

## 1 EU - Type Examination Certificate

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: ExVeritas 19ATEX0561X Issue: 1

4 Equipment: Earth-Rite OMEGA II Static Earthing Unit

5 Manufacturer: Newson Gale Limited

6 Address: Omega House, Private Road 8, Colwick, Nottingham NG4 2JX, UK

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:


EN IEC 60079-0: 2018

EN 60079-11: 2012

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment shall include the following:

 II(1)GD [Ex ia Ga] IIC  
[Ex ia Da] IIIC  
Ta = -40°C to +60°C

On behalf of ExVeritas



Peter Lauritzen  
Managing Director



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### 13 Description of Equipment or Protective System

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:

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

The OMEGA II is marked [Ex ia Da] IIC 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.

#### 13.1 Details of Change

The following changes are introduced in issue 1 of the certificate:

- Transfer of the certificate from ExVeritas UK, Notified Body number 2585 to ExVeritas Denmark, Notified Body number 2804. Certificate number remains unchanged.

### 14 Descriptive Documents

#### 14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R2249/A/8	19/11/2019	0	Initial issue of the Prime Certificate
EXV3140A	12/01/2021	1	Issue of the first variation, see section 13.1.

#### 14.2 Compliance Drawings:

##### Issue 0

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

Certificate: ExVeritas 19ATEX0561X

Issue 1

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15 Conditions of Certification

15.1 Special Conditions for Safe Use

1. 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 mounted.
2. 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.

15.2 Conditions for Use (Routine tests)

1. The following test shall be performed on 100% of transformers. Each transformer shall be dielectric strength tested in accordance with EN 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.

16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.