

Impressed Current Cathodic Protection

Power Supplies / Air Cooled Transformer Rectifiers

PS 01.001

Air Cooled Transformer Rectifiers

Our range of Air Cooled Transformer Rectifiers for the Cathodic Protection of Steel Structures including jetties, pipelines and tank farms, have been designed to comply with the most stringent industry specifications and appropriate environmental conditions where continual Operational Safety and Reliability are paramount.

All units are manufactured to rigorous safety regulations and quality assurance procedures under our ISO 9001 certification, fully in accordance with all applicable British and European standards.





Applications

Our Air Cooled Transformer Rectifiers are designed for applications where lower current units are required, generally up to 50 amperes and are suitable for environments in ambient temperatures up to 55°C whether indoors or outside. The units are generally smaller and of lighter weight than oil cooled units and are particularly suited to non-hazardous area applications where the size and weight of an oil cooled transformer rectifier would make installation prohibitive.

They are designed and manufactured with a wide variety of innovative features, and every aspect of their design can be customised to suit the application or client specification.

In order to accommodate every possible application, we are able to incorporate a wide variety of specialised features into our customised transformer rectifiers, including local and remote monitoring of output voltage, current, reference electrode potentials, and remote control of output voltage and current.

Features

Enclosures

- Painted Mild Steel
- Glass Reinforced Plastic (GRP)
- Stainless Steel grades 304 or 316.

Control

- Continuously Variable Transformer (Variac)
- Discrete Step Switching in 16, 20, 25 or 63 Steps (Step Control)
- Constant Current / Constant Voltage
- Automatic Potential Controlled.

Input Supply

- 115V to 240V single phase
- Up to 660V three phase.

Additional Features

- GPS Synchronous Current Interruption
- Data Logging of Output Voltage, Current and Reference Electrode Potential
- Remote Monitoring and Control using the Internet, Satellite, GSM Cellular, or RS232/RS485 network
- Trip Alarms for Output Voltage, Current, Reference Electrode Potential, AC Input Voltage, Phase Failure.



ENCLOSURE FITTINGS	External earth bolt	✓
	Sunshade	○
	ID Label	✓
	Rating Plate	✓
	Operating & Maintenance Manual	✓
	Laminated Circuit Diagram	○
	Anchor Bolts	○
	Lifting lugs	○
	Padlock Facility	○
	Cable Entry	○ Glands (Armoured) ○ Glands (Un-armoured)
MOUNTING	Mounting	● Wall ○ Floor ○ Free - standing frame ○ H - frame ○ Pole
	Output Voltmeter & Ammeter	● Analogue 90° Scale † ○ Analogue 240° Scale † ○ Digital 3.5 Digit ○ Digital 4.5 Digit
METERING	Reference Potential Meter	○ Analogue 90° Scale † ○ Analogue 240° Scale † ○ Digital 3.5 Digit ○ Digital 4.5 Digit
	Input Voltmeter	○
	Input Ammeter	○
	Hours Run Counter	○
	Kilowatt Hour Meter	○
	Output Meter Monitor sockets (4mm)	○

† Also available hermetically sealed and tropicalised if required.

- KEY**
- ✓ = Included as standard.
 - = Included as standard but other options available.
 - = Optional Extra

ELECTRICAL	Input MCB	✓
	Isolator Switch	○
	Surge/Lightning Arrester DC	✓
	Surge/Lightning Arrester AC	○
	A.C. Healthy Neon	○
	Input RCD / ELCB	○
	Service Fuse Unit (SFU)	○
	Door Interlocked Isolator	○*
	Anti-Condensation Heater & Switch	○
	Rectifier Fuses	○*
	Smoothing/Efficiency Circuit	○*
	RFI Suppression Filters	○
	Auxiliary AC Socket (to suit client requirements)	○
	Output Termination	● Studs ○ Terminals
	Output Protection	● Fuse ○ MCB
	MONITORING	Transducer for Output Current
Transducer for Output Voltage		○
Transducer for Reference Potential		○
DC Low Output / Failure Alarm		○
Failure alarm		○ AC ○ DC
AC Phase Monitor (3 Phase only)		○
Current Interruption		○ Synchronous ○ Non synchronous ○ GPS synchronous
Timer Link (For Portable Timer)		○
Remote Monitoring and Control Unit (Watchdog CP)		○
Data Logger Units with GPS Synchroniser (CARMS)		○

* Included as standard in CC-CV and Fully Automatic Units

Size and weight dependent on material of enclosure, DC output rating and ambient temperature.

Diagram 1: Sample Air Cooled TR Circuit Diagram

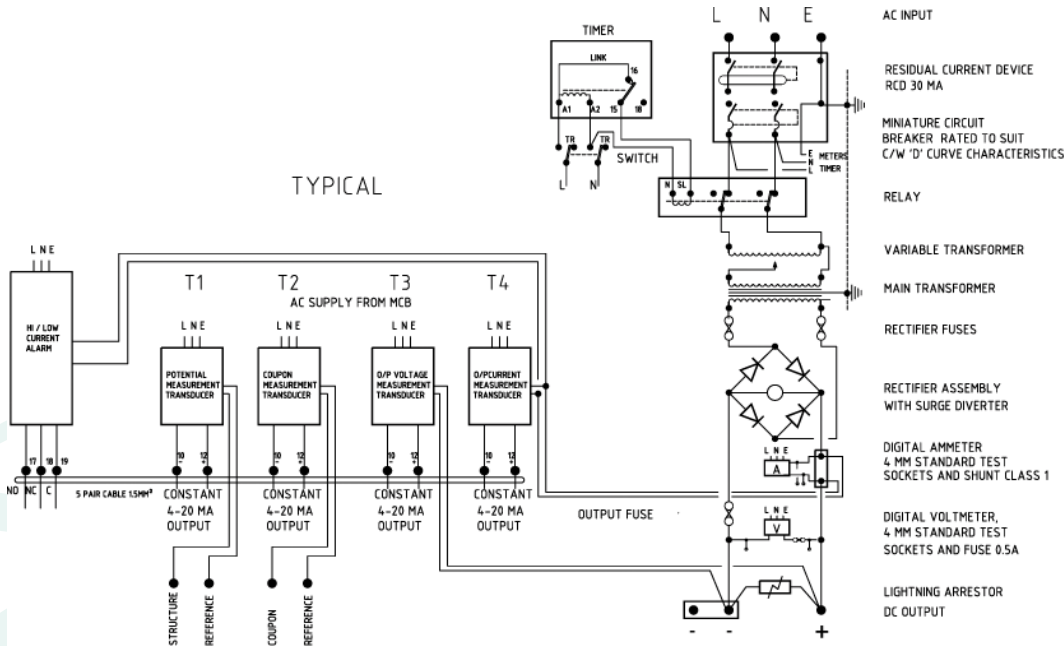
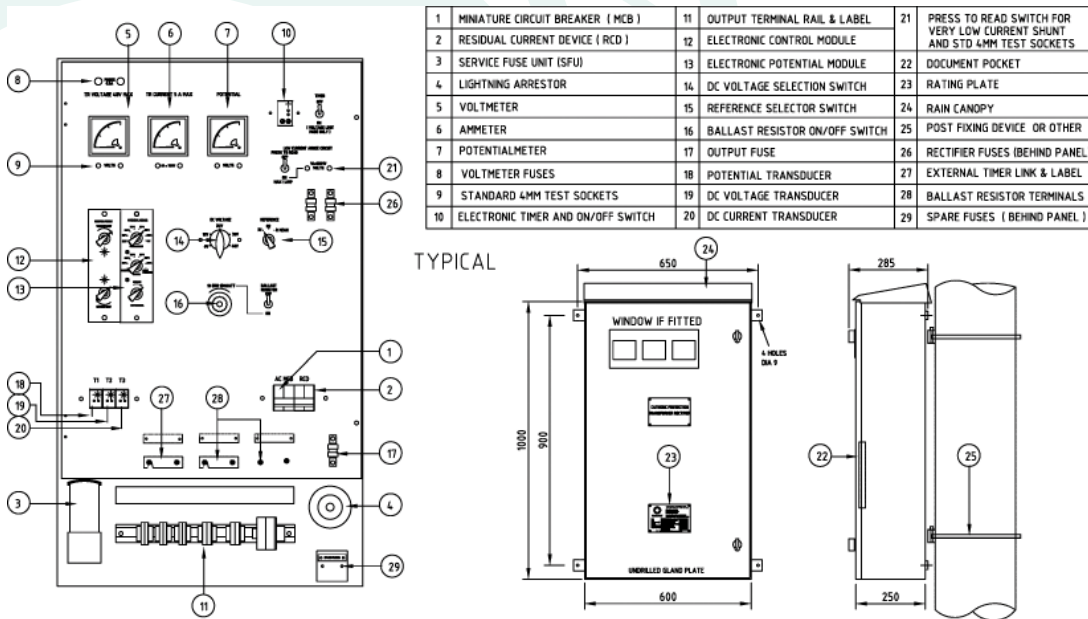


Diagram 2: Sample Air Cooled TR Outline Diagram



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