1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

3 Type Examination Certificate Number: **ExVeritas 21UKEX0837X** Issue: **1**

4 Product: 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 product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 ExVeritas Limited Approved Body number 2585, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 **EN IEC 60079-7:2015+A1:2018** **EN 60079-11: 2012**
EN 60079-15: 2010 **EN 60079-31: 2014**

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

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 TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the equipment shall include the following:

Monitoring Unit
II 1 G
II 1 D
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 2(1)D
Ex ec nC [ia Ga] IIC T4 Gc
Ex tb [ia Da] IIIC T65ºC Db
Ta = -40°C to +60°C

UKAS PRODUCT CERTIFICATION
No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

Schedule

13 Description of Product

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 nC [ia Ga] IIC T4 Gc, Ex tb [ia Da] IIIC T65ºC Db
- Monitoring Unit (MU) with status indication, certified Ex ia IIC T4 Ga, Ex ia IIIC T135ºC 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:
  Uo = 11.76 V Io = 0.413 A Po = 0.904 W Ci = 0 Li = 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 µH/Ω	117 µH/Ω	234 µH/Ω

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)

Ui = 11.76 V Ii = 0.413 A Pi = 0.904 W Ci = 1.3 µF Li = 0

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Combined output through Channels 1- 8 – Intrinsically safe

Uo = 11.76 V Io = 0.170 A Po = 500 mW Ci = 0 Li = 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.

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	**Cert Issue Date**	**Issue**	**Comment**
R3140B/1	2022-04-29	0	Initial issue of the Prime Certificate
R4400/A/1	2023-04-26	1	Variation to Earth-Rite Multipoint II (ExVeritas 21UKEX0837X) to update Ex marking codes as per the applicable standards.

14.2 Compliance Drawings:

Drawing No.:	Date:	Rev. Level:	Title:
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 MPII GRP PSU	14/08/2015	1	General Arrangement - Multipoint II GRP Power Supply Unit
X GA MPII MON	14/08/2015	1	General Arrangement - Multipoint II Monitoring Unit
X GA MPII SS PSU	14/08/2015	2	General Arrangement - Multipoint II St St Power Supply Unit
MPII MB LAB UKCA	26/05/2021	AA	Marking for the Earth-Rite Multipoint II Marshalling Box
MPII MON LAB UKCA	14/10/21	AB	UKCA CERTIFICATION DETAIL EARTH-RITE MULTIPOINT II MARSHALLING BOX
MPII PSU LAB UKCA	01/03/2023	AC	*UKCA CERTIFCATION DETAIL EARTH-RITE MULTIPOINT II POWER SUPPLY UNIT
X MPII Q15151	02/03/2023	5	*Multipoint II Static Earth Monitoring - Control Drawing
MPII RIS LAB UKCA	26/05/2021	AA	UKCA CERTIFICATION DETAIL EARTH-RITE MULTIPOINT II REMOTE INDICATOR STATION

Schedule

*Note: An * is included before the title of documents that are new or revised.*

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use:

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

15.2 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 equipment incorporates a previously certified enclosure:

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 (Regulations Schedule 1)

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 ExVeritas of any modifications to the design of the product described by this schedule.