

## Earth-Rite<sup>®</sup> OMEGA

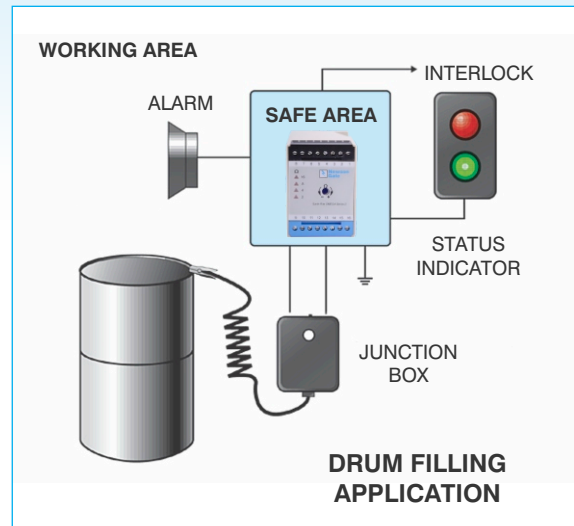
### Intrinsically Safe Earth Bonding Integrity Module

The **Earth-Rite OMEGA** enables engineers, contractors and OEMs to incorporate dedicated static earth monitoring as part of larger plant instrumentation and control systems.

It is well understood that electrostatic accumulation on isolated conductors in the chemical and process industries can provide sufficient energy to ignite many flammable vapours, gases and dusts. Many common plant situations may contain potentially isolated conductors, for example wherever equipment must be disconnected for transfer to other operations, such as filling/discharging machinery etc.

Isolated conductors may also develop in normally fixed plant when sections have insulating seals or gaskets, and therefore require separate bonding and earthing. In hazardous atmospheres, many companies prefer to actively monitor these points, but their options are limited when it comes to compliance with international requirements for static earthing.

To answer this need, the **Earth-Rite OMEGA** module has been designed for rail mounting (35mm DIN standard) into control panels to form part of an overall control system. The monitoring output is certified intrinsically safe [EEx ia] IIC, and is capable of checking resistance between two points and providing relay output switching at a user-defined set point, between 1 to 16 ohms. Typical applications include temporary ground condition monitoring of all mobile conductive plant items and permanent continuity monitoring of fixed plant items in Zone 0, 1 & 2 (gas/vapour) and Zone 20, 21 & 22 (dust) flammable atmospheres, as well as monitoring simple devices such as float switches in hazardous areas.



#### Typical Grounding/Bonding Applications

- Drum Filling
- Conveyor/ducting sections
- Process Machinery
- Bond Integrity
- Other conductive plant

#### Major Features of the Earth-Rite OMEGA

- User defined “balanced bridge” (lead compensation) monitoring
- Two pairs of output contacts
- May be used with the PSU or any CE marked power supply
- Up to 4 modules may be used with one power supply
- Up to 4 modules may be used in parallel (i.e. it is safe for up to 4 Omega I.S. currents to circulate simultaneously).

Certification	Ex II (1) GD [EEx ia] IIC
Power Supply	24V DC nominal
Monitoring range	1-16 Ohms
Output contacts	DPDT

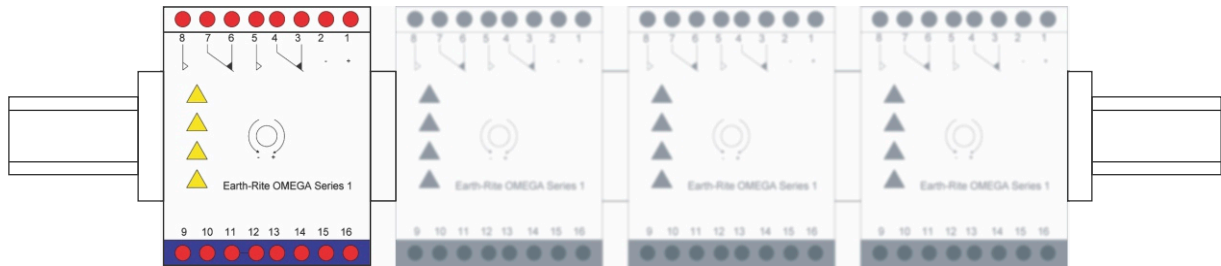
The **Earth-Rite OMEGA** enables engineers to comply with international requirements for static earthing when designing and constructing larger plant instrumentation and control systems. It makes a valuable contribution to plant and personnel safety by preventing dangerous accumulation of static charge.



## Installation Variations

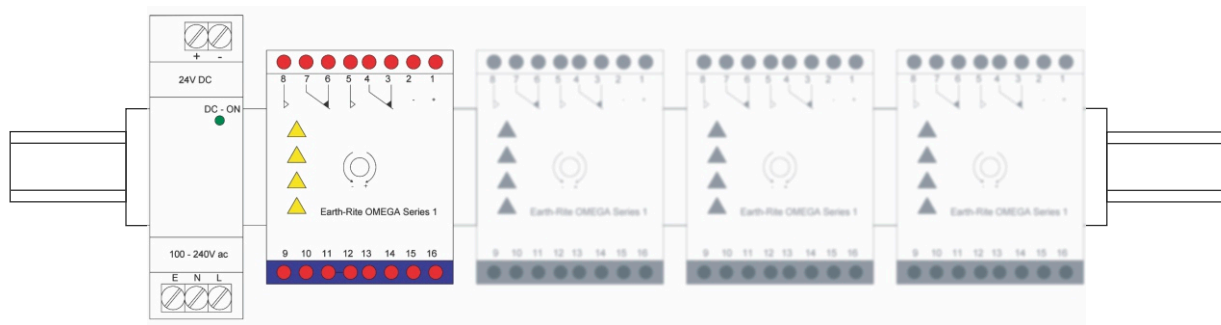
### Option One

One, or more, OMEGA modules supplied loose for the customer to fit into a suitable enclosure. The enclosure should be to IP65 and located within a safe area. The module(s) must be powered from a regulated 24V dc supply with overcurrent protection.



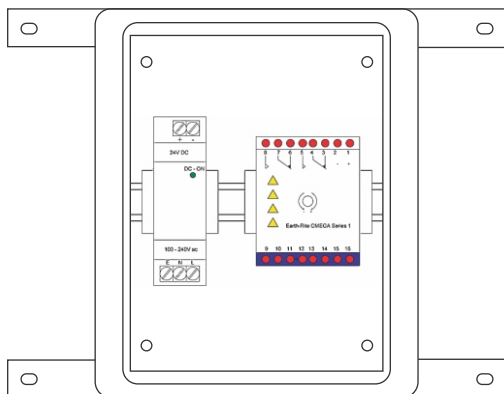
### Option Two

One power supply unit and one, to four, OMEGA modules supplied loose for customer to fit into a suitable enclosure. The enclosure should be to IP65 and located within a safe area.



### Option Three

One power supply unit with one to four OMEGA modules supplied within an IP65 wall mounting enclosure. Supplied part-wired by Newson Gale Ltd., ready for mounting on a suitable surface within a safe area.



In this complete system version, the equipment is also known as the Earth-Rite SENTRY.

The Earth-Rite OMEGA forms part of the Earth-Rite range of Static Grounding and Bonding Equipment available from Newson Gale