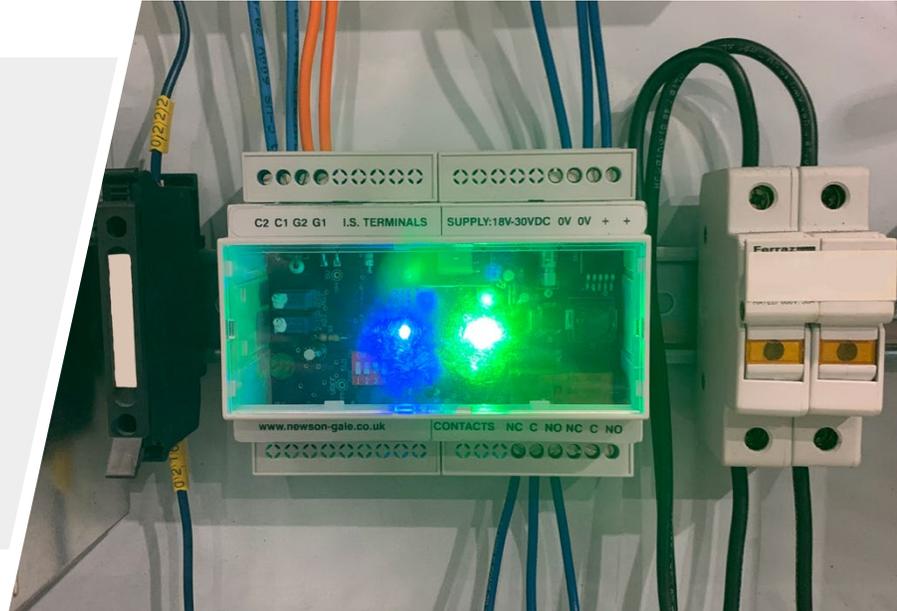


Earth-Rite® OMEGA II



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 XP certified enclosure located inside the hazardous area.

Two dry 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 set points 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 NFPA 77 & IEC TS 60079-32)
- 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°F to + 140°F (-40°C to +60°C)
Ingress Protection	Type 1
Module Nett Weight	0.55 lbs (0.25 kg)
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/TS 60079-32 & NFPA 77 recommended) 0 Ohms to 600 Ohms (typically used for grounding rotating equipment)
Mechanical Dimensions	3.5" x 4.1" x 2.3" (35 mm DIN rail)

Hazardous Area Certification

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
(-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

* 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.

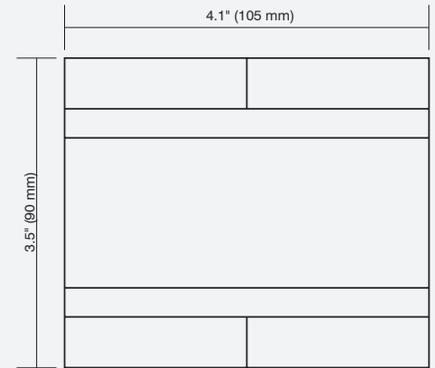
Europe / International Version Available:

IECEX

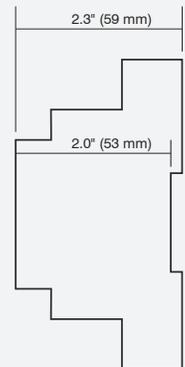
[Ex ia Ga] IIC (gas & vapour)
[Ex ia Da] IIIC (combustible dusts)
Ta = -40°C to +60°C
IECEX EXV 19.0066X
IECEX Certifying Body: ExVeritas

ATEX

Ⓜ 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



Top View



Side View

Additional Certification

Safety Integrity Level:

SIL 2 (in accordance with IEC/EN 61508)

EMC Tested:

to EN 61000-6-3, EN 61000-6-2
FCC - Part 15 (Class B)

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.



Hazardous Area 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**.

- 115 V / 230 V AC and 24 V / 48 V DC options
- Amber, Green & Red strobe colour options



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 aids in the reduction of powder deposit build up over time and aids in clean down operations.

- Made using Stainless Steel (SS grade: 304) with Viton O-Rings
- IP 66
- -40°F to 140°F (-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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Leading the way in hazardous area static control



www.newson-gale.com

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United Kingdom
Newson Gale Ltd
Omega House
Private Road 8
Colwick, Nottingham
NG4 2JX, UK
+44 (0)115 940 7500
groundit@newson-gale.co.uk

United States
IEP Technologies LLC
417-1 South Street
Marlborough, MA 01752
USA
+1 732 961 7610
groundit@newson-gale.com

Deutschland
IEP Technologies GmbH
Kaiserswerther Str. 85C
40878 Ratingen
Germany
+49 (0)2102 58890
erdung@newson-gale.de