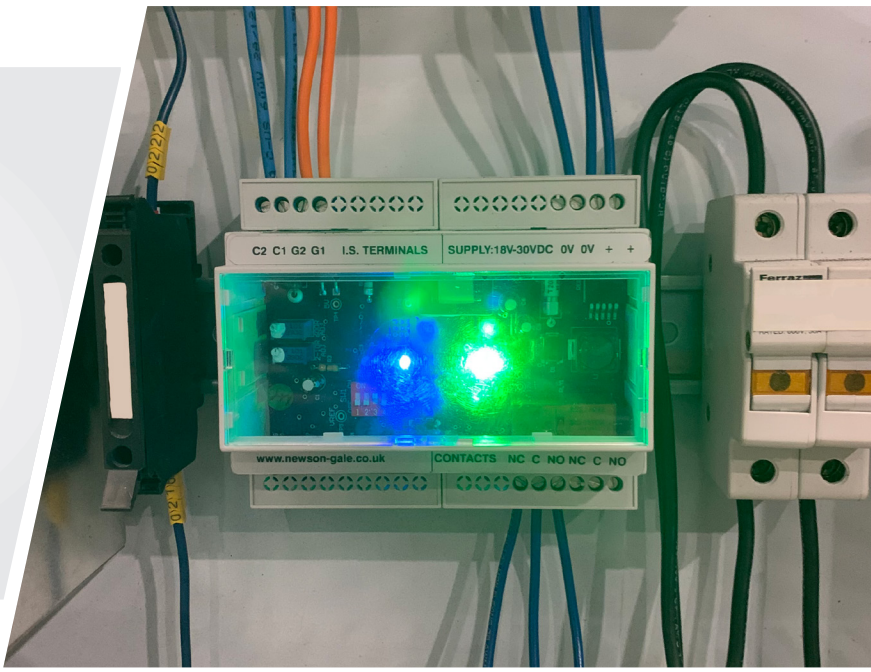
Earth-Rite® OMEGA II



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.

The Earth-Rite 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 Earth-Rite OMEGA II detects a resistance higher than the range setting on the path to ground.

Ground Resistance Monitoring Set Points

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

> 0 Ohms to 2 Ohms to monitor low resistance bonding paths

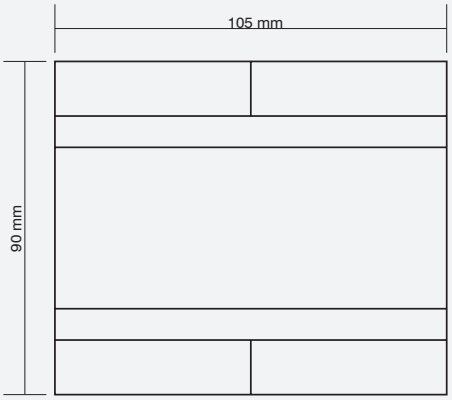
> 0 Ohms to 4 Ohms

> 0 Ohms to 10 Ohms (recommended values of resistance in IEC TS 60079-32 & NFPA 77)

> 0 Ohms to 600 Ohms (to monitor the grounding of rotating machinery)

Technical Specification

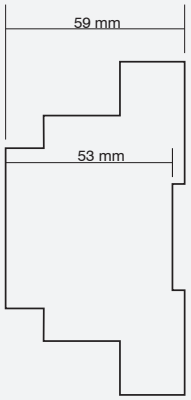
Power Supply	24V DC stabilised supply (Supply voltage range: 18 V to 30 V DC) Up to four OMEGA II modules can be powered by Newson Gale's 24V DC power supply
Power Rating	5 Watts
Power Supply Protection	500 mA fast blow fuse connected into the supply circuit (not included)
Ambient Temperature Range	-40°C 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	90 mm x 105 mm x 59 mm (35 mm DIN rail)



Top View

Hazardous Area Certification

Europe / International:	***North America Version Available:***
IECEx	***NEC 500 / CEC (Class & Division)***
[Ex ia Ga] IIC (gas & vapour) [Ex ia Da] IIIC (combustible dusts) Ta = -40°C to +60°C IECEX EXV 19.0066X IECEx Certifying Body: ExVeritas	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 (-40°F to +140°F) OSHA recognised NRTL: CSA
ATEX	***NEC 505 & 506 (Class & Zoning)***
Ⓔx II (1)GD [Ex ia Ga] IIC (gas & vapour) [Ex ia Da] IIIC (combustible dusts) Ta = -40°C to +60°C ExVeritas 19ATEX0561X ATEX Notified Body: ExVeritas	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



Side View

* The OMEGA II is marked [Ex ia Da] IIIC because the intrinsically safe output has current and power limits that are non-incendive for flammable dusts, thus, the clamps in a zone 20, 21 or 22 hazardous area (supplied from the OMEGA II) are suitable for total immersion in any flammable dust with a layer ignition temperature of not less than 210°C.

Additional Certification

Safety Integrity Level	SIL 2 (in accordance with IEC/EN 61508)
EMC Tested	to EN 61000-6-1,EN 61000-6-3, FCC Part 15 (Class B Digital)

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System Options

Universal Resistance Tester (URT)

The URT is designed to provide users of Newson Gale **Earth-Rite®** static grounding systems with a means of testing the permissive resistance range on a regular basis.

The easy to use tester consists of a pair of rotary switches that enable a competent electrical person to check the resistance level at which the grounding system should be working and conduct a PASS / FAIL test at the required setting.

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 OMEGA II**.

> 115V / 230V AC and 24V DC options

> ATEX /IECEx approved Exd strobe light

> ⟨Ex⟩ 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

System Options

2-Pole Surface Mountable connector

With this assembly operators tasked with earthing mobile process equipment will have a dedicated earthing point to attach the easy to use screw thread connector. The 'plug and play' connector can interface with all Newson Gale 2 core systems to provide earth monitoring capability on a wide range of mobile processes and equipment where generic earthing clamps cannot be used.

The conical shape design prevents powder deposit build up over time and aids in clean down operations.

> Made using Stainless Steel 304 with Viton O-Rings

> IP 66

> -40˚C to 60˚C

> Various lengths of straight or spiral Hytrel cable available

> IECEx Ex h certification:

Ex h IIC T6 Ga
Ex h IIIC T85°C Da
Ta = -40°C to +60°C
IECEx EXV 20.0033

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