

## 1 EU - Type Examination Certificate

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

3 Certificate Number: ExVeritas 19ATEX0546X Issue: 1

4 Equipment: Earth-Rite Multipoint II Static Earthing System

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 60079-7: 2018    EN 60079-11: 2012    EN 60079-15: 2010  
EN 60079-31:2014

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:



Monitoring Unit  
II 1 GD

Ex ia IIC T4 Ga  
Ex ia IIIC T135°C Da  
Ta = -40°C to +60°C



Power Supply Unit  
II 3(1)G  
II 2D

Ex ec [ia Ga] nC IIC T4 Gc  
Ex tb IIIC T65°C Db  
Ta = -40°C to +60°C

On behalf of ExVeritas



Peter Lauritzen  
Managing Director

### 13 Description of Equipment or Protective System

The Earth-Rite Multipoint II Static Earthing system comprises the following modules and the associated interconnecting cables and clamps:

- Power Supply Unit (PSU), certified Ex ec [ia Ga] nC IIC T4 Gc, Ex tb IIIC T65°C, Db
- Monitoring Unit (MU) with status indication, certified Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da

The outputs from the Monitoring Unit are connected to a combination of static grounding clamps, junction boxes, indicator junction boxes, marshalling boxes and static earth dissipating points. The system monitors the resistance to earth of up to 8 channels. Each channel provides a pass/fail output to the PSU via the "CAN" transceiver from the Monitoring Unit and used to drive status relays. The status of each channel is indicated by the illumination of either a green or a red LED on the Monitoring Unit.

The mains power supply is connected to the PSU, which is located in the non-hazardous area or in a Zone2, Zone 21 or Zone 22. The PSU provides an intrinsically safe output to the Monitoring Unit and the rest of the system which is located in Zone 0/1/2 and Zone 20/21/22.

#### **Power supply unit (PSU)**

Input: 100-230 Vac, 50/60 Hz, Um = 250 V

Outputs:

- ten non-intrinsically safe volt free relay outputs.
- one intrinsically safe output on a CANbus data link via a 4-core cable with the following entity parameters:  
 $U_o = 11.76\text{ V}$      $I_o = 0.413\text{ A}$      $P_o = 0.904\text{ W}$      $C_i = 0$      $L_i = 0$

The external capacitance, inductance and inductance/resistance ratio are as follows:

Gas Group	IIC	IIB	IIA
Co	1.5 $\mu\text{F}$	9.9 $\mu\text{F}$	39 $\mu\text{F}$
Lo	208 $\mu\text{H}$	833 $\mu\text{H}$	1667 $\mu\text{H}$
Lo/Ro	29.1 $\mu\text{H}/\Omega$	117 $\mu\text{H}/\Omega$	234 $\mu\text{H}/\Omega$

The PSU comprises a circuit board, housed in a GRP or a stainless steel enclosure.

The PSU generates two supplies: a +5V I.S. supply which feeds the Monitoring Unit and the CAN transceiver on the PSU board; the second non I.S. supply drives relays, micro and fail safe pump circuit.

#### **Monitoring Unit**

The Monitoring Unit is powered from the Multipoint II PSU. It has eight outputs via Channels 1 to 8. The electronics in the monitoring board are mounted on a PCB, which is housed in a stainless steel enclosure.

#### **Input from the MPII PSU (Intrinsically safe)**

$U_i = 11.76\text{ V}$      $I_i = 0.413\text{ A}$      $P_i = 0.904\text{ W}$      $C_i = 1.3\ \mu\text{F}$      $L_i = 0$

### Combined output through Channels 1- 8 – Intrinsically safe

U<sub>o</sub> = 11.76 V    I<sub>o</sub> = 0.170 A    P<sub>o</sub> = 500 mW    C<sub>i</sub> = 0    L<sub>i</sub> = 208µH

Gas Group	IIC	IIB	IIA
Co	1.5 µF	9.9 µF	39 µF
Lo	1022 µH	4088 µH	8175 µH
Lo/Ro	68 µH/Ω	272 µH/Ω	544 µH/Ω

Channels 1 to 8 are intrinsically safe in combination, so need not be installed as separate intrinsically safe circuits.

#### 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/7	18/11/2019	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:
Multipoint II Monitor Board Certified Parts List	AA0211-PLC	R3C	24/07/2015
Multipoint II Monitor Circuit 8 CH	AA0211R3C-CERT	C	24/07/2015
Multipoint II Monitor Board	AA0211R3C-PCB	C	24/07/2015
Multipoint II O-P Board	AA0220R4A-CERT	A	24/07/2015
Multipoint II O/P Board	AA0220R4A-PCB	A	24/07/2015
Multipoint II O/P Board Certified Parts List	AA0220R4A-PLC	R4B	06/09/2019
General Arrangement - Multipoint II GRP Power Supply Unit	X GA MPIO GRP PSU	1	14/08/2015
General Arrangement - Multipoint II Monitoring Unit	X GA MPIO MON	1	14/08/2015
General Arrangement - Multipoint II St St Power Supply Unit	X GA MPIO SS PSU	2	14/08/2015
Marking for the Earth-Rite Multipoint II Marshalling Box	X MPIO MB LAB AI	AC	16/10/2019
Marking for the Earth-Rite Multipoint II Monitoring Unit	X MPIO MON LAB AI	AE	21/10/2019
Marking for the Earth-Rite Multipoint II Power Supply Unit	X MPIO PSU LAB AI	AD	17/10/2019
Multipoint II Static Earth Monitoring - Control Drawing	X MPIO Q15151	4	29/10/2019
Marking Earth-Rite Multipoint II Remote Indicator Station	X MPIO RIS LAB AI	AC	16/10/2019

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Issue 1

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For help or assistance relating to this certificate, contact [info@exveritas.com](mailto:info@exveritas.com).

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15 Conditions of Certification

15.1 Special Conditions for Safe Use

- The system shall be installed as per the control drawing 'X MPII Q15151'.

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.
2. The system incorporates previously certified enclosures. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device, and the manufacturer shall inform the certification body of any modifications of the device that may impinge upon the explosion safety design of the product.

Certificates	Enclosure
PTB 00 ATEX 1101U	Phoenix Mecano Rose Type 34 stainless steel enclosure
PTB 01 ATEX 1061U	Phoenix Mecano Rose Type 26 GRP enclosure

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.