



# Transformer Rectifiers

Transformer Rectifier Unit System Technology



# Clearly the best protection...



**Cathodic Protection Co Ltd have been leaders in the industry for 40 years.**

**Providing Transformer Rectifier units worldwide.**

## Core Values

- **Customer Focus**
- **Performance**
- **Teamwork**
- **Innovation**
- **Value**

Cathodic Protection Co Ltd has been manufacturing Transformer Rectifier units for over 40 years, with over 6,000 units in operation in over 35 countries. Experience shows that our customers demand quality, versatility and cost effectiveness when choosing their Cathodic Protection power supply units. That's why we developed the TRUst™ range of Transformer Rectifiers - updating technology, retaining quality and meeting the needs of our increasingly diverse client base.

Some of our most recent clients include Technip, Tecnicas Reunidas, Saipem, with end-users such as SABIC, Sonatrach, and BP. With the diversity of our clients' specification requirements, we were offered the challenge to develop a product reliable and simple to understand, which met the needs of today's corrosion engineers.

We work hand in hand with our clients to deliver proven products that meet or exceed project specifications. Our purpose-built manufacturing facility in the UK has the capacity to handle any requirement a customer may have. We recognise above all that our Transformer Rectifiers must be delivered on time, on budget and ready to get to work. TRUst™ takes Transformer Rectifier specification into the 21st century - practical, workable solutions that deliver exactly what the customer wants, when they want it.

Here you can find some of the main features of the TRUst™ system and what specific options are available to you.



# Our Services



## Generic Specification Features

- 1 phase or 3 phase AC supply to suit customer requirements
- Cooling oil natural, air natural, air ventilated, air forced
- Safe area up to IP65
- Hazardous area zone 1 air cooled
- Hazardous area zone 2 oil cooled (Thyristor only)
- Output range available up to and over 1000A DC

## Enclosures and Fabrication

We design our own tanks and cabinets in the following materials:

- Mild steel sheet
- Stainless steel 304 and 316L
- GRP
- Aluminium

The thickness chosen is based upon weight/stress, environment and client specifications. We offer a wide range of finishing and paint specifications to suit customer requirements including:

- Galvanising to BS 729
- Bead blast shot blast SA2.5
- Hot zinc spray
- Powder coating
- Wet paint

As standard we offer a high build zinc rich base coat with a long life powder top coat.



## Remote Monitoring & Control Systems

Cathodic Protection Co Ltd's Remote Monitoring and Control System (RMCS) allows the checking of an installation's performance from any remote computer or mobile device, giving complete freedom and versatility.

Features:

- Remote connectivity by GSM/GPRS, 3G and other
- Local connectivity by RS485 or Ethernet, fibre or copper
- Local server or cloud-based software, customised to the client's needs
- Applications for steel in concrete (compliant with BS EN 12696:2012), pipelines, tanks farms, in-plant pipework and more
- Retrofit to non-CPCL power supplies
- Access to the system can be via:
  - PC with internet connection using web browser software
  - PC connected to RMCS controller LAN
  - Laptop at RMCS controller
  - Optional HMI 5.7" touch screen LCD display built into RMCS controller
  - Internet enabled devices (e.g. iPad or Android phone)
  - Laptop with WiFi when RMCS controller includes a WiFi hub

# Our Services

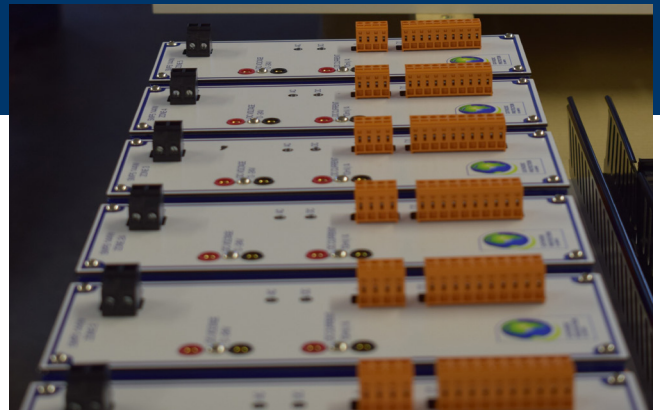


## Thyristor Transformer Rectifiers

In terms of range and features, Thyristor control is the most flexible system available, meeting the most arduous of industrial specifications.

Features:

- AC supply 110 to 690V, 1ph or 3ph, 50-60Hz as required by the client.
- DC output range 6V to 200V and 100mA to 1000A as required by the client.
- Can monitor an unlimited number of reference electrodes
- Air or oil cooled
- Built to suit all environments, including marine, desert, tropical and Arctic.
- Safe or hazardous area
- Enclosure manufactured from, mild or stainless steel, aluminium and GRP, determined by the client specifications
- Enclosure paint finish to suit client specifications
- Control Types:
  - Constant voltage
  - Constant current
  - Auto potential control
  - Survey mode
- Control resolution:
  - 0-1V/A in 1mV/mA steps
  - 1-10V/A in 10mV/mA steps
  - 10-1000V/A in 100mV/mA steps
- Analogue or digital controls and metering
- Integrated data logging
- User controller alarm indications
- Microprocessor based control board
- Fully compatible with our Remote Monitoring and Control Systems (RMCS)
- Designed in house by CPCL engineers
- 25 year design life as standard
- GPS interrupter optional



## Switch Mode Power Supply (SMPS)

Switch Mode Power Supplies (SMPS) are ideal for low power applications, particularly concrete CP systems.

Features:

- AC supply 90 to 260V, 1ph, 50-60Hz with power factor >0.9
- Also available with DC input supply – enquire for details
- 144W DC output at maximum 24V and 12A, ie. 24V/6A, 12V/12A, 18V/9A or similar
- 4x12W DC output, in configurations of 2 x 24V/1A or 4 x 24V/0.5A
- High efficiency for low running costs
- Monitor unlimited number of reference electrodes with outstanding precision at less than 1mV
- Air cooled
- Built to suit all environments, including marine, desert, tropical and Arctic
- Safe or hazardous area
- Enclosure manufactured from, mild or stainless steel, aluminium and GRP, determined by the client specifications
- Enclosure paint finish to suit client specifications
- Control Types:
  - Constant voltage
  - Constant current
  - Auto potential control
  - Survey mode
- Control resolution of 1mA and 1mV across output range
- Digital controls and metering
- User controller alarm indications
- Microprocessor based control board
- Fully compatible with our Remote Monitoring and Control Systems (RMCS)
- Designed in house by CPCL engineers
- 10 year design life as standard



## Variac Transformer Rectifiers

Variac controlled Transformer Rectifiers are best for industrial solutions that require robust, trouble-free operation.

Features:

- AC supply 110 to 690V, 1ph or 3ph,
- 50-60Hz as required by the client
- DC output range 6V to 200V and 1A to 1000A as required by the client
- Air or oil cooled
- Built to suit all environments, including marine, desert, tropical and Arctic
- Safe or hazardous area
- Manufactured from, mild or stainless steel, aluminium and GRP, determined by the client specifications
- Paint finish to suit the client specifications
- Constant voltage control 0-100% of rated output
- Analogue or digital metering
- Fully compatible with our Remote Monitoring Systems (RMS)
- Designed in house by CPCL engineers
- Low maintenance
- 25 year design life as standard

Find out more:



## Hazardous Area Transformer Rectifiers

CPCL design and manufacture Oil-Cooled Hazardous Area Transformer Rectifier Units. Certified by a notified body, these units are specifically designed for use on impressed current cathodic protection systems, protecting structures in extreme environments from corrosion. They are certified for Zone 2 hazardous areas and comply with ATEX, IECEx, and UKEx standards. In addition, they are capable of withstanding extreme ambient temperatures ranging from -20°C to +60°C. CPCL continue to offer options for modern transformer rectifier technology for all applications.

The units have both local and remote control capability, to ensure they can be monitored/maintained either on site and in person, or through our Remote Monitoring and Control System (RMCS), whilst following all the standards around ATEX, IECEx and UKEx specifications. Local control is available through external push buttons, without the need to open any enclosures, ensuring no specialist equipment or training is required to operate the unit in the Hazardous area.

...for your  
investment

# Protecting your investment for 70 years



## Our Brands

Marine Growth Anti-Fouling Systems

**Cuprion™**



## Distributors for



## Agents representing us worldwide



**CATHODIC PROTECTION CO LTD**

Venture Way, Grantham  
Lincolnshire, NG31 7XS, UK

**Tel:** +44 (0)1476 590 666

**Email:** [sales@cathodic.co.uk](mailto:sales@cathodic.co.uk)