

Earth-Rite® OMEGA II



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.

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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) 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.



Earth-Rite OMEGA II

Ground Resistance Monitoring Set Points

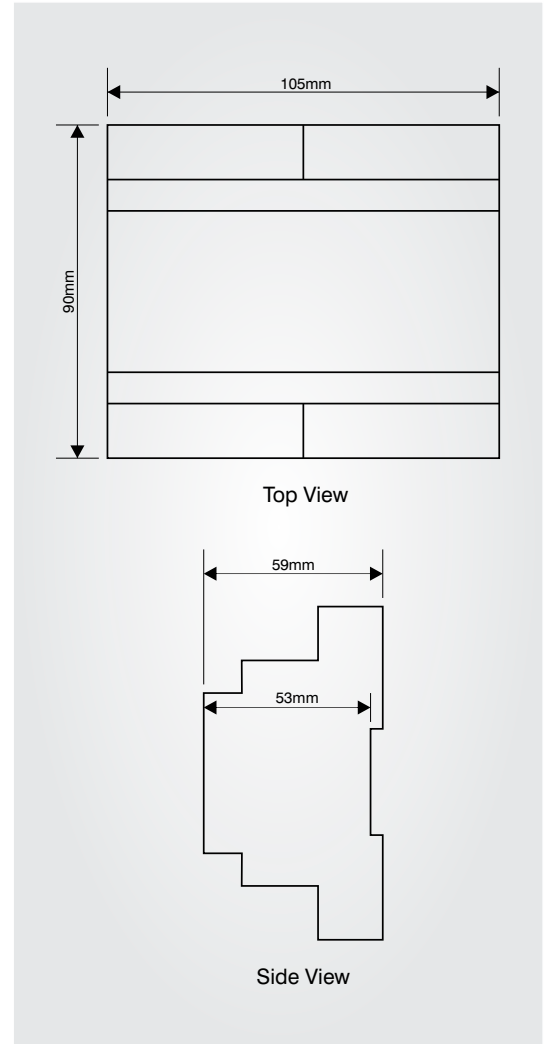
The OMEGA II is designed specifically for monitoring the static grounding of process equipment and has 4 resistance set points depending on the installation and operating characteristics of the application. It can also be installed to monitor the resistance of bonding circuits and lightning protection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

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Technical Specification

Power supply:	24 V dc stabilised supply (Supply voltage range: 18 V to 30 V dc). Up to four OMEGA II modules can be powered by Newson Gale's 24 V DC power supply (Product code: VESF80)
Power rating:	5 Watts
Power supply protection:	500 mA fast blow fuse connected into the supply circuit (not included).
Ambient temperature range:	-40°C to +60°C -40°F to + 140°F.
Ingress Protection:	IP 20
Module nett weight:	0.25 kg (0.55 lbs)
Enclosure material:	Polycarbonate
Output Contact relay rating:	1 pair of NO/NC changeover contacts (both volt free). 250 V AC, 5 A, 500 VA max resistive. 30 V DC, 2 A, 60 W 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.
Resistance monitoring set points:	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).
Mechanical dimensions:	Units in mm: 90 x 105 x 59 (35 mm DIN rail).



Hazardous Area Certification

Europe / International:	North America:
IECEX [Ex ia Ga] IIC (gas & vapour). [Ex ia Da] IIIC (combustible dusts). Ta = -40°C to +60°C. IECEX SIR 13.0003X IECEX certifying body: SIRa.	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.
ATEX Ⓜ II (1)GD [Ex ia Ga] IIC (gas & vapour). [Ex ia Da] IIIC (combustible dusts). Ta = -40°C to +60°C. SIRa 13ATEX2009X ATEX Notified Body: SIRa.	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

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).



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

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System Options

Newson Gale supplies a range of product options that enhance the control and general safety of transfer processes and aid engineers with system installations and routine system service checks. Contact Newson Gale or your local Newson Gale representative for more information on the range of options available.

Universal Resistance Tester

The URT is designed to provide owners of Newson Gale **Earth-Rite®** and **Bond-Rite®** static grounding systems with a means of regularly testing the grounding settings for their system on a routine basis.

Periodic testing with the URT verifies that the grounding system's **GO/NO GO** settings are working in compliance with the recommendations of:

NFPA 77: "Recommended Practice on Static Electricity."

IEC 60079-32-1: "Explosive atmospheres. Part 32-1: Electrostatic hazards, guidance."


The easy to use tester consists of a pair of switches that enable an electrician to set up the resistance level at which the grounding system should be working and conduct a PASS / FAIL test at the required setting.

Earth-Rite® and **Bond-Rite®** products that can be tested with the URT:

- > Earth-Rite® PLUS
- > Earth-Rite® FIBC (both 10 meg-ohm and 100 meg-ohm variants)
- > Bond-Rite® CLAMP
- > Bond-Rite® EZ
- > Bond-Rite® REMOTE
- > OhmGuard® (both 10 ohm and 100 ohm variants).

Ex Strobe Light

The strobe light is mounted in an elevated position and when the equipment is correctly grounded, flashes continuously informing personnel that a transfer process is underway and is protected from the static hazard. The strobe light can be used in conjunction with the **Earth-Rite RTR** and **Earth-Rite PLUS**.

- > 115 V / 230 V AC and 24 V DC options.
- > ATEX /IECEx approved Exd strobe light.
- >  II 2 Ex d IIC T4 (Ta. -50°C to +70°C).
- > II 2G Ex d IIC T5 (Ta. -50°C to +40°C).
- > II 2D Ex tD A21 IP67 T125°C based on max. Ta. 70°C.



Universal Resistance Tester
Product Code: URT.



Ex Strobe Light
Product Code: STROBE11/A
(Amber strobe).
Please enquire for options

Earth-Rite® OMEGA II



Product Ordering Codes

Ordering 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.
VESX90-IP VESX45-IP	Large and standard Heavy Duty grounding clamps to connect the OMEGA II to process equipment requiring static grounding protection.
STROBE11/A (230V ac)	Amber Strobe, 15 J, 115 V / 230 V AC and 24 V DC options. Please enquire for further options.
ER2/CRT	Universal Resistance Tester
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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