

**UNITED KINGDOM CONFORMITY ASSESSMENT
UK TYPE EXAMINATION CERTIFICATE**

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

Type Examination Certificate Number: **ExVeritas 21UKEX0841** Issue: **0**

Product: Earth-Rite Dual Grounding System DGS

Manufacturer: Newson Gale Limited

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

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

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.

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

EN IEC 60079-0:2018
EN 60079-31:2014

EN 60079-1:2014

EN 60079-11:2012

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

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 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.

The marking of the equipment shall include the following:



II 2(1)G

II 2(1)D

Ex db [ia Ga] IIC T6 Gb

Ex tb [ia Da] IIIC T135°C Db

Ta = -40°C to +50°C



No. 8613

On behalf of ExVeritas



S Clarke CEng MSc FIET
Managing Director

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The status of this certificate can be verified at www.exveritas.com

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

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Schedule

13 Description of Product

The Earth-Rite Dual Grounding System DGS comprises of an Exd enclosure with intrinsically safe associated apparatus designed to monitor and ground one or two channels for connection to equipment in a hazardous area where static dissipation and monitoring is required. The DGS provides isolated intrinsically safe outputs for connection to one or two grounding clamps or other connection method. It comprises two printed circuit boards and the associated interconnecting cables and clamps. The two modules are:

Power supply PCB: this converts a non-intrinsically safe supply into an isolated D.C output to the monitoring board. It also provides a signal back to the user via relays.

Monitoring PCB: this is mounted above the power supply board. This receives the input from the power supply board and provides an intrinsically safe output to grounding clamps and an earth bar. The two printed circuit boards are mounted inside an IP66 flameproof aluminium enclosure. The DGS is rated for 90-264 Vac, 50/60 Hz.

The equipment has the following input parameters at the PSU board: $U_m = 250\text{Vac}$

The equipment has the following output parameters at the Monitor board:

Connections to the Earth Clamps and Earth bar (PL4, PL2 and PL3 combined)

$U_o = 8.61\text{ V}$
 $I_o = 17\text{ mA}$
 $P_o = 36\text{ mW}$
 $C_o = 5.87\mu\text{F}$
 $L_o = 123\text{ mH}$
 $L_o/R_o = 990\text{ }\mu\text{H}/\Omega$

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

14.2 Compliance Drawings:

Issue 0

Number	Sheets	Issue	Date	Description
AA0227-CERT-CCT	1 of 1	R7A	18 May 20	DGS Monitor schematic
AA0227-CERT-PL	1 to 2	R7A	16 Jun 20	DGS Monitor BOM
AA0227-CERT-PCB	1 to 4	R7A	16 Jun 20	DGS Monitor PCB Layout
AA0228-CERT-PL	1 to 2	R8C	16 Jun 20	DGS AC PSU BOM
AA0228-CERT-CCT	1 of 1	R8C	16 Jun 20	DGS PSU schematic
AA0228-CERT-PCB	1 to 4	R8C	16 Jun 20	DGS PSU PCB Layout
DGS LAB UKCA 01	1 of 1	AB	14/10/21	UKCA CERTIFICATION DETAIL DUAL GROUNDING SYSTEM
X-DGS-Q-17052 IECEx	1 to 2	7	18 May 20	DGS Control drawing
X-DGS-GA-001	1 to 4	1	18 May 20	DGS Monitoring Unit GA
CB001-0-01R1	1 of 1	G	03 Nov 17	DC-DC Transformer details

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Schedule

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

None

15.2 Routine tests

- In accordance with EN 60079-11:2012 clause 10.3, each manufactured sample of the transformer shall be subjected to an electric strength test using a test voltage of 1500 Vac applied between the primary and the secondary windings for a minimum of 60s. Alternatively, a voltage of 20% higher may be applied for 1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5mA.

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.

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