



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 09ATEX2247** Issue: **1**

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

5 Applicant: **Newson Gale Limited**

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

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2004 EN 60079-11:2007 EN 60079-15:2005 IEC 61241-1:2004
EN 60079-0:2009 (used for guidance in respect of marking and general requirements for dust)

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 EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 3(1)G
II 2D
Ex nA nC [ia] IIC T4 Gc(Ga)
Ex tb IIIC T70°C Db
Ta = -40°C to +55°C

(The category 3 marking is applied as part of the manufacturer's ATEX declaration and is shown for clarity)

Project Number 20535
C. Index 16

C Ellaby
Certification Officer

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 09ATEX2247
Issue 1

13 DESCRIPTION OF EQUIPMENT

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 (a.c. for connection to a mains supply, or d.c. for connection to a nominally 12-30 Vdc supply that may be mains-derived or from a vehicle battery) – this converts a non-intrinsically safe supply into an isolated intrinsically safe output to the monitoring board
- 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.

There are five versions of the equipment:

Product code	Mounting	Power supply board	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

The installation must be in accordance with the relevant control drawing ER11-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:

Models RTRP1EA, MGVP1ED & RTRP1ED		Models PLUSP1EA & PLUSP1ED
Tri-mode IS output at PL3/PL4 combined	Tri-mode IS output at PL2	Single mode IS output at PL3/PL4 combined
Uo = 8.61 V Io = 0.060 A Po = 0.129 W Co = 1.0 µF Lo = 9.8 mH	Simple apparatus only	Uo = 8.61 V Io = 0.041 A Po = 0.088W Co = 0.361 µF Lo = 21 mH



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 09ATEX2247
Issue 1

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	14 December 2009	R20533A	The release of the prime certificate.
1	03 September 2010	R20535A/00	This Issue introduces five, new models as detailed below: PLUSP1EA, PLUSP1ED, RTRP1EA, MGVP1ED and RTRP1ED. These models replace the previous versions (TELP1EA, TELP1ED, MGVP1EA and MGVP1ED) and therefore all reference to these models has been removed from Issue 1. For full descriptions of these versions, the reader is advised to refer to Issue 0. The new description of the equipment also recognises an updated reference to the control drawing number and incorporates a new, isolated d.c. power supply (previously non-isolated); the Condition of Manufacture addressing dielectric strength testing being amended to include the d.c. transformer.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

None

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The equipment incorporates previously certified devices. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications to the device that may impinge upon the explosion safety design of the product.

17.4 The following test shall be performed on 100% of transformers. Each transformer shall be dielectric strength tested in accordance with IEC 60079-11:2006 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.

17.5 The manufacturer shall ensure that the relevant control drawing is supplied with each unit or batch of units.

This certificate and its schedules may only be reproduced in its entirety and without change.

Certificate Annexe

Certificate Number: Sira 09ATEX2247
Equipment: Earth-Rite II Static Earthing System
Applicant: Newson Gale Limited



Issue 0 (The models introduced by Issue 1 do not rely on any of the previously certified documents and therefore these drawings have been removed from this Issue; the reader is advised to refer to Issue 0 to access information about the previously certified documents.)

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
ER II GA 004	1 to 3	6	12 Aug 10	General assembly, P1
ER II LAB 004	1 of 1	5	12 Aug 10	Marking, P1
ERII-Q-10174 AI	1 to 3	1	12 Aug 10	Control drawing, P1
AA0190R3A-CERT	1 of 1	A	08 Jun 10	Schematic – a.c. P/S
AA0190R3ACB-CERT	1 of 1	A	08 Jun 10	Bottom copper – a.c. P/S
AA0190R3ACT-CERT	1 of 1	A	08 Jun 10	Top copper – a.c. P/S
AA0190R3ASS-CERT	1 of 1	A	08 Jun 10	Silkscreen – a.c. P/S
AA0190R3A-PLC	1 to 2	A	08 Jun 10	Parts list – a.c. P/S
BE008-0-01 R3	1 of 1	B	08 Jun 10	Transformer – a.c. P/S
AA0189R1D-CERT	1 of 1	D	08 Jun 10	Schematic – d.c. P/S
AA0189R1D-CB-CERT	1 of 1	D	08 Jun 10	Bottom copper – d.c. P/S
AA0189R1D--CT-CERT	1 of 1	D	08 Jun 10	Top copper – d.c. P/S
AA0189R1D-SS-CERT	1 of 1	D	08 Jun 10	Silkscreen – d.c. P/S
AA0189R1D-PLC	1 to 2	D	08 Jun 10	Parts list – d.c. P/S
BE010-0-01 R1C	1 of 1	C	08 Jun 10	Transformer – d.c. P/S
AA0195R1B-CERT	1 of 1	B	08 Jun 10	Schematic – tri-mode
AA0195R1BCB-CERT	1 of 1	A	08 Jun 10	Bottom copper – tri-mode
AA0195R1BCT-CERT	1 of 1	A	08 Jun 10	Top copper – tri-mode
AA0195R1BSS-CERT	1 of 1	A	08 Jun 10	Silkscreen – tri-mode
AA0195R1B-PLC	1 to 2	B	08 Jun 10	Parts list – tri-mode
AA0194R1B-CERT	1 of 1	B	08 Jun 10	Schematic – single mode
AA0194R1BCB-CERT	1 of 1	B	08 Jun 10	Bottom copper – single mode
AA0194R1BCT-CERT	1 of 1	B	08 Jun 10	Top copper – single mode
AA0194R1BSS-CERT	1 of 1	B	08 Jun 10	Silkscreen – single mode
AA0194R1B-PLC	1 to 2	B	08 Jun 10	Parts list – single mode

This certificate and its schedules may only be reproduced in its entirety and without change.