Hazardous Area (ATEX Certified) Transformer Rectifiers

Impressed current cathodic protection power supplies

ENERGY & MINING

HOCKWAY™

A Corrpro® Company

Hazardous Area (ATEX Certified) Transformer Rectifiers

Our range of ATEX Certified oil cooled hazardous area transformer rectifiers are designed, manufactured and fully certified under our ATEX license for use in Zone 2 hazardous areas with gas group IIB (Baseefa 07ATEX 0155) and IIC (Certified No 07 ATEX 0261). For absolute safety Hockway build integrated certified units, rather than build boxes and enclosures with individual certification.

These ATEX Certified transformer rectifiers are supplied specifically for the cathodic protection of steel structures, including jetties, pipelines, tank farms, offshore structures and vessels and are designed to comply with the most stringent industry specifications and environmental conditions where operational safety and reliability are paramount. Being in the ONAN (Oil Natural Air Natural) cooling category they are inherently more reliable than oil circulated and forced air designs

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 ATEX Certified oil cooled hazardous area transformer rectifiers are designed for use in Zone 2 hazardous areas temperature class T3, where the highest standards of equipment safety are required. Typical applications include oil refineries, LNG plants, chemical plants and offshore installations. Units can operate in ambient temperatures up to 55°C with current ratings up to 600A. Multiple output channels can be built into a single rectifier enclosure, if required.

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 – Sealed to a protective category of IP66, ATEX fully certified for hazardous area Zone 2, Gas Group IIB or IIC

- Mild steel heavy duty welded with flame zinc spray and 2 part epoxy/polyurethane coating
- Painted stainless steel heavy duty welded 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 control

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

TYPICAL SIZES AND WEIGHTS

Max power output (power = DC voltage x DC current)			Type	Dimensions (Excl. sunshade) H x W x D mm	Nominal weight (Kg)	Oil required (l)
CC/CV auto	Three-phase 415V manual	Single-phase 230V manual				
2,700	3,700	1,600	VS	1200 x 1050 x 900	500	190
3,500	5,800	2,900	S	1400 x 1050 x 900	600	250
5,900	8,400	4,200	M	1400 x 1550 x 900	850	440
7,300	11,600	5,200	L	1600 x 1550 x 900	1000	540
17,100	27,000	12,000	L + 4R	1600 x 1550 x 950	1100	570
26,800	42,500	18,800	L + 8R	1600 x 1550 x 1100	1200	600

Sizes based on 55°C Ambient temperature, in cooler climates sizes may be reduced.

Units based on standard specification with no optional extras. With optional extras depth and weight may increase.

ENCLOSURE AND FITTINGS

Oil level gauge	✓
Oil filling pipe	✓
Oil drain valve	✓
Breather - silica gel	✓
Skid under base	✓
External/earth bolt	✓
Sunshade	✓
ID label	✓
Rating plate	✓
Dial type thermometer	✓
Operation and maintenance manual	✓
First filling of oil to BS148/ IEC296	✓
Laminated circuit diagram	○
Anchor bolts	○
Lifting lugs	✓
Meter viewing window	✓
Padlock facility	✓
Hinged Lid	○
Lid toggle latches	○
Cable entry	○ Glands (armoured)

METERING

Output voltmeter and ammeter	● Analogue 90° Scale † ○ Analogue 240° Scale † ○ Digital 3.5 digit ○ Digital 4.5 digit
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.

ELECTRICAL

Input MCB	✓
External isolator	✓
Surge/lightning arrestor DC	✓
Surge/lightning arrestor AC	○
AC healthy neon	○
Input RCD/ELCB	○
Door interlocked isolator	○
Over temperature trip	✓
Anti-condensation heater and 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	○
Data logger units with GPS synchroniser	○

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

** Included as standard in 3-phase CC-CV and 3-phase fully automatic units.

KEY

✓ = Included as standard ● = Included as standard but other options available ○ = Optional extra

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DIAGRAM 1

Typical ATEX (Hazardous) TR Circuit Diagram

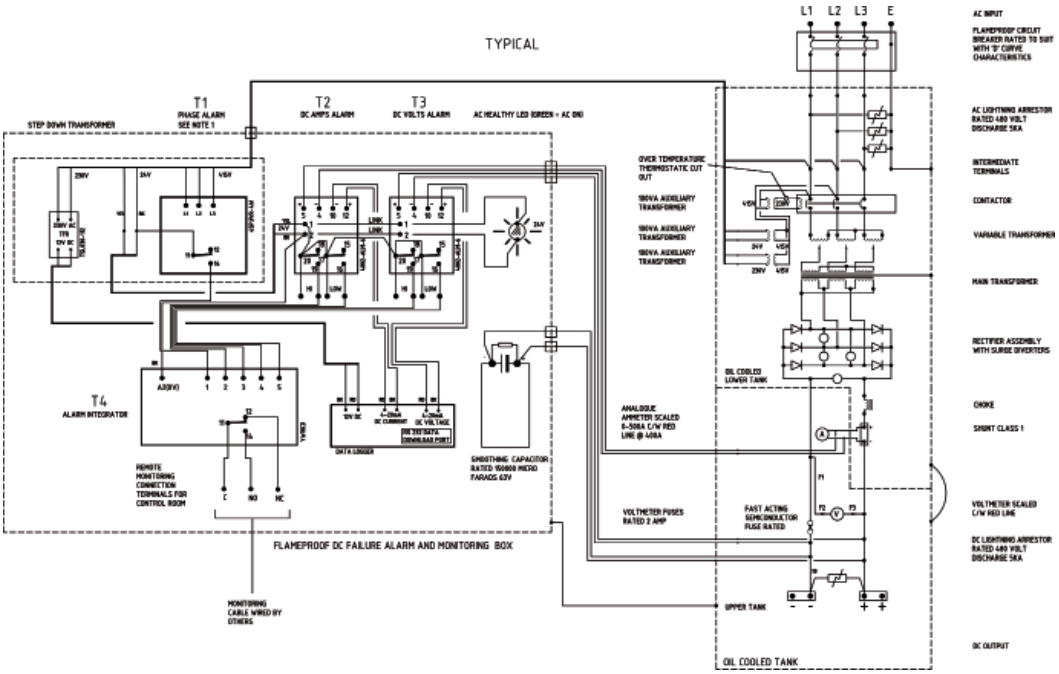
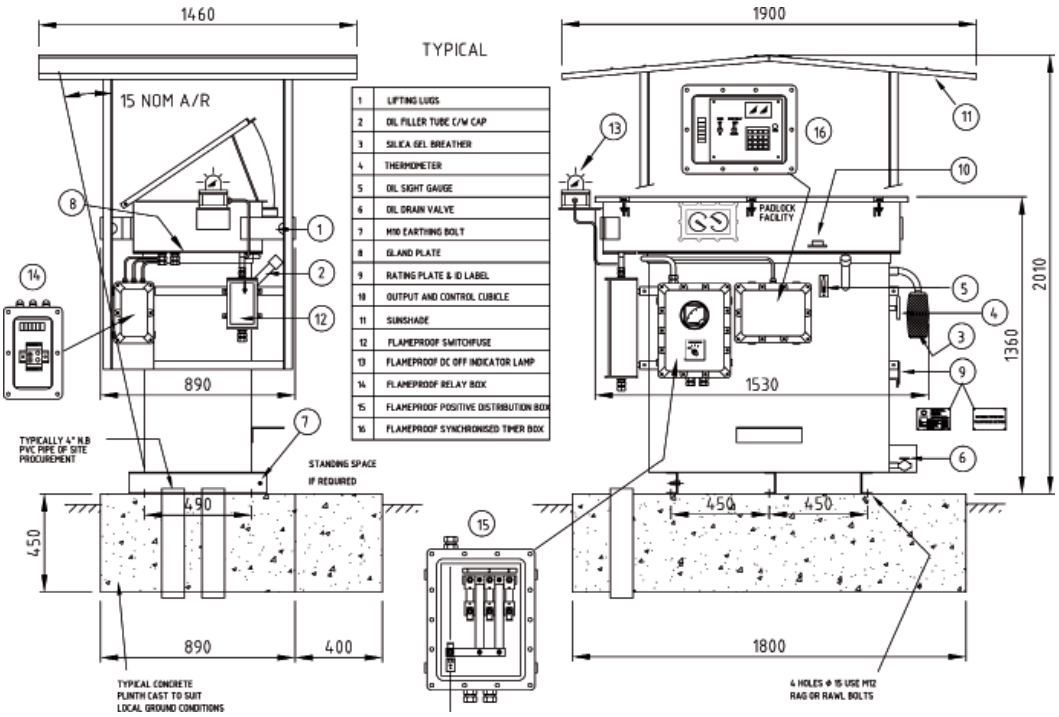


DIAGRAM 2

Typical ATEX (Hazardous) TR Outline Diagram



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