

1) Introduction

The GNExL2 and GNExL1 are second generation flameproof loudspeakers which are certified to meet the requirements of the ATEX directive 2014/34/EU, the IECEx scheme and the UKEX scheme. The loudspeakers can be used in hazardous areas where potentially flammable atmospheres may be present. There are four versions of each loudspeaker, 8 ohm or 16 ohm and 70V/100V Line transformer. On 70V/100V line transformer units there are four output tappings for each size of loudspeaker. The GNExL2 unit produces output levels in the 117dB(A) range and the GNExL1 unit produces output levels in the 112dB(A) range.

The loudspeakers are Group II, EPL (equipment protection level) Gb. Dependant on unit type and ambient temperature the equipment is certified 'Ex db IIC Gb' and as such may be used in Zones 1 and 2 with flammable gases and vapours with apparatus groups IIA, IIB & IIC and temperature Classifications of T1, T2, T3 and T4 dependant on ambient temperature, see marking codes in section 2.

The equipment is also certified 'Ex db IIB Gb' and as such may be used in Zones 1 and 2 with flammable gases and vapours with apparatus groups IIA & IIB and temperature Classifications of T1, T2, T3, T4, T5 and T6 dependant on ambient temperature, see marking codes in section 2.

2) Marking

All units have a rating label, which carries the following important information:-

Unit Type No. GNExL2 or GNExL1

Impedance: 8 ohm or 16 ohm
70V Line or 100V Line

Codes: GNExL1

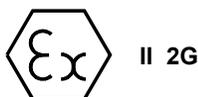
Ex db IIC T4 Gb for Ta -60°C to +50°C
Ex db IIC T3 Gb for Ta -60°C to +70°C
Ex db IIB T6 Gb for Ta -60°C to +50°C
Ex db IIB T5 Gb for Ta -60°C to +65°C
Ex db IIB T4 Gb for Ta -60°C to +70°C

Codes: GNExL2

Ex db IIC T4 Gb for Ta -60°C to +50°C
Ex db IIC T3 Gb for Ta -60°C to +65°C
Ex db IIB T6 Gb for Ta -60°C to +50°C
Ex db IIB T5 Gb for Ta -60°C to +65°C

Certificate No. SIRA 13ATEX1139X
IECEX SIR 13.0029X
CSAE 21UKEX1558X

Epsilon x:
Equipment Group
and Category:



CE Marking:
Notified Body No.



UKCA Marking and
Notified Body No.



“Warnings”

DO NOT OPEN WHEN ENERGISED

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

ELECTROSTATIC HAZARD - CLEAN ONLY WITH A DAMP CLOTH

IF TEMPERATURE EXCEEDS 70°C AT ENTRY OR 80°C AT BRANCHING POINT USE SUITABLY RATED CABLE AND CABLE GLANDS

Year of Construction /
Serial No. i.e. 20 / 1GL25000001

3) Type Approval Standards

The loudspeakers have an EC Type examination certificate issued by SIRA and have been approved to the following standards:-

EN60079-0:2018 EN IEC60079-0:2018 General Requirements

EN60079-1:2014 A/C:2018 EN 60079-1:2014 ed. 7
Flameproof Enclosure 'd'

4) Special Conditions for Safe Use

4.1) Installation

The sounders must be installed in accordance with the latest issues of the relevant parts of the EN 60079 and IEC60079 standards – Selection, Installation and maintenance of electrical apparatus for use in potentially explosive atmospheres (other than mining applications or explosive processing and manufacture):-

EN60079-14:2008 Electrical Installations in Hazardous
IEC60079-14:2007 (Ed4) Areas (other than mines)

EN60079-10-1:2009 Classification of Areas, Gas
Atmosphere

IEC60079-10:2008 (Ed1)

The installation of the units must also be in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer who has the necessary training.

4.2) Specific Conditions

Flameproof joints shall not be repaired or modified in any way (See figures 1 & 2 for location of flameproof joints).

The enclosure is non-conducting and under certain extreme conditions may generate an ignition capable level of electrostatic charge. The user shall ensure that the equipment is not installed in a location where it may be subjected to extreme conditions (such as high-pressure steam) which might cause a build-up of electrostatic charge on non-conducting surfaces.

4.3) Maintenance, Repair and Overhaul

Maintenance, repair and overhaul of the equipment should only be carried out by suitable qualified personnel in accordance with the current relevant standards:

- EN60079-19 / IEC60079-19 : Explosive atmospheres - Equipment repair, overhaul and reclamation
- EN 60079-17/ IEC60079-17 : Explosive atmospheres - Electrical installations inspection and maintenance



WARNING:
Do not open when energised.

Electrostatic charging hazard – clean only with a damp cloth.

Do not open when an explosive atmosphere may be present.

If opening the unit during maintenance operations, a clean environment must be maintained, and any dust layer removed prior to opening the unit.

For options on unit repairs or replacement parts, contact E2S using the contact information in the footer of this installation manual.

5) Zones, Gas Group, Category and Temperature Classification

The GNExL2 and GNExL1 sounders have been certified Ex db IIC T4 , T3 and Ex db IIB T6 , T5 ,T4 dependant on ambient temperature for full marking see section 2. This means that the units can be installed in locations with the following conditions:-

Area Classification:

| | |
|--------|---|
| Zone 1 | Explosive gas air mixture likely to occur in normal operation. |
| Zone 2 | Explosive gas air mixture not likely to occur, and if it does, it will only exist for a short time. |

Gas Groupings:

| | |
|-----------|------------------------|
| Group IIA | Propane |
| Group IIB | Ethylene |
| Group IIC | Hydrogen and Acetylene |

Equipment Category: 2G

Temperature Classification:

| | |
|----|--------|
| T1 | 450° C |
| T2 | 300° C |
| T3 | 200° C |
| T4 | 135° C |
| T5 | 100° C |
| T6 | 85° C |

Ambient Temperature Range:

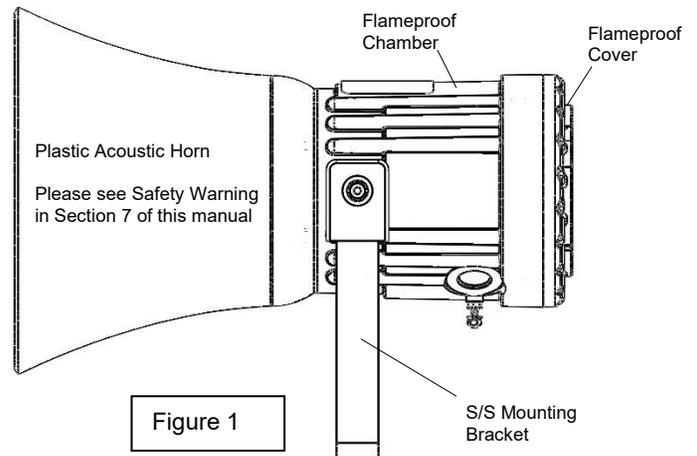
GNExL1 - For range see Marking Codes Section 2

GNExL2 - For range see Marking Codes Section 2

6) Loudspeaker Location and Mounting

The location of the loudspeakers should be made with due regard to the area over which the unit must be audible. The loudspeakers should only be fixed to services that can carry the weight of the unit.

The loudspeakers should be securely bolted to a suitable surface using the 7mm diameter boltholes in the stainless steel U shaped mounting bracket (see figure 1). The angle can then be adjusted in the direction that the sound is primarily required to cover. This can be achieved by loosening the two large bracket screws in the side of the unit, which allow adjustment in steps of 18°. On completion of the installation the two large bracket adjustment screws on the side of the unit must be fully tightened to ensure that the unit cannot move in service.



7) Safety Warning (Electrostatic Hazard)

The acoustic horn section is made of ABS Plastic, therefore to avoid a possible ELECTROSTATIC CHARGE the unit must only be cleaned with a damp cloth.

8) Access to the Flameproof Enclosure

In order to connect the electrical supply cables to the sounder it is necessary to remove the flameproof cover to gain access to the flameproof chamber. To achieve by loosening the M3 Grub Screw within the flameproof cover, and then unscrew the flameproof cover, taking extreme care not to damage the flameproof joints in the process.

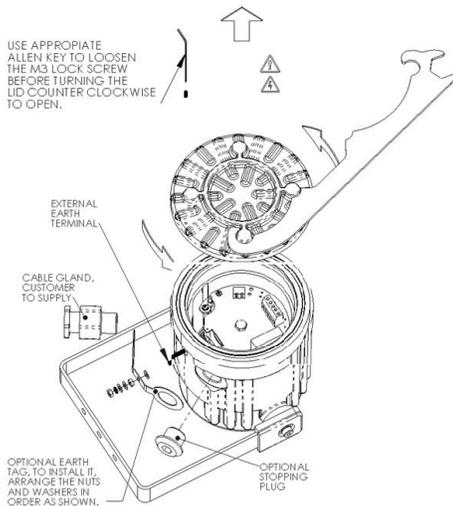


Figure 2

On completion of the cable wiring installation the flameproof joints should be inspected to ensure that they are clean and that they have not been damaged during installation. Also check that the 'O' ring seal is in place. When replacing the flameproof cover ensure that it is tighten fully with tool provided.

9) Power Amplifier Selection

It is important that the loudspeakers are connected to power amplifiers that have outputs that are compatible to the type of loudspeaker being used. Loudspeakers with a 70V or 100V line matching transformer fitted must be connected to a power amplifier with a 70V or 100V line output. Low impedance 8 ohm or 16 ohm loudspeakers must be connected to amplifiers with a suitable low impedance output. When selecting the cable size consideration must be given to the current that each unit draws, the number of loudspeakers on the line and the length of the cable run.

The following table shows the range of loudspeakers:-

| Unit Type | Input | Wattage | Max. I/P Volts |
|-----------|-----------|---------|----------------|
| GNExL2 | 100V Line | 25W | 100V |
| GNExL2 | 70V line | 25W | 70V |
| GNExL2 | 8 ohm | 25W | 14.14V |
| GNExL2 | 16 ohm | 25W | 20V |
| GNExL1 | 100V Line | 15W | 100V |
| GNExL1 | 70V Line | 15W | 70V |
| GNExL1 | 8 ohm | 15W | 10.95V |
| GNExL1 | 16 ohm | 15W | 15.49V |

The above table also shows the maximum AC signal voltages at which the loudspeakers can be operated.

The current levels taken by the each loudspeaker will depend on which output tapping has been selected (see section 13 of this instruction manual). GNExL2 70V and 100V Line units have output levels of 25W, 12.5W, 6W and 2W; GNExL1 70V and 100V Line units have output levels of 15W, 7.5W, 3W and 1W.

10) Cable Selection

When selecting the cable size consideration must be given to the input current that each unit draws (see table 2 of 4), the number of loudspeakers on the line and the length of the cable runs. The cable size selected must have the necessary capacity to provide the input current to all of the loudspeakers connected to the line.

SAFETY WARNING: If temperature exceeds 70°C at entry or 80°C at branching point use suitably rated cable and cable glands.

11) Earthing

Both AC and DC loudspeaker units must be connected to a good quality earth. The units are provided with external earthing terminals which are both located on the terminal chamber section of the unit (see figures 2 and 3).

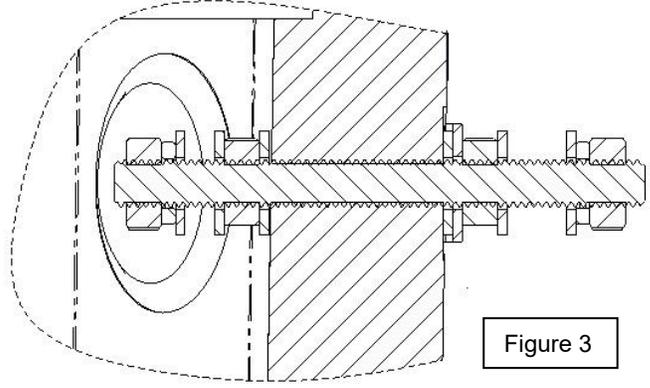


Figure 3

When using the external earth terminal a cable crimp lug must be used. The cable lug should be located between the two M4 stainless steel flat washers. The M4 stainless steel spring washer must be fixed between the outer flat washer and the M4 stainless steel nut to ensure that the cable lug is secured against loosening and twisting.

12) Cable Glands

The GNExL2 and GNExL1 sounders have dual cable gland entries which have an M20 x1.5 entry thread as standard. Only cable glands approved for Ex 'd' applications can be used, which must be suitable for the type of cable being used and also meet the requirements of the Ex 'd' flameproof installation standards EN 60079-14:2008 / IEC60079-14:2007.

SAFETY WARNING: If temperature exceeds 70°C at entry or 80°C at branching point use suitably rated cable and cable glands.

If a high IP (Ingress Protection) rating is required then a suitable sealing washer must be fitted under the cable gland.

When only one cable entry is used the other one must be closed with an Ex 'd' flameproof blanking plug, which must be suitably approved for the installation requirements.

13) Cable Connections

The cable connections are made into the terminal blocks on the pcb assembly located in the flameproof enclosure. See section 8 of this manual for access to the flameproof enclosure. The 70V and 100V Line loudspeakers are fitted with a five way terminal block. Terminal A is common and one of the other terminals B, C, D or E should be selected depending on what output level is required (see table below).

Refer to D157-06-201 for schematic diagram.

GNExL2 and GNExL1 70V and 100V Line Loudspeakers

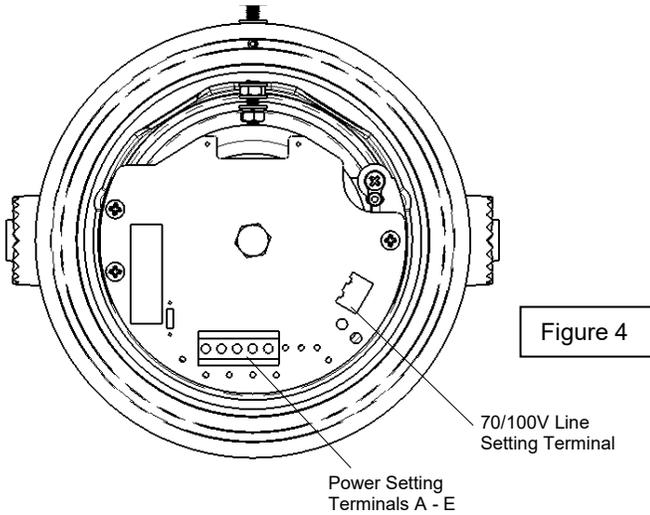


Figure 4

| Terminals | GNExL2 (25W) | GNExL1 (15W) |
|-----------|--------------|--------------|
| A - B | 25W | 15W |
| A - C | 12.5W | 7.5W |
| A - D | 6W | 3W |
| A - E | 2W | 1W |

A single solid or stranded wire with a cross sectional area of up to 4mm² can be connected to each terminal way or if an input and output wire is required two 2.5mm² wires can be connected to each terminal way. When connecting wires to the terminals great care should be taken to dress the wire so that when the cover is inserted into the chamber the wires do not exert excess pressure on the terminal blocks. This is particularly important when using cables with large cross sectional areas such as 2.5mm² and above.

Wire insulation needs to be stripped 6-7mm. Wires may be fitted securely with crimped ferrules. Terminal screws need to be tightened down with a tightening torque of 0.56Nm / 5 Lb-in.

The unit will be set as standard to 100V line. But can be easily altered to 70V line by moving the red selection cable from the 100V line terminal to the 70V line terminal (see figure 4 for position).

GNExL2 and GNExL1 8 ohm and 16 ohm Loudspeakers

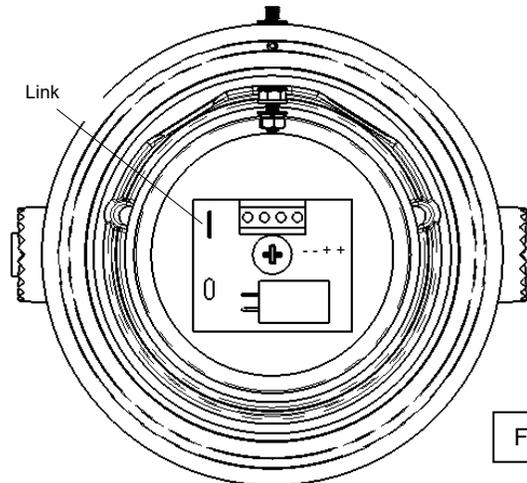


Figure 5

GNExL2 and GNExL1 8 ohm and 16 ohm low impedance loudspeakers have dual input terminals on the pcb assembly for input and output wiring. A cable of up to 2.5mm² can be connected to each terminal. If dc line monitoring is used cut the link on the board (see figure 5 and section 14 of this manual).

14) End of Line DC Monitoring

On GNExL2 and GNExL1 loudspeakers, dc line monitoring can be used if required. Both the 70V and 100V Line units and the Low Impedance units have blocking capacitors fitted. It should be noted that each loudspeaker has a 1M ohm bleed resistor connected across the blocking capacitor and this should be taken into account when selecting the value of the end of line monitoring resistance.

The end of line monitoring resistor can be connected across the terminals on the end of line unit. On the low impedance units care must be taken with the polarity of the monitoring voltage.

On 100V and 70V line units the end of line resistor used must have a minimum resistance value of 4k7 ohms and a minimum wattage of 2.5 watts

On low impedance units the end of line resistor used must have a minimum resistance value of 2k ohms and a minimum wattage of 0.5 watts or a minimum resistance value of 500 ohms and a minimum wattage of 2 watts. On the low impedance units care must be taken with the polarity of the monitoring voltage. If an end of line resistor is fitted to a unit the links on the printed circuit boards of all loudspeakers in the line must be cut for the dc blocking capacitors to be in circuit in order to dc monitor the line (see figure 5).

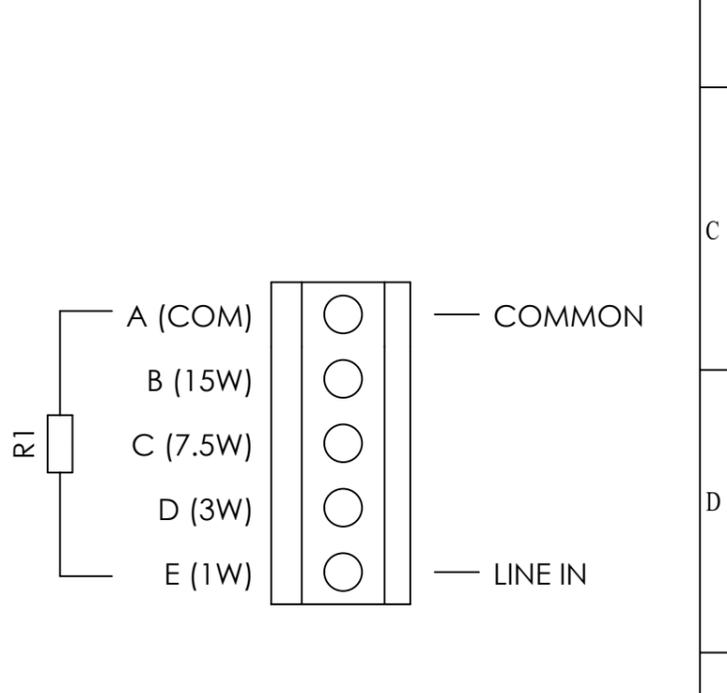
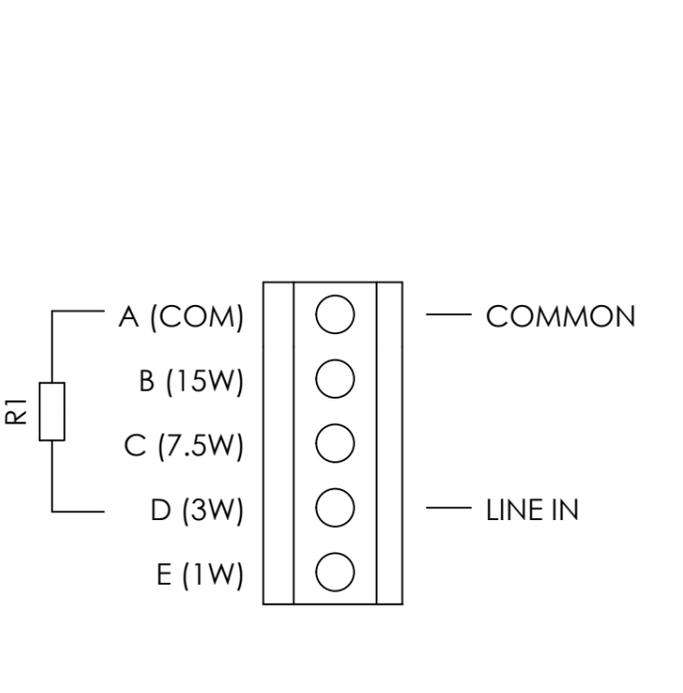
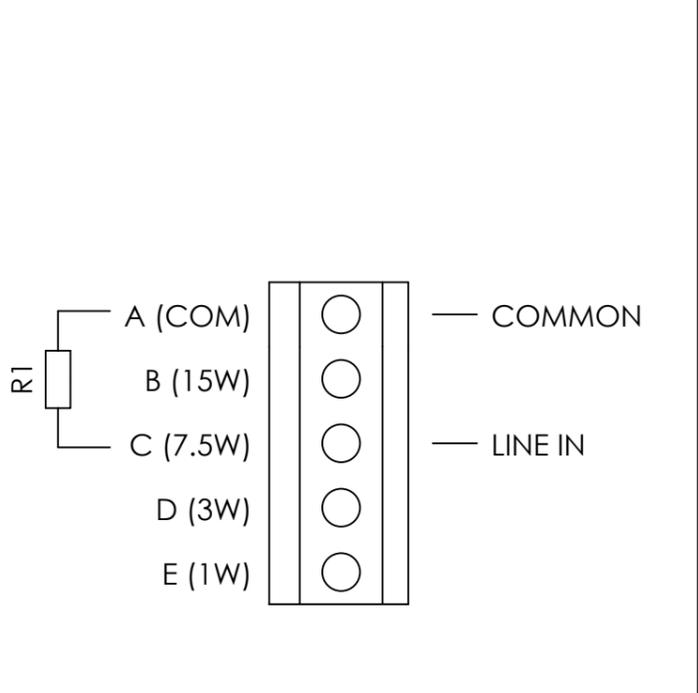
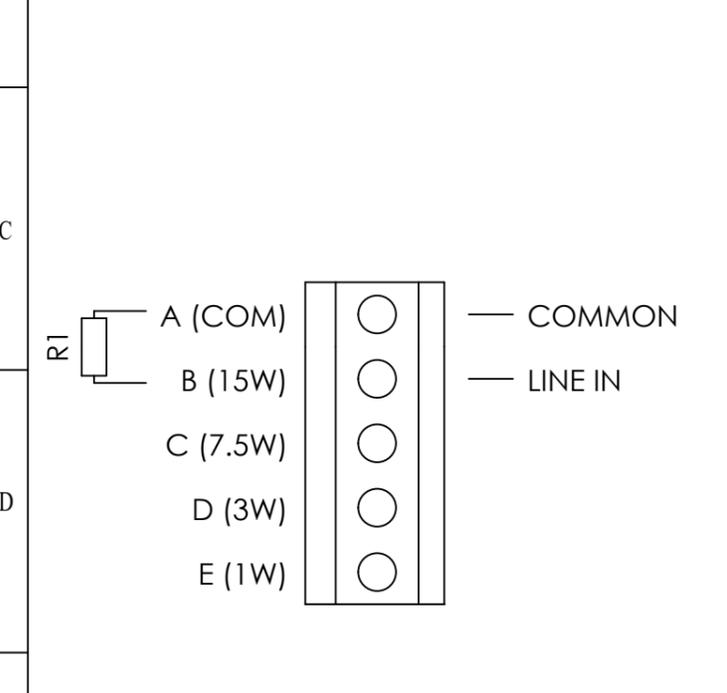
Refer to D157-06-201 for schematic diagram.

| | | | | | | | | | |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
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| | | | | | | | 1 | | INTRODUCTION MA 01/11/2022 |

 OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,
MINIMUM VALUE:
4K7Ω MIN, 2.5W MIN

GNEXL1V100

| | | | | | | | |
|-----------------------------------|-------------|-------------------------------------|-------------|---------------------------------|-------------|---------------------------------|-------------|
| 70V & 100V Line In | Config.: 1a | 70V & 100V Line In | Config.: 1b | 70V & 100V Line In | Config.: 1c | 70V & 100V Line In | Config.: 1d |
| Optional Line Monitoring | | Optional Line Monitoring | | Optional Line Monitoring | | Optional Line Monitoring | |
| 15W: Apply Signal to Common & 15W | | 7.5W: Apply Signal to Common & 7.5W | | 3W: Apply Signal to Common & 3W | | 1W: Apply Signal to Common & 1W | |



| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL1V100 | A-B | 70V | 15W |
| | | 100V | |

| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL1V100 | A-C | 70V | 7.5W |
| | | 100V | |

| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL1V100 | A-D | 70V | 3W |
| | | 100V | |

| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL1V100 | A-E | 70V | 1W |
| | | 100V | |

DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
GNEXL1
GNEXL2

DRAWN M.ABALOS 01/11/2022
CHECKED R.N.POTTS 01/11/2022
APPROVED R.N.POTTS 01/11/2022

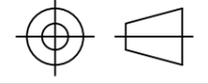
SURFACE FINISH
WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

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ALL DIMENSIONS IN MM
IF IN DOUBT, ASK -
DO NOT SCALE

 **A3**

TITLE **GNEXL1 & GNEXL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS**

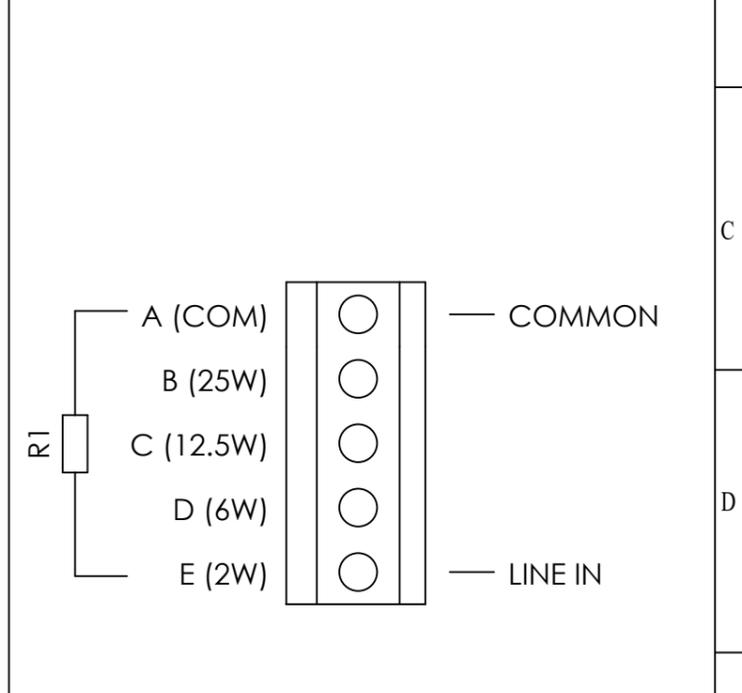
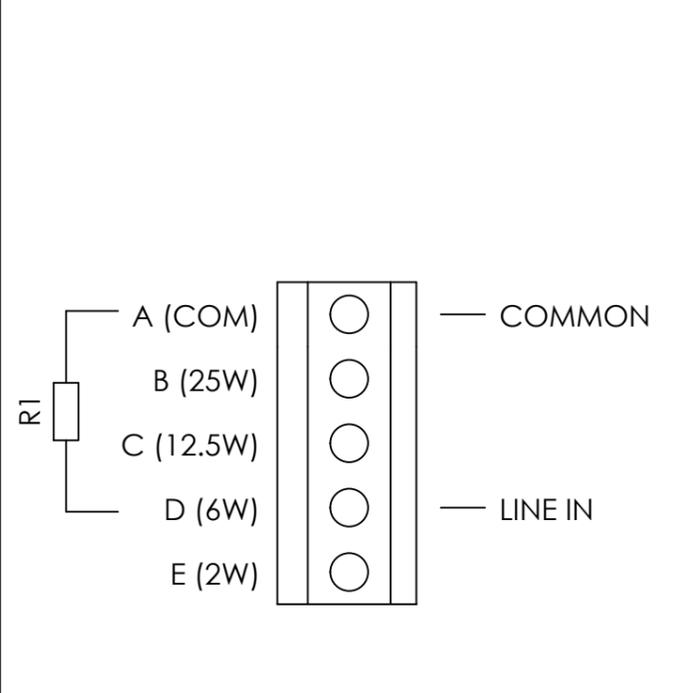
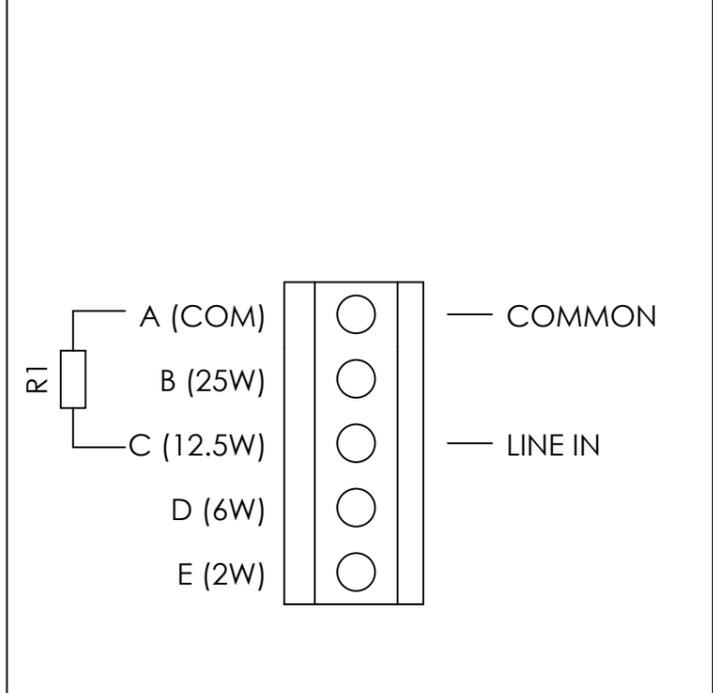
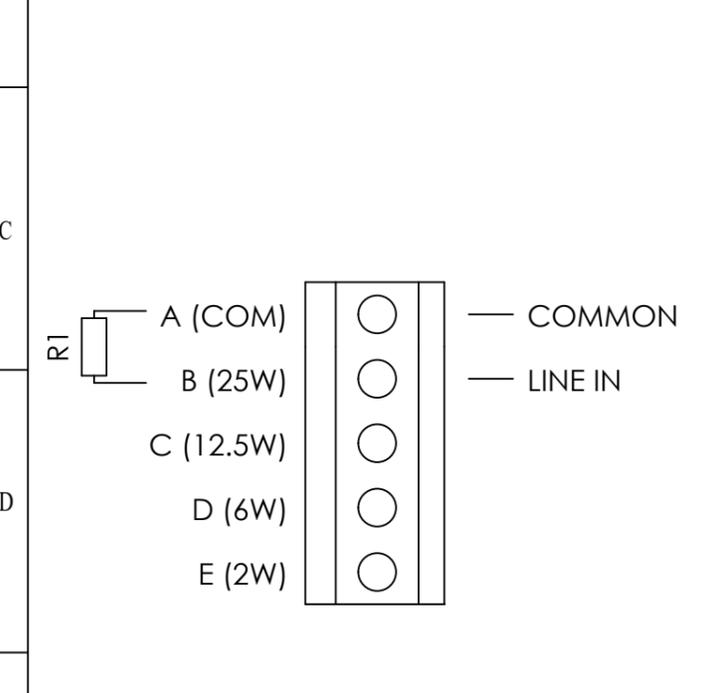
SCALE NTS SHEET 1 OF 3 DRAWING NUMBER **D157-06-201**

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| | | | | | | | 1 | | INTRODUCTION MA 01/11/2022 |

 OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,
MINIMUM VALUE:
4K7Ω MIN, 2.5W MIN

GNEXL2V100

| | | | | | | | |
|-----------------------------------|-------------|---------------------------------------|-------------|---------------------------------|-------------|---------------------------------|-------------|
| 70V & 100V Line In | Config.: 2a | 70V & 100V Line In | Config.: 2b | 70V & 100V Line In | Config.: 2c | 70V & 100V Line In | Config.: 2d |
| Optional Line Monitoring | | Optional Line Monitoring | | Optional Line Monitoring | | Optional Line Monitoring | |
| 25W: Apply Signal to Common & 25W | | 12.5W: Apply Signal to Common & 12.5W | | 6W: Apply Signal to Common & 6W | | 2W: Apply Signal to Common & 2W | |



| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL2V100 | A-B | 70V | 25W |
| | | 100V | |

| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL2V100 | A-C | 70V | 12.5W |
| | | 100V | |

| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL2V100 | A-D | 70V | 6W |
| | | 100V | |

| | TERMINAL CONNECTIONS | MAX. INPUT VOLTAGE | OUTPUT LEVEL |
|------------|----------------------|--------------------|--------------|
| GNEXL2V100 | A-E | 70V | 2W |
| | | 100V | |

DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
GNEXL1
GNEXL2

DRAWN M.ABALOS 01/11/2022
CHECKED R.N.POTTS 01/11/2022
APPROVED R.N.POTTS 01/11/2022

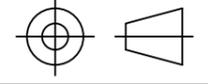
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WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

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 **A3**

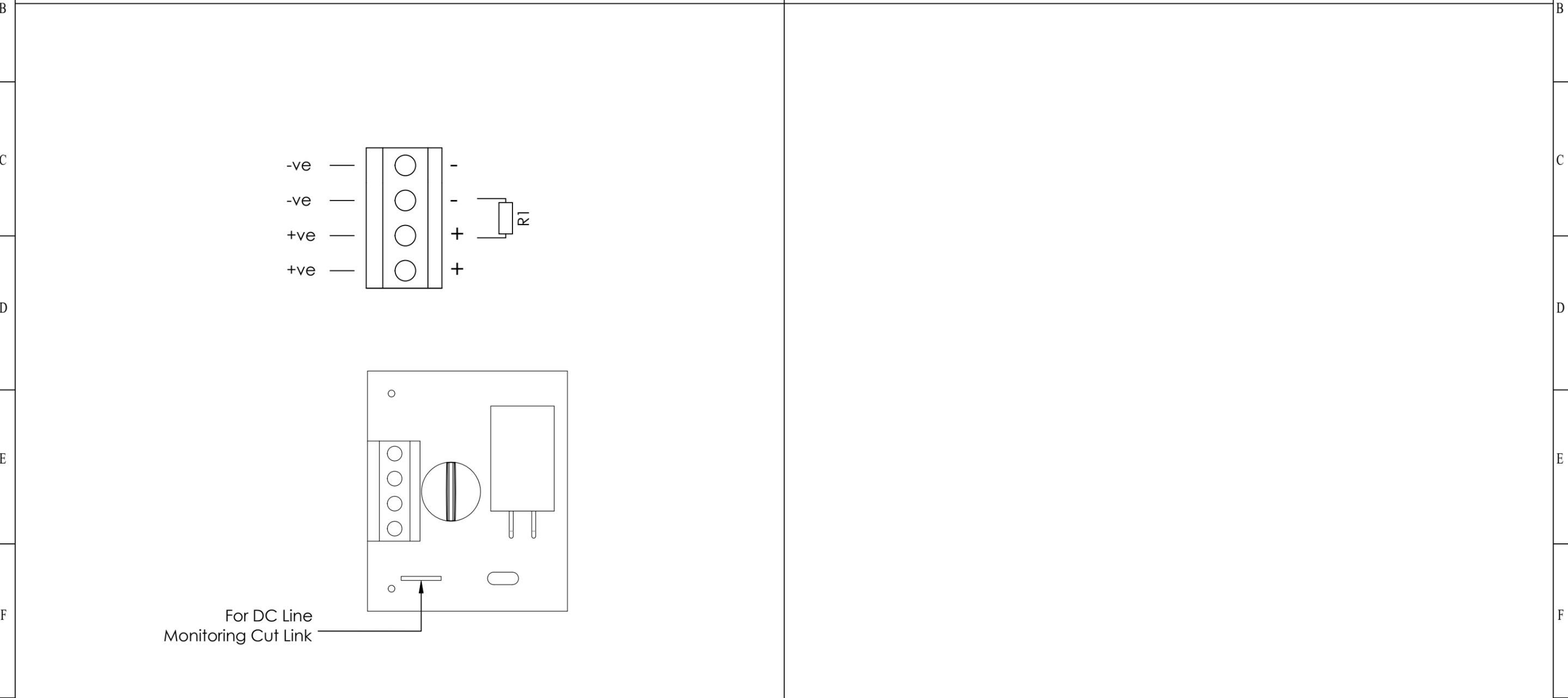
TITLE **GNEXL1 & GNEXL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS**

SCALE NTS SHEET 2 OF 3 DRAWING NUMBER **D157-06-201**

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| | | | | | | | ISSUE | MOD No. | REASON - INITIAL - DATE |
| | | | | | | | 1 | | INTRODUCTION MA 01/11/2022 |

OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,
MINIMUM VALUE:
500Ω MIN, 2W MIN OR 2KΩ MIN, 0.5W MIN

GNExL1R008, GNExL1R016, GNExL2R008 & GNExL2R016 LOW IMPEDANCE Config.: 3
Optional Line Monitoring
Apply Signal to +ve & - ve



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|---|-------------------------------|----------|----------------|----------------------|---|---|--|-----------------|--------------------------------------|-----------|
| DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS | DRAWN | DATE | SURFACE FINISH | WEIGHT (Kg) | THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. | EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM | ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE | | | A3 |
| | CHECKED | DATE | | | | | TITLE GNExL1 & GNExL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS | | | |
| | STANDARDS GNExL1 GNExL2 | APPROVED | DATE | ALTERNATIVE MATERIAL | | | SCALE NTS | SHEET 3 OF 3 | DRAWING NUMBER D157-06-201 | |

EU Declaration of Conformity



Manufacturer: European Safety Systems Ltd.
Impress House, Mansell Road, Acton
London, W3 7QH
United Kingdom

Authorised Representative: E2S Warnsignaltechnik UG
Charlottenstrasse 45-51
72764 Reutlingen
Germany

Equipment Type: GNExS1, GNExS2
GNExL1, GNExL2

Directive 2014/34/EU: Equipment and Protective Systems for use in Potentially Explosive Atmospheres (ATEX)

| | |
|---|--|
| Notified Body for EU type Examination (Module B): | Sira Certification Service Notified Body No.: 2813 CSA Group Netherlands B.V, Utrechtseweg 310, 6812 AR, Arnhem, Netherlands |
| EU-type Examination Certificate (Module B): | Sira 13ATEX1139X |
| Notified Body for Quality Assurance Notification / Conformity to EU-type based on quality assurance of the production process (Module D): | Sira Certification Service Notified Body No.: 2813 CSA Group Netherlands B.V, Utrechtseweg 310, 6812 AR, Arnhem, Netherlands |
| Quality Assurance Notification (Module D): | SIRA 05 ATEX M342 |
| Provisions fulfilled by the equipment: | II 2G Ex db IIB or IIC T3, T4, T5 or T6 Gb |
| Standards applied: | EN 60079-0:2018 EN 60079-1:2014 A/C:2018 |

Directive 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

| | |
|--------------------|--|
| Standards applied: | EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007 / A1:2011 / AC: 2012 EN 61000-6-4:2007 / A1: 2011 |
|--------------------|--|

Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

Other Standards and Regulations

EN 60529:1992+A2:2013 - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66/67

EU Declaration of Conformity



On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.

A handwritten signature in black ink, appearing to read 'Martin Streetz'.

Martin Streetz
Quality Assurance Manager

Document No.:
Date and Place of Issue:

DC-038_Issue_F
London, 23/12/2020

Manufacturer: European Safety Systems Ltd.
 Impress House, Mansell Road, Acton
 London, W3 7QH
 United Kingdom

Equipment Type: GNExS1, GNExS2
 GNExL1, GNExL2

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

| | |
|---|--|
| Notified Body for UK type Examination (Module B): | Sira Certification Service Notified Body No.: 0518 Rake Lane, Eccleston, Chester CH4 9JN, UK |
| UK-type Examination Certificate (Module B): | CSAE 21UKEX1558X |
| Notified Body for Quality Assurance Notification / Conformity to EU-type based on quality assurance of the production process (Module D): | Sira Certification Service Notified Body No.: 0518 Rake Lane, Eccleston, Chester CH4 9JN, UK |
| Quality Assurance Notification (Module D): | CSAE 22UKQAN0046 |
| Provisions fulfilled by the equipment: | II 2G Ex db IIB or IIC T3, T4, T5 or T6 Gb |
| Standards applied: | EN 60079-0:2018 EN 60079-1:2014 A/C:2018 |

Directive 2014/30/EU: Electromagnetic Compatibility Directive (EMC)

| | |
|--------------------|--|
| Standards applied: | EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007 / A1:2011 / AC: 2012 EN 61000-6-4:2007 / A1: 2011 |
|--------------------|--|

Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

Other Standards and Regulations

EN 60529:1992+A2:2013 - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66/67

On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.



Martin Streetz
 Quality Assurance Manager

Document No.: DC-095_Issue_A
 Date and Place of Issue: London, 04/02/2022