

Guardian

Power and Protective Conductor Monitoring



The Guardian is an advanced power and protective conductor monitoring system, designed to detect and safeguard electrical systems against broken neutral faults and stray voltages on connected services. It continuously monitors the electricity supply and electrical infrastructure, with the capability to isolate or alert any detected faults, including loss of neutral, broken PEN conductors, voltage on protective earth/ground conductors, high and low line voltages and frequencies.

Incorporating patented O-PEN® technology from matt:e, a leading expert in broken neutral and PEN fault protection products, the Guardian provides comprehensive protection to assets and people, including cloud-based real-time monitoring with matt:e cloud, with SMS and email alerts for potential failures.

The Guardian is easily installed in or alongside any existing distribution board with a three-phase supply. For complete protection, it should be connected to the main incoming supply and at each distribution board within the infrastructure, providing essential protection against conditions typically undetected by standard building circuit breakers, RCDs, MCBs, or surge protection devices.

- Simple installation and commissioning
- Visual display of alerts and status
- Ethernet connection to cloud based platform
- Modbus connection for 3rd party building management systems
- Standard 3-year parts warranty

Applications

The Guardian provides safe, resilient and cost-efficient power and protective conductor monitoring applicable in all buildings with a 3 phase supply*, including:

- Power Utilities
- Data Centres
- Commercial Buildings
- Schools
- Hospitals
- Farms
- Rail Network
- Smart Buildings
- E-Mobility
- Energy Storage
- Renewable Energy Farms
- Hotels
- Hospitality Industry
- Highrise Apartments
- Care Homes
- Supermarkets
- Marinas

* The Guardian can also be used on single and split-phase however, VN-N and VN-E measurements are not available.

Specifications

Measurement Inputs

Max Load	10W
Single Phase	100-277 VAC 50-60Hz
Split Phase	100-277 VAC 50-60Hz
3 Phase	100-480 VAC 50-60Hz

Outputs

Relay Contacts	DC-13: 30V / 5A MAX, AC-15: 277V / 5A MAX
Min. recommended wetting current	50mA

Connections

Type	Spring Clamp
Wire type	Copper Solid or Stranded
Min. cable temperature rating	65°C (149°F)
Wire strip length	6.5mm to 7mm (0.26" to 0.28")
Wire gauge	0.8mm ² - 3.3mm ² (18AWG to 12AWG)

Environment

Temperature - operating	-20°C to +60°C (-4°F to +140°F)
Temperature - storage	-20°C to +70°C (-4°F to +158°F)
Altitude	2000 metres
Relative Humidity (non-condensing)	1 – 85 %
Measurement category	II
Oversupply category (IEC664)	II
Pollution Degree (IEC664)	2
IP rating (from the front)	IP20



Part Number

APM-VT-PWR-HV-D345

Guardian, Power and Protective Conductor Monitoring