



CORROSION CONTROL



TRANSFORMER RECTIFIERS

“FLEXIBLE POWER TO MEET YOUR REQUIREMENTS”

General

BAC Corrosion Control Ltd design and manufacture air and oil cooled transformer rectifiers that are suitable for impressed current cathodic protection systems. We have a dedicated design team that combines many years of cathodic protection and electronic engineering knowledge that enable us to design and manufacture high quality transformer rectifiers to meet the most demanding and complicated customer specifications.

Types of Units Supplied

We can supply any of the following combination

- Single or three phase AC input
- Oil or Air cooled
- Conventional or electronic control
- Indoor or outdoor
- Hazardous or non hazardous

AC Input Power Supplies

Our transformer rectifiers can be designed and manufactured to suit any worldwide AC input supply, either single or three phase, 50 or 60 Hz.



Transformer

All transformers are designed, built and tested to BS EN 60076-1. They are constructed with high conductivity copper windings on a low loss steel core and are varnish impregnated under vacuum after assembly. They are also fitted with an earth shield situated between the primary and secondary windings.



Rectifier Assemblies

All rectifier assemblies are rated to at least 125% of the maximum rated DC output. They are constructed from high quality silicon diodes or thyristors mounted on aluminum heat sinks. The heat sink is sized so that the junction temperatures of each silicon diode or thyristor are kept well within their design limits. To withstand high voltage surges all silicon diodes or thyristors fitted have a minimum reverse voltage of 1200V. All rectifier assemblies are designed and tested as per the BS EN 60146-1-1.

Control

- 63 step
- Constant current
- Auto-potential
- Variac
- Constant voltage

Enclosures

BAC offer enclosures that are suitable to meet different customer requirements. These can range from pole, frame, wall or plinth mounted and can be constructed from the following materials:

- GRP (Air cooled)
- Fibreglass roadside cabinet (Air cooled)
- Mild steel (Air cooled)
- Mild steel (Oil cooled)
- Stainless steel

Paint finishes

- Polyester powder structure paint to RAL 7032 for indoor applications.
- Shot blast prepared, zinc flame spray base, epoxy micaceous iron oxide undercoat with a polyurethane top coat to RAL 7032 for outdoor applications.
- Hot dip galvanised
- Or to customers specification



Ingress protection rating

An ingress protection rating of up to IP 66 is available to the BS EN 60529 standard.

Common Standard Features

- Anti-condensation heaters
- AC input protection
- Door interlock isolator
- Low DC output ripple (<5%)
- Surge protection
- AC on lamp
- DC Voltmeter (analogue or digital)
- DC Ammeter (analogue or digital)

Monitoring Facilities

- Output current 4/20mA signal
- Output voltage 4/20mA signal
- Reference potential 4/20mA signal
- Under & over protection alarm
- Phase fail alarm
- Low DC current alarm
- Over temperature alarm
- Reference cell potential digital meter



Tests

Each Transformer Rectifier manufactured is fully tested to ensure build quality. The test procedure includes the following checks:

- Earth continuity
- High voltage insulation resistance test
- Circuit integrity
- Full load operation
- Component function check
- Heat run (min 8 hours)



Additional & Special Features

- External isolator
- AC input RCD
- EMC filter
- Over temperature trip
- Electronic non-synchronous DC current interrupt
- GPS synchronous DC current interrupt compatible with BAC Global Surveyor data logging system
- Lightning protection



CORROSION CONTROL

BAC CORROSION CONTROL LTD
Stafford Park 11, Telford, Shropshire, TF3 3AY UK
Tel +44 (0) 1952 290321
Fax +44 (0) 1952 290325
Email: sales@bacgroup.com
Website: www.bacgroup.com

