



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx EXV 19.0066X** Page 1 of 4 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2019-11-25

Applicant: **Newson Gale Limited**
Omega House
Private Road 8
Colwick
Nottingham
NG4 2JX
United Kingdom

Equipment: **Earth-Rite OMEGA II Static Earthing Unit**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: [Ex ia Ga] IIC
[Ex ia Da] IIIC
Ta = -40°C to +60°C

Approved for issue on behalf of the IECEx
Certification Body:

Sean Clarke CEng MSc FIET

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom





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Manufacturer: **Newson Gale Limited**
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Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[GB/EXV/ExTR19.0092/00](#)

Quality Assessment Report:

[GB/EXV/QAR19.0009/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Earth-Rite OMEGA II Static Earthing Unit ("OMEGA II") is associated apparatus for installation in a non-hazardous area only. The intrinsically safe output functions as a static earth monitoring system in the hazardous area. It relies on an isolating transformer and an opto-isolator to provide an isolated, intrinsically safe output. The equipment is housed in a DIN-rail mounted polycarbonate enclosure that is intended to be installed in a location that provides suitable protection against moisture and dust.

The equipment monitors the resistance between the object to be earthed and the earth connection point. If the resistance exceeds one of the four user-programmed values then a relay changes state.

For the supply, the maximum input voltage under fault conditions (U_m) = 250 Vac, but the nominal input voltage is in the range 18-30 Vdc.

The contact input is rated 250 Vac / 5 A / 500 VA; 30 Vdc / 2 A / 60 W.

The OMEGA II is intended for connection to simple apparatus only in the hazardous area, typically comprising a permanent connection to an earth bar and also connections to the object to be earthed and the local earth connection point. The following entity parameters apply to the intrinsically safe output terminals C1 and C2, with respect to G1 and G2:

$U_o = 8.61 \text{ V}$ $I_o = 112 \text{ mA}$ $P_o = 241 \text{ mW}$ $C_o = 600 \text{ nF}$ $L_o = 1 \text{ mH}$

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.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The OMEGA II is associated apparatus intended for installation in a non-hazardous area. The device shall be installed in a location or an external enclosure that provides an ingress protection of at least IP54. The installer shall ensure that the relevant installation requirements of EN 60079-14 are met, including (but not limited to) the following separations between the OMEGA II and other terminals and conductors:
 - 6 mm clearance between the intrinsically safe terminals and those of another intrinsically safe circuit
 - 3 mm clearance between the intrinsically safe terminals and any earthed metal
- 50 mm between the intrinsically safe terminals of the OMEGA II and the non-intrinsically safe terminals of other equipment; a suitable partition may be used to provide this separation, particularly when DIN-rail
- Equipment in the hazardous area (such as earthing clamps) that are connected to the OMEGA II shall not be used in the presence of flammable dusts with a layer auto-ignition temperature below 210°C.



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Equipment (continued):

Conditions of manufacture

The Manufacturer shall comply with the following:

1. The following test shall be performed on 100% of transformers. Each transformer shall be dielectric strength tested in accordance with IEC 60079-11:2012 clause 11.2 as follows: 1500 Vac shall be applied between the primary and secondary windings for a minimum of 60 s. The maximum current shall not exceed 5 mA and there shall be no evidence of insulation breakdown. Alternatively, the test may be performed at 1800 Vac for a minimum of 1 s.

Annex:

[ExVeritas 19.0066X Annex Issue 0.pdf](#)

Manufacturer's documents:			
Drawing No.:	Rev.	Title:	Date:
BE010-0-01 R1C	C	DC Power Transformer	13/04/2010
OMEGA II GA	3	Omega II Static Earth Monitoring Relay	29/07/2013
Omega II LAB 001	AI	Label for Earth-Rite Omega II Monitoring Unit	22/10/2019
AA0214-CERT	R4A	Omega II	14/09/2015
AA0214-PLC	R4A	Certified Parts List	14/09/2015