# 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 19.0059X** | Page 1 of 4 | Certificate history: |
| Status: | **Current** | Issue No: 2 | Issue 1 (2021-04-19)<br>Issue 0 (2019-11-25) |
| Date of Issue: | 2022-12-13 | | |

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

Equipment: **Earth-Rite II P1 Static Earthing System**

Optional accessory:

Type of Protection: **Increased Safety, Sealed device, Intrinsically Safe, Protection by Enclosure**

Marking: Ex ec nC [ia Ga] IIC T4 Gc
Ex tb [ia Da] IIIC T70°C Db
Ta = -40°C to +55°C

Approved for issue on behalf of the IECEx Certification Body: **Sean Clarke CEng MSc FIET**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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**

# IECEx Certificate of Conformity



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

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

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

IEC 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Reports:

GB/EXV/ExTR19.0063/00 GB/EXV/ExTR19.0063/01 GB/EXV/ExTR22.0016/00

Quality Assessment Report:

GB/EXV/QAR19.0009/04

# IECEx Certificate of Conformity



**EQUIPMENT:**
Equipment and systems covered by this Certificate are as follows:

The Earth-Rite ER II P1 Static Earthing System is intrinsically safe associated apparatus that provides an intrinsically safe output for connection to earth monitoring equipment in the hazardous area. The ER II consists of two printed circuit boards, mounted inside an IP66 GRP enclosure:

• A power supply board: this converts a non-intrinsically safe supply into an isolated intrinsically safe output to the monitoring board and may be a.c. input (xxxxP1EA models) for connection to a mains supply or d.c. input (xxxxP1ED models) for connection to a nominally 12-30 Vdc supply, which may be mains-derived or from a vehicle battery.
• A monitoring unit board (either single mode or tri-mode), mounted above the power supply board this receives an intrinsically safe input from the power supply board and provides an intrinsically safe output for connection to an earth bar and a clamp.
• An additional optional Intrinsically Safe switching PCB may also be fitted in between the power supply PCB and the monitoring PCB which can provide the facility to switch an external intrinsically safe circuit.

Refer to the Annex for additional information

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. In locations where high external humidity and internal temperature variations (e.g. frequent on-off cycles) may cause condensation inside the equipment, the interior shall be periodically inspected.

# IECEx Certificate of Conformity



**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**
1. To introduce substitution of some safety critical components.

2. The Ex marking code has been amended to reflect correctness to the latest applicable standards.

**Annex:**

IECEx_EXV_19.0059X Issue 2 Annex_1.pdf

**Description Continued:**

There are seven versions of the equipment:

| Product code | Mounting | Power supply | Monitoring unit board |
|---|---|---|---|
| PLUSP1EA | terrestrial | a.c. | single mode |
| PLUSP1ED | mobile or terrestrial | d.c. | single mode |
| RTRP1EA | terrestrial | a.c. | tri mode |
| MGVP1ED | mobile | d.c. | tri mode |
| RTRP1ED | terrestrial | d.c. | tri mode |
| FIBCP1EA | terrestrial | a.c. | single mode |
| FIBCP1ED | terrestrial | d.c. | single mode |

The installation must be in accordance with the relevant control drawing ERII-Q-10174 AI. The maximum input voltage (Um) is 250 V for all versions. The single mode version provides resistive-only monitoring. The tri-mode version provides capacitive and resistive monitoring. The safety description at the intrinsically safe output of the ER II depends on the version:

| RTRP1EA, RTRP1ED & MGVP1ED models | | PLUSP1EA & PLUSP1ED models | FIBCP1EA & FIBCP1ED models |
|---|---|---|---|
| Tri-mode IS output at PL3/PL4 | Tri-mode IS output at PL2 | Single mode IS output at PL3/PL4 | Single mode IS output at PL3/PL4 |
| Uo = 8.61 V<br>Io = 60 mA<br>Po = 129 mW<br>Co = 1.0 µF<br>Lo = 9.8 mH | Simple apparatus only | Uo = 8.61 V<br>Io = 41 mA<br>Po = 88 mW<br>Co = 0.361 µF<br>Lo = 21 mH | Uo = 8.61 V<br>Io = 0.87 mA<br>Po = 8 mW<br>Co = 5.9 µF<br>Lo = 46 H |

For all models, intrinsic safety is maintained if the cable connected to any intrinsically safe output terminal does not exceed 100m.

Optional Intrinsically Safe switching PCB which is used to switch an external intrinsically safe circuits or signals with the following I.S parameters:

| Optional IS Switching PCB Terminal PL1 |
|---|
| Ui = 30V<br>Ii = 500mA<br>Ci = 0<br>Li = 0 |

**Routine Tests:**

None.



ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.

| Technical Documents | | | |
|---|---|---|---|
| Drawing No.: | Rev. Level: | Title: | Date: |
| AA0190R3A-CERT | A | ERII PSU AC Board | 25/03/2010 |
| AA0190R3ACB-CERT | A | ERII AC Supply PCB Layout | 25/03/2010 |
| AA0190R3ACT-CERT | A | ERII AC Supply PCB Layout | 25/03/2010 |
| AA0190R3ASS-CERT | A | ERII AC Supply PCB Layout | 25/03/2010 |
| AA0190R3B-PLC | B | *ERII PSU AC Certified Parts List | 10/11/2021 |
| BE008-0-01 R3 | B | Transformer Details | 08/04/2010 |
| BE010-0-01 R1C | C | Transformer Details DC Power Transformer | 13/04/2010 |
| AA0195R1B-CERT | B | ERII CR Monitor Board Circuit | 18/03/2010 |
| AA0195R1BCB-CERT | A | ERII CR Monitor Board PCB Layout | 18/03/2010 |
| AA0195R1BCT-CERT | A | ERII CR Monitor Board PCB Layout | 18/03/2010 |
| AA0195R1BSS-CERT | A | RTR II CR Monitor Board PCB Layout | 18/03/2010 |
| AA0195R1D-PLC | D | *RTR II CR Monitor Board Certified Parts List | 14/02/2022 |
| AA0194R1B-CERT | B | ERII R Monitor Circuit | 18/03/2010 |
| AA0194R1BCB-CERT | B | RTR II R Monitor Board PCB Layout | 18/03/2010 |
| AA0194R1BCT-CERT | B | RTR II R Monitor Board PCB Layout | 18/03/2010 |
| AA0194R1BSS-CERT | B | RTR II R Monitor Board PCB Layout | 18/03/2010 |
| AA0194R1B-PLC | B | RTR II R Monitor Board Certified Parts List | 11/01/2010 |
| AA0206R3A-CB-CERT | A | FIBC II Board PCB Layout | 29/07/2011 |
| AA0206R3A-CERT | A | FIBC II Monitor Circuit | 29/07/2011 |
| AA0206R3A-CT-CERT | A | FIBC II Board PCB Layout | 29/07/2011 |
| AA0206R3A-PLC | A | FIBC II Monitor Board Certified Parts List | 01/09/2011 |
| AA0206R3A-SS-CERT | A | FIBC II Board PCB Layout | 29/07/2011 |
| AA0189-CERT | 2A | ERII DC PSU | 15/09/2015 |
| AA0189-PLC | R2C | *ERII DC PSU Certified Parts List | 14/02/2022 |
| AA0243-CERT-PCB | R5A | ER II I.S. Switching PCB Layout | 17/09/2018 |
| AA0243-PLC-ERII ISS | R5A | ER II I.S. Switching PCB Certified Parts List | 17/09/2018 |
| AA0243-SCH-CERT | R5A | ER II I.S. Switching | 17/09/2018 |
| ERII LAB 004 | AI | *CERTIFICATION DETAIL EARTH-RITE II P1 MONITORING UNIT & PSU IN APPROVED GRP ENCLOSURE | 22/11/2022 |
| ERII GA 004 | 7 | ERII P1 Combined PSU-Monitor Unit | 01/10/2018 |
| ERII-Q-10174 AI | 5 | Earth-Rite II P1 RTR, PLUS & FIBC - Control Drawing - AC | 03/12/2018 |

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



ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.