

## Earth-Rite® OMEGA II

 ENQUIRY

Click here to submit a product related query or a request for quotation.

The **Earth-Rite® OMEGA II** is a compact panel mounted static grounding module that can monitor a range of resistance values, based on the grounding application and installation requirements of specific processes.

The OMEGA II monitors the resistance of the static grounding circuit for processes where a risk of static charge accumulation on the equipment could result in an incendive electrostatic spark within locations that have potentially flammable atmospheres present.

It is specified primarily for applications where an alternative means of ground status indication is provided, e.g. via panel mounted indicators or remote indicator stations, as opposed to more regular grounding solutions in the [Earth-Rite®](#) range.

The DIN rail mountable module can be located in an electrical panel mounted in a non-hazardous area or inside an Ex(d) / XP certified enclosure located inside the hazardous area.

Two volt free changeover contacts can be used to switch power to additional ground status indicators or interlock with the process to shutdown product transfer when the OMEGA II detects an open circuit on the path to ground.



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The OMEGA II PCB contains a green LED which illuminates when a ground path in the correct range of resistance is detected.

### Ground Resistance Monitoring Set Points.

The OMEGA II is designed specifically for monitoring the static grounding of process equipment and has 4 resistance set points depending on the installation and operating characteristics of the application. It can also be installed to monitor the resistance of bonding circuits and lightning protection grounding points.

- 0 ohms to 2 ohms to monitor low resistance bonding paths.
- 0 ohms to 4 ohms.
- 0 ohms to 10 ohms (recommended values of resistance in IEC 60079-32 & NFPA 77).
- 0 ohms to 600 ohms (to monitor the grounding of rotating machinery).



IECEx

**SIL 2**

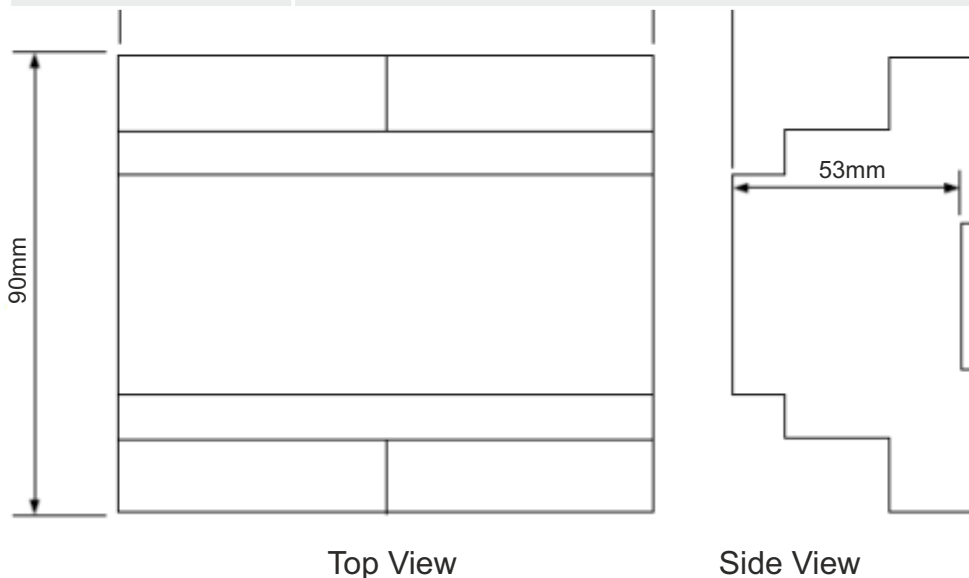
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## Technical Information

<b>Power supply:</b>	24V dc stabilised supply (Supply voltage range: 18V to 30V dc). Up to four OMEGA II modules can be powered by Newson Gale's 24V DC power supply (Product code: VESF80)
<b>Power rating:</b>	5 Watts
<b>Power supply protection:</b>	500 mA fast blow fuse connected into the supply circuit (not included).
<b>Ambient temperature range:</b>	-40°C to +60°C -40°F to + 140°F.
<b>Ingress Protection:</b>	IP 20 (Protection against the entry of fingers and small objects) Equivalent to NEMA 1.
<b>Module nett weight:</b>	0.25 kg / 0.55 lbs
<b>Enclosure material:</b>	polycarbonate
<b>Output Contact relay rating:</b>	1 pair of NO/NC changeover contacts (both volt free / dry contacts). 250Vac, 5A, 500VA max resistive. 30Vdc, 2A, 60W max resistive. The relay is designed to switch Low Voltage circuits or Extra Low Voltage circuits. A slave relay should be used for switching Low Voltage circuits and Extra Low Voltage circuits at the same time.
<b>Resistance monitoring set points:</b>	0 ohms to 2 ohms. 0 ohms to 4 ohms. 0 ohms to 10 ohms (IEC 60079-32 & NFPA 77 recommended). 0 ohms to 600 ohms (typically used for grounding rotating equipment).
<b>Mechanical dimensions:</b>	Units in mm: 90 x 105 x 59 (35 mm DIN rail). Units in inches: 3.5 x 4.1 x 2.3



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## Hazardous Area Certification

### Europe / International:

#### IECEx

[Ex ia Ga] IIC (gas & vapour).  
[Ex ia Da] IIIC (combustible dusts).  
Ta = -40°C to +60°C.  
IECEx certifying body: SIRA.

#### ATEX

II (1)GD  
[Ex ia Ga] IIC (gas & vapour).  
[Ex ia Da] IIIC (combustible dusts).  
Ta = -40°C to +60°C.  
ATEX Notified Body: SIRA.

### North America:

#### NEC 500 / CEC (Class & Division)

Intrinsically safe associated apparatus  
for supply to locations classified:

Class I, Div. 1, Groups A, B, C, D.  
Class II, Div. 1, Groups E, F, G.  
Class III, Div. 1.  
Ta = -40°C to +60°C.  
Ta = -40°F to +140°F  
OSHA recognised NRTL: CSA.

#### NEC 505 & 506 (Class & Zoning)

Class I, Zone 0, [AEx ia], IIC (gas & vapour).  
Class II, Zone 20, [AEx iaD], IIIC (combustible dusts).

#### CEC Section 18 (Class & Zoning)

[Ex ia] IIC (gas & vapour).

## Additional Certification

**Safety Integrity Level:** SIL 2 (in accordance with IEC/EN 61508).

**SIL assessment body:** ExVeritas.

**EMC Tested:** to EN 61000-6-1, EN 61000-6-3, FCC Part 15 (Class B Digital).



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## Product Ordering Codes

Product Codes	Product Description
ER/OM2/02	Earth-Rite OMEGA II / 0 ohms to 2 ohms resistance monitoring range. (To monitor the condition of bonding connections to True Earth grounding points.)
ER/OM2/04	Earth-Rite OMEGA II / 0 ohms to 4 ohms resistance monitoring range.
ER/OM2/10	Earth-Rite OMEGA II - 0 ohms to 10 ohms resistance monitoring range. (Recommended ground resistance values in IEC 60079-32 & NFPA 77).
ER/OM2/600	Earth-Rite OMEGA II - 0 ohms to 600 ohms resistance monitoring range. (For monitoring the grounding of rotating machinery).
VESF80	115 to 230 V AC Power supply - powers up to 4 OMEGA II modules simultaneously.
<a href="#">VESX90-IP</a> <a href="#">VESX45-IP</a>	Large and standard Heavy Duty grounding clamps to connect the OMEGA II to process equipment requiring static grounding protection.
Additional Accessories	Please note: the method of connecting the OMEGA II to process equipment will be dictated by the application and installation characteristics of the process. Contact Newson Gale to determine which combination of clamps, cables, reels and junction boxes can be used to provide the optimum installation.

## Contact Us

Your enquiry will be processed rapidly via our [webform enquiry service](#).

If you would prefer to call us, or e-mail us, please use the contact details provided below.



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