

# Air Cooled Transformer Rectifier

*Impressed current cathodic protection power supplies*

ENERGY & MINING



**HOCKWAY™**  
A Corpro® Company

# Air Cooled Transformer Rectifiers

Our range of air cooled transformer rectifiers for the cathodic protection of steel structures, including jetties, pipelines and tank farms are designed to comply with the most stringent industry specifications and environmental conditions where 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 International standards.

## APPLICATIONS

Our air cooled transformer rectifiers are designed for applications where lower current outputs are required and can be manufactured up to 50 amperes and are suitable for environments in ambient temperatures up to 55°C whether indoors or outdoors. 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 variety of innovative features and every aspect of their design can be customised to suit an application or client specification.

In order to accommodate every possible application, we are able to incorporate specialised features into our 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 480V three phases

### 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 mobile and RS232/RS485 interfaces
- Trip alarms for output voltage, current, reference electrode potential, AC input voltage or phase failure



## ENCLOSURE AND FITTINGS

Sunshade	<input type="radio"/>
ID label	<input checked="" type="checkbox"/>
Rating plate	<input checked="" type="checkbox"/>
Operating and maintenance manual	<input checked="" type="checkbox"/>
Laminated circuit diagram	<input type="radio"/>
Anchor bolt	<input type="radio"/>
Lifting lugs	<input type="radio"/>
Padlock Facility	<input type="radio"/>
Cable Entry	<input type="radio"/> Glands (armoured) <input type="radio"/> Glands (un-armoured)
Mounting	<input checked="" type="radio"/> Wall <input type="radio"/> Floor <input type="radio"/> Free-standing frame <input type="radio"/> H-frame <input type="radio"/> Pole
External earth bolt	<input checked="" type="checkbox"/>

## METERING

Output voltmeter and ammeter	<input checked="" type="radio"/> Analogue 90° Scale † <input type="radio"/> Analogue 240° Scale † <input type="radio"/> Digital 3.5 digit <input type="radio"/> Digital 4.5 digit
Reference potential meter	<input type="radio"/> Analogue 90° Scale † <input type="radio"/> Analogue 240° Scale † <input type="radio"/> Digital 3.5 digit <input type="radio"/> Digital 4.5 digit
Input voltmeter	<input type="radio"/>
Input ammeter	<input type="radio"/>
Hours run counter	<input type="radio"/>
Kilowatt hour meter	<input type="radio"/>
Output meter monitor sockets (4mm)	<input type="radio"/>

† Also available hermetically sealed and tropicalised, if required.

### KEY

✓ = Included as standard

● = Included as standard but other options available

○ = Optional extra

## ELECTRICAL

Input MCB	<input checked="" type="checkbox"/>
Isolator switch	<input type="radio"/>
Surge/lightning arrestor DC	<input checked="" type="checkbox"/>
Surge/lightning arrestor AC	<input type="radio"/>
AC healthy neon	<input type="radio"/>
Input RCD/ELCB	<input type="radio"/>
Service Fuse Unit (SFU)	<input type="radio"/>
Door interlocked isolator	<input type="radio"/> *
Anti-condensation heater and switch	<input type="radio"/>
Rectifier fuses	<input type="radio"/> *
Smoothing/efficiency circuit	<input type="radio"/> *
RFI suppression filters	<input type="radio"/>
Auxiliary AC socket (to suit client requirements)	<input type="radio"/>
Output termination	<input checked="" type="radio"/> Studs <input type="radio"/> Terminals
Output protection	<input checked="" type="radio"/> Fuse <input type="radio"/> MCB

## MONITORING

Transducer for output current	<input type="radio"/>
Transducer for output voltage	<input type="radio"/>
Transducer for reference potential	<input type="radio"/>
DC low output/failure alarm	<input type="radio"/>
Failure alarm	<input type="radio"/> AC <input type="radio"/> DC
AC phase monitor (3 phase only)	<input type="radio"/>
Current interruption	<input type="radio"/> Synchronous <input type="radio"/> Non synchronous <input type="radio"/> GPS synchronous
Timer link (for portable timer)	<input type="radio"/>
Remote monitoring and control unit	<input type="radio"/>
Data logger units with GPS synchroniser	<input type="radio"/>

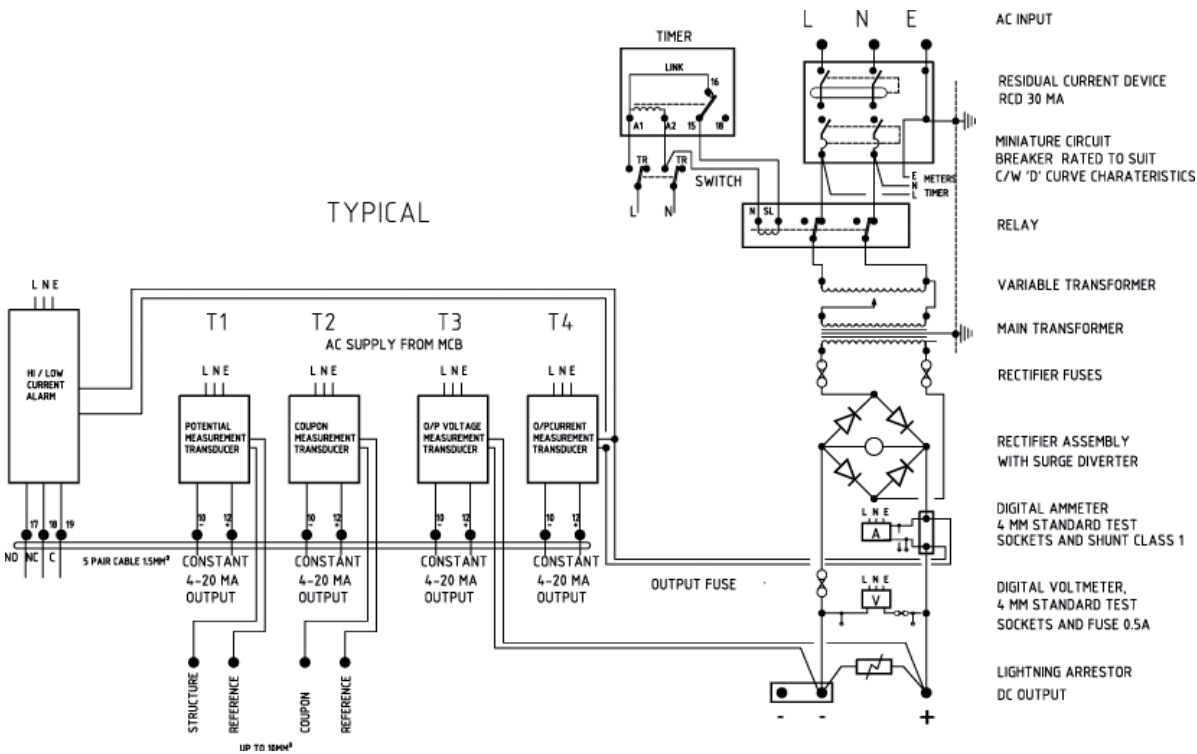
\* Included as standard in CC-CV and fully automatic units.

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

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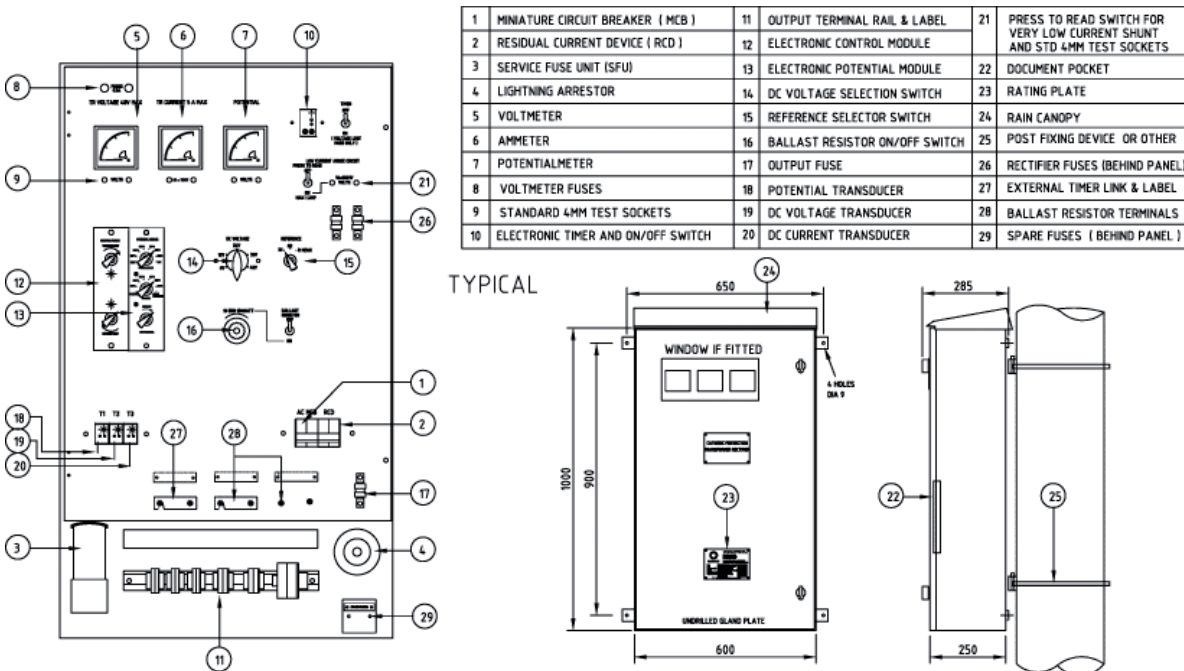
**DIAGRAM 1**

**Typical Air Cooled Circuit Diagram**



**DIAGRAM 2**

**Typical Air Cooled Outline Diagram**



**Hockway UK Head Office**

Unit 6 Trowers Way Centre, Holmehorpe Industrial Estate,  
Redhill, Surrey RH1 2LP, United Kingdom  
Tel: +44(0)1737 762222  
Fax: +44(0)1737 236100

**Hockway Middle East FZC**

PO Box 440136  
Dubai, UAE  
Tel: +971(0)4 3263120  
Fax: +971(0)4 326 3122

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