

Transformer Rectifier

A Cathodic Protection Transformer Rectifier is a critical DC power supply unit designed to provide impressed current for the cathodic protection of buried or immersed metal structures, such as pipelines, storage tanks, and marine facilities. By converting alternating current (AC) from the mains supply into a controlled direct current (DC), it effectively suppresses the electrochemical corrosion of metals exposed to aggressive environments like soil or seawater. These units are engineered for high reliability, efficiency, and long-term operation in demanding conditions, often outdoors or in chemically hostile atmospheres. The integration of a transformer and rectifier into a single unit offers a compact, robust, and maintenance-friendly solution essential for infrastructure preservation.

■ PRODUCT SPECIFICATIONS

AC Input: 380V $\pm 10\%$, 3 Phase, 50/60 Hz $\pm 5\%$

DC Output: Voltage: 0-100 V (Adjustable)

Current: 0-50 A (Adjustable)

Rectification: Full-Wave Bridge

Output Ripple: $\leq 5\%$

Cooling Method: ONAN (Oil Natural Air Natural)

Enclosure / IP Rating: IP55 (Outdoor)

Operating Temperature: -20°C to $+50^{\circ}\text{C}$

Control Modes: Auto-Potential (Primary), Constant Current, Constant Voltage, Manual

Protection Features: Primary MCB, AC/DC Fuses, Surge Suppression (AC & DC sides), Electronic Current/Voltage Limit

Design Life: 20+ Years

Standards Compliance: BS EN 61000, BS EN 60204, IEC Standards

■ OPTIONAL FEATURES

1. GPS Synchronous Current Interrupter
2. Remote Monitoring and Control (SCADA Interface)
3. Enhanced Surge/Lightning Protection
4. Anti-condensation Heaters
5. Customized Enclosure Finishes (e.g., Hot-dipped Galvanized)

