



**EC TYPE-EXAMINATION CERTIFICATE**

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

Certificate Number: **Sira 09ATEX2210** Issue: **2**

Equipment: **Earth-Rite Universal Power Supply (a.c.)**

Applicant: **Newson Gale Limited**

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

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

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.


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:

IEC 60079-0:2007      EN 60079-11:2007      EN 60079-15:2005      IEC 61241-1:2004

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.

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.

The marking of the equipment shall include the following:

 II 3(1)G  
II 2D  
Ex nA[ia] IIC T4 Gc(Ga)  
Ex tb IIIC T70°C Db IP66  
(Ta = -40°C to +55°C)

Project Number    23342  
C. Index            16

C Ellaby  
Certification Officer

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

**Sira Certification Service**

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

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Issue 2

#### 13 DESCRIPTION OF EQUIPMENT

The Earth-Rite Universal Power Supply (a.c.) is intrinsically safe associated apparatus that provides an isolated intrinsically safe output for connection to one or more earth monitoring devices in the hazardous area, typically Newson Gale Earth-Rite units. The equipment consists of a single printed circuit board, mounted inside a glass reinforced plastic enclosure, intended for installation in zones 2/22/21 or a non-hazardous (unclassified) location.

Um = 125 Vac or 250 Vac depending on the terminals used

The safety description at the intrinsically safe output is as follows:

Uo = 8.61 V  
Io = 0.152 A  
Po = 0.715 W  
Co = 5.9 µF  
Lo = 1.5 mH

**Variation 1** - This variation introduced the following changes:

- The d.c. power supply option was removed, therefore, the Description of Equipment was modified accordingly.
- The safety resistors R2 and R4 in the a.c. power supply board were increased in value.
- Taking into account changes i. and ii., the list of certified drawings was rationalised, all previously certified drawings being withdrawn and replaced with those registered against Issue 1.

**Variation 2** - This variation introduced the following change:

- The introduction of a re-designed a.c. power supply board was endorsed, this board incorporates a type BE008-0-01 R3 transformer and is assessed without conformal coating; the model number remains unchanged.

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	11 August 2009	R52L20494A	The release of the prime certificate.
1	8 September 2009	R52L20494B	The introduction of variation 1 (NOTE: report no. R52L20494B is a complete record of the latest assessment and replaces report no. R52A20494A.)
2	29 September 2010	R23342A/00	The introduction of Variation 2.

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Issue 2

- 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 CERTIFICATION**

- 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 a previously certified enclosure, 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 Sira of any modifications of the device that may impinge upon the explosion safety design of their product.

Certificate numbers	Details
IECEx PTB 08.0003U and PTB 01ATEX1061U	ROSE Systemtechnik Type 26 enclosure

- 17.4 The following test shall be performed on 100% of transformers fitted to the a.c. power supply. Each transformer shall be dielectric strength tested in accordance with EN 60079-11:2007 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 not make any products that incorporate the d.c. power supply board that was covered by the drawings originally listed against Issue 0.

# Certificate Annexe

Certificate Number: Sira 09ATEX2210  
 Equipment: Earth-Rite Universal Power Supply  
 Applicant: Newson Gale Limited



## Issue 0

Common drawings					
Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title	
ERUPS 907 LAB	1 of 1	6	11 Aug 09	Marking	
ERUPS GA 001	1 to 3	2	03 Aug 09	General assembly	
A.C. PSU					
Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title	
AA0185R2A-ER UPS AC-CERT	1 of 1	A	24 Jul 09	Schematic – a.c. P/S	
AA0185R2A-CERT*	1 of 3	A	24 Jul 09	Top copper – a.c. P/S	* Sheet numbering was added by Sira.
AA0185R2A-CERT*	2 of 3	A	24 Jul 09	Bottom copper – a.c. P/S	
AA0185R2A-CERT*	3 of 3	A	24 Jul 09	Silkscreen – s.c. P/S	
AA0185R2A-ER UPS AC-PLC	1 of 1	A	24 Jul 09	Parts list – a.c. P/S	
AE005-0-01R2	1 of 1	A	24 Jul 09	Transformer details	
D.C. PSU					
Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title	
AA0187R2A-ER UPS DC-CERT	1 of 1	A	24 Jul 09	Schematic – d.c. P/S	
AA0187R2A-CERT*	1 of 3	A	24 Jul 09	Top copper – d.c. P/S	* Sheet numbering was added by Sira.
AA0187R2A-CERT*	2 of 3	A	24 Jul 09	Bottom copper – d.c. P/S	
AA0187R2A-CERT*	3 of 3	A	24 Jul 09	Silkscreen – d.c. P/S	
AA0187R2A-ER UPS DC-PLC	1 to 2	A	24 Jul 09	Parts list – d.c. P/S	

The above drawings were replaced by those listed in Issue 1

## Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title	
ERUPS 907 LAB	1 of 1	7	08 Sep 09	Marking	
ERUPS GA 001	1 to 3	2	03 Aug 09	General assembly	
AA0185R2B-ER UPS AC-CERT*	1 of 1	B	08 Sep 09	Schematic – a.c. P/S	* Sheet numbering was added by Sira.
AA0185R2BCT-CERT*	1 of 1	B	08 Sep 09	Top copper – a.c. P/S	
AA0185R2BCB-CERT*	1 of 1	B	08 Sep 09	Bottom copper – a.c. P/S	
AA0185R2BSS-CERT*	1 of 1	B	08 Sep 09	Silkscreen – a.c. P/S	
AA0185R2B-ER UPS AC-PLC	1 of 1	B	08 Sep 09	Parts list – a.c. P/S	
AE005-0-01R2	1 of 1	A	24 Jul 09	Transformer details	

## Issue 2

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title	
ERUPS GA 001	1 to 3	3	14 Sep 10	General assembly	
AA0190R3A-AC UPS-CERT	1 of 1	A	14 Sep 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-ER AC UPS-PLC	1 of 1	A	28 Sep 10	Parts list – a.c. P/S (UPS)	
BE008-0-01 R3	1 of 1	B	08 Jun 10	Transformer – a.c. P/S	

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