



GUARDIAN TECHNOLOGY IN PROTEUS SWITCHGEAR

PROTEUS SWITCHGEAR GUIDE TO CONDUCTOR MONITORING

PROTEUSSWITCHGER.CO.UK



PROTEUS SWITCHGEAR INCORPORATING MATT:E GUARDIAN TECHNOLOGY

With the modern day dependency on always being connected the importance has never been higher for a clean and safe electrical supply and infrastructure. This is why here at Proteus we have again teamed up with Matt:e to incorporate their ground breaking and completely unique Guardian device within our switchgear offering.

The Guardian device is a new monitoring solution for detecting and protecting against broken neutral faults and stray voltages on the electrical supply and infrastructure of a building.

DETECTING AND PROTECTING



BREAKAGES OR BAD CONNECTIONS OF THE NEUTRAL CONDUCTORS

Being as reliant as we are on electricity both in our homes and places of work any issues within the supply can quite quickly cause major disruptions.

Faults within the infrastructure and breakages or bad connections of the neutral conductors can be caused by:



ROAD WORKS



CORROSION



**GENERAL WEAR AND TEAR TO
AN AGING NETWORK**

Currently this type of fault is not detected within an installation but a breakage or bad connection in the neutral conductor can cause:



**DANGER OF
ELECTROCUTION**



HIGH VOLTAGES



**DAMAGE TO CRITICAL
LOADS**



**DAMAGE TO MACHINERY OR
CONNECTED APPLIANCES**



**FIRE HAZARD WHEN NOT
IDENTIFIED QUICKLY**

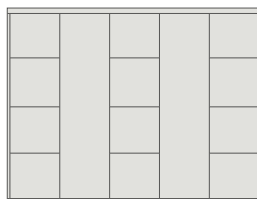


DETECTS AND PROTECTS AGAINST BROKEN NEUTRAL FAULTS AND STRAY VOLTAGES

The Guardian technology detects and protects against broken neutral faults and stray voltages by monitoring the incoming supply. When installed on the main incoming supply the Guardian ensures the property is protected as well as equipment and building users from faults entering the infrastructure.



Power is distributed
into a building



Via the Guardian device
built into the main
incomer



The supply voltage
of the property is
monitored

Early detection of broken neutral faults or stray voltages can prevent major safety issues and repairs can be made ahead of such events. Once a fault is detected alerts can be sent to facility managers or building users and if needed the Guardian can isolate specific supplies if they're becoming unsafe.

An emergency stop button has been added, creating an optional alert for an imbalance on the phases of >3%. Providing further energy savings and support in prolonging the life of a three-phase load. Updates are achieved online or by using a USB.



INCORPORATING THE PATENTED O-PEN® TECHNOLOGY

The Guardian also incorporates the patented Matt:e O-PEN® technology to provide additional detection and protection against:

- Loss of neutral
- Broken PEN conductor
- Stray voltages on any bonded surface including gas pipework
- Voltages on earth and ground conductors
- High and low line voltages
- High and low frequency.

REMOTE MONITORING & ALERTS

The highly spec'd Guardian device offers a web based portal allowing each device to be remotely monitored and fault alerts sent to registered users via email or SMS. The guardian is purchased with 12 months FREE subscription, after this you can view the device however to receive alerts a subscription is then required.

The device can be installed on all buildings with a three phase supply in varying sectors such as: Power Utilities, Data Centres, Renewable Energy, Hospitality, Hotels, Rail, Agricultural and many more.





MAIN INCOMING BOARD & SUB DBs

Within an installation the Guardian devices can be installed on the main incoming board to monitor the supply into a property. To monitor more on an installation the device can also be utilised on sub distribution boards if additional protection is desired, these would monitor the installation/ infrastructure within the property.



SAVE TIME & SPACE ON-SITE

We can offer the Guardian device built-in to our switchgear arrangements, such as our LV floor standing switch boards, wall mounted panel boards, TP+N boards and within our range of distribution boards for EV chargers. Incorporating the device within the switchgear reduces the need for additional enclosures to house the device, therefore reducing installation time and it also saves on-site space for your installation.



POTENTIAL SWITCHGEAR ARRANGEMENTS FOR THE GUARDIAN DEVICE



**LV
SWITCHBOARDS**



PANEL BOARDS



**TP+N
DISTRIBUTION
BOARDS**

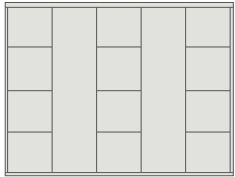


**EV DISTRIBUTION
BOARDS**

BESPOKE SWITCHGEAR

Here at Proteus we can design bespoke solutions for your project needs. By incorporating the Matt:e Guardian device into the switchgear arrangement there is no need for additional enclosures to house the device. The supply to your installation can be monitored by a Guardian device within the switchgear panel before being distribution into your infrastructure.

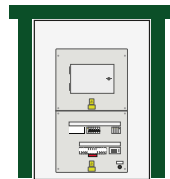
With over 30 years manufacturing experience and on-site production facilities at our Telford based operation we can offer a unique solution and reduce your installation time. **We can save your engineers time on site** by doing some of their work for them within the design and manufacturing process.



SIZE RESTRICTIONS

Do you need your board to fit into a specific space?

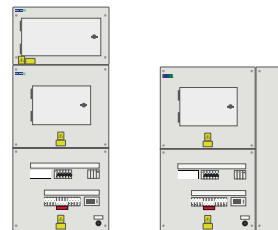
We offer a vast variety of designs to suit most spaces. This can range from adding a plinth to the bottom of the board or designing the board to fit into the corner of a room with a left or right turn in the board.



FEEDER PILLARS

Are you installing a board for a car park or forecourt?

Let us know the size of your feeder pillar and we can design the board to suit, or we can provide you with the dimensional details for the mounting plinth.



EXTENSION BOXES

Do you have hardware or sockets that need to be fed from the board?

We can design purpose-built extension boxes with cut outs to accommodate the hardware on the top or side of your panel and also pre drill the knockouts to aid the installation.



PRE POPULATED

Has your customer specified the number of chargers?

We can pre fit your board with the required devices either single or three phase to suit the amount of EV chargers that will be used. Saving time when installing on site.

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