MCB	<b>A</b>	<input checked="" type="checkbox"/> Surge Protection
		<input checked="" type="checkbox"/> Rectifier Fuse	<b>315 A</b>	
2	DC Output Rating	<input checked="" type="checkbox"/> Output No 1:	<input checked="" type="checkbox"/> Semiconductor Fuse	<b>350 A</b>
			<input checked="" type="checkbox"/> Surge Protection	
			<input checked="" type="checkbox"/> Voltmeter Fuse	
			<input type="checkbox"/> Output MCCB	<b>-- A</b>

## 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

<input type="checkbox"/> Manual Cleaning	
<input checked="" type="checkbox"/> Blast Cleaning	
<input type="checkbox"/> 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