

1 EU - Type Examination Certificate

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

3 Certificate Number: ExVeritas 19 ATEX 0546X Issue: 0

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 2585 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 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



No. 8613

On behalf of ExVeritas

ATEX Notified Body 2585

S Clarke MSc CEng FIET
Certification Manager

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The certificate is only valid when it carries an original signature.

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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, $U_m = 250\text{ V}$

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 μF	9.9 μF	39 μF
Lo	208 μH	833 μH	1667 μH
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)

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

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Combined output through Channels 1- 8 – Intrinsically safe

$U_o = 11.76 \text{ V}$ $I_o = 0.170 \text{ A}$ $P_o = 500 \text{ mW}$ $C_i = 0$ $L_i = 208 \mu\text{H}$

Gas Group	IIC	IIB	IIA
Co	1.5 μF	9.9 μF	39 μF
Lo	1022 μH	4088 μH	8175 μH
Lo/Ro	68 $\mu\text{H}/\Omega$	272 $\mu\text{H}/\Omega$	544 $\mu\text{H}/\Omega$

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

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

14.2 Compliance Drawings:

Issue 0

Number	Date	Issue	Description
AA0211-PLC	24/07/2015	R3C	Multipoint II Monitor Board Certified Parts List
AA0211R3C-CERT	24/07/2015	C	Multipoint II Monitor Circuit 8 CH
AA0211R3C-PCB	24/07/2015	C	Multipoint II Monitor Board
AA0220R4A-CERT	24/07/2015	A	Multipoint II O-P Board
AA0220R4A-PCB	24/07/2015	A	Multipoint II O/P Board
AA0220R4A-PLC	06/09/2019	R4B	Multipoint II O/P Board Certified Parts List
X GA MP11 GRP PSU	14/08/2015	1	General Arrangement - Multipoint II GRP Power Supply Unit
X GA MP11 MON	14/08/2015	1	General Arrangement - Multipoint II Monitoring Unit
X GA MP11 SS PSU	14/08/2015	2	General Arrangement - Multipoint II St St Power Supply Unit
X MP11 MB LAB AI	16/10/2019	AC	Marking for the Earth-Rite Multipoint II Marshalling Box
X MP11 MON LAB AI	21/10/2019	AE	Marking for the Earth-Rite Multipoint II Monitoring Unit
X MP11 PSU LAB AI	17/10/2019	AD	Marking for the Earth-Rite Multipoint II Power Supply Unit
X MP11 Q15151	29/10/2019	4	Multipoint II Static Earth Monitoring - Control Drawing
X MP11 RIS LAB AI	16/10/2019	AC	Marking Earth-Rite Multipoint II Remote Indicator Station

15 Conditions of Certification

15.1 Special Conditions for Safe Use

- The system shall be installed as per the control drawing 'X MP11 Q15151'.

15.2 Conditions for Manufacture

- 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

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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

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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.

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