



DC Power Supplies Data Sheet

The **pml** manufactured range of Cathodic Protection Transformer Rectifiers is wide and encompasses both oil and air cooled Transformer Rectifiers. Alternative Power Supplies available include hazardous area equipment, Solar Power, Thermo-Electric Generators and CCVT.



Transformer Rectifiers are available to suit all a.c. inputs including single and three phase, 50 or 60 Hz. Outputs can be custom designed to meet individual Clients' requirements.

Output Options:

- Manual output control by multi-rotary switches to give 15 or 63 steps of control or by auto-transformer giving continuously variable output.
- Automatic output control by thyristors to give Constant Current or Constant Potential which will maintain a constant potential with respect to an external reference electrode.

Units designed and manufactured by **pml** are for plinth, wall/frame or pole mounting. Sun shades are provided where appropriate. Weather protection typically: Air cooled to IP65, Oil cooled to IP55

The oil cooled transformer rectifier illustrated is typical of the range of plinth mounted, equipment available.

Outputs typically vary from :

- 12 to 48 volts
- 5 to 600 amps

The air cooled transformer rectifier illustrated is typical of the range of wall mounted, fibreglass cased, equipment available. Mild steel and stainless steel housing are also available.

Typical outputs are :-

- 5Amp, 24volt
- 10Amp, 48volt
- 15Amp, 48volt

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Transformer Rectifier Selection

- Air Cooled
- Indoor/Outdoor locations
- Low Power
- Normal Conditions
- Clean Environment
- Oil Cooled
- Outdoor locations
- High Power
- Tropical Conditions
- Aggressive Environment

Non Safe-Area Transformer Rectifiers

For non-safe areas, Transformer Rectifiers are available with BASEEFA certification for use in Zone 2 hazardous areas.

Solar Power Supplies

Purpose designed to supply Cathodic Protection power in remote and desert locations.

Equipments are sized to suit Cathodic Protection demand and are based on the anticipated local sunshine data and other environmental conditions.

Solar modules are linked together to provide the necessary output for Cathodic Protection. Battery storage is provided to supplement output in low sun/night conditions. Constant voltage/current/auto potential Cathodic Protection Controllers are provided to control/adjust the output to the desired requirements

Thermo Electric Generators

Thermoelectric generators (TEGs) convert heat directly into electricity with no moving parts. As heat moves from a gas burner through the thermoelectric module, it causes an electrical current to flow. The heart of a thermoelectric generator is a hermetically sealed thermoelectric module (thermopile), which contains an array of lead-tin-telluride semiconductor elements.

With gas supplied from a gas pipeline or bottled gas, the TEG produces a limited d.c. output which can be controlled and used for cathodic protection. A number of TEGs may be required connected in a series/parallel combination to provide a desired cathodic protection current output.

CCVT

Closed Cycle Vapour Turbogenerators are an alternative to TEGs and are, essentially, vapour generators driving a single stage turbine generating electrical power by means of a direct coupled alternator.

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