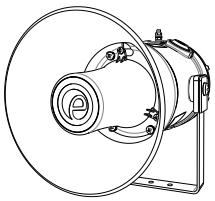
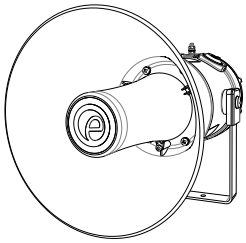
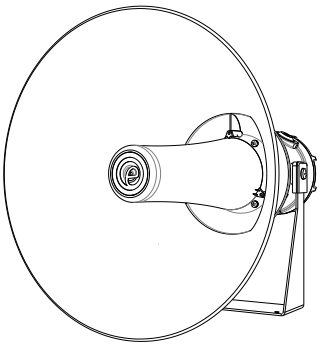
INSTRUCTION MANUAL
D2xL1 & D2xL2
Loudspeaker
Class I, Zone 2 & 22



D2xL1F



D2xL2F



D2xL2H

1) Product Table

Unit Type Code	Input	Power (Watts)	Max I/P Volts	Sound Pressure Level dB(A)	
				Max Rated	Pink Noise @ 1W
D2xL1FV100-A	100V Line	15	100	120	101
D2xL1FV725-A	70.7 / 25V Line	15	70.7		
D2xL1FR008-A	8 Ohm	15	10.95		
D2xL1FR016-A	16 Ohm	15	15.49		
D2xL2FV100-A	100V Line	25	100	124	104
D2xL2FV725-A	70.7 / 25V Line	25	70.7		
D2xL2FR008-A	8 Ohm	25	14.14		
D2xL2FR016-A	16 Ohm	25	20		
D2xL2HV100-A	100V Line	25	100	129	106
D2xL2HV725-A	70.7 / 25V Line	25	70.7		
D2xL2HR008-A	8 Ohm	25	14.14		
D2xL2HR016-A	16 Ohm	25	20		
Frequency Range: 400Hz to 8000Hz					
The table shows the input current taken by the various Loudspeakers. Nominal current at nominal voltage.					
Table 1: Electrical Ratings.					

2) Warnings

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
DO NOT OPEN WHEN ENERGISED
POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH

NE PAS OUVRIR UN PRESENCE D'ATMOSPHERE EXPLOSIVE
NE PAS OUVRIR ENERGIE
DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE - NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE

3) Marking & Rating Information

3.1 UL Certification

All Loudspeakers comply with the following standards:

UL 1480A (Ed 1) – Speakers for Commercial and Professional Use
CSA C22.2 No. 205 (Ed 3) – Signal Equipment
UL 1480 (Ed 6) – Speakers for Fire Alarm and Signaling Systems, Including Accessories
CAN/ULC-S541 (Ed 4) – Speakers for Fire Alarm and Signaling Systems, Including Accessories

See relevant sections further down.

The D2xL Loudspeakers comply with the following standards for hazardous locations:

3.2 Class/Division & Class/Zone Ratings for US & Canada

Class Division Ratings for US (NEC) & Canada (CEC)	
Standards	
UL 121201-2021 Ed 9 CAN/CSA C22.2 No. 213-17 Ed 3	
Model No:	**Rating**
D2xL1-V100/ D2xL1-V725/ D2xL1-R008/ D2xL1-R016	Class I Div 2 ABCD T4A Ta -55°C to +45°C Class I Div 2 ABCD T4 Ta -55°C to +55°C Class I Div 2 ABCD T3C Ta -55°C to +80°C Class I Div 2 ABCD T3 Ta -55°C to +85°C Class II Div 2 FG T4 Ta -55°C to +85°C Class III Ta -55°C to +85°C
D2xL2-V100/ D2xL2-V725/ D2xL2-R008/ D2xL2-R016	Class I Div 2 ABCD T3C Ta -55°C to +60°C Class I Div 2 ABCD T3B Ta -55°C to +65°C Class I Div 2 ABCD T3A Ta -55°C to +80°C Class I Div 2 ABCD T3 Ta -55°C to +85°C Class II Div 2 FG T4 Ta -55°C to +85°C Class III Ta -55°C to +85°C
NEC Class Zone Ratings for US	
Standards	
UL60079-0 Ed 7 UL60079-7 Ed 5 UL60079-31 Ed 2	
Model No:	**Rating**
D2xL1-V100/ D2xL1-V725/ D2xL1-R008/ D2xL1-R016	Class I Zone 2 AEx ec IIC T4 Gc Ta -55°C to +50°C Class I Zone 2 AEx ec IIC T3 Gc Ta -55°C to +75°C Zone 21 AEx tc IIIC T109°C Dc Ta -55°C to +75°
D2xL2-V100/ D2xL2-V725/ D2xL2-R008/ D2xL2-R016	Class I Zone 2 AEx ec IIC T3 Gb Ta -55°C to +75°C Zone 22 AEx tc IIIC T119°C Dc Ta -55°C to +75°
CEC Class Zone Ratings for Canada	
Standards	
CSA C22.2 No 60079-0 Ed 4 CSA C22.2 No 60079-7 Ed 2 CSA C22.2 No 60079-31 Ed 2	
Model No:	**Rating**
D2xL1-V100/ D2xL1-V725/ D2xL1-R008/ D2xL1-R016	Ex ec IIC T4 Gc -55°C to +50°C Ex ec IIC T3 Gc -55°C to +75°C Ex tc IIIC T109°C Dc -55°C to +75°C
D2xL2-V100/ D2xL2-V725/ D2xL2-R008/ D2xL2-R016	Ex ec IIC T3 Gc -55°C to +75°C Ex tc IIIC T119°C Dc -55°C to +75°C
Installation must be carried out in compliance with the National Electric Code / Canadian Electric Code	

3.3 ATEX / IECEx & UKEx Ratings

Standards	
EN IEC 60079-0:2018/IEC 60079-0:2017 (ed.7): Explosive Atmospheres - Equipment General Requirements. EN IEC 60079-7:2015 +A1:2018/IEC60079-7:2018 (ed.5.1): Explosive Atmospheres - Equipment Protection by increased safety “e”. EN60079-31:2014/IEC60079-31:2022 (ed.3): Explosive Atmospheres - Equipment Dust Ignition Protection by enclosure “t”.	
Model No:	**Rating**
D2xL1-V100/ D2xL1-V725/ D2xL1-R008/ D2xL1-R016	Ex ec IIC T4 Gc Ta -55°C to +50°C Ex ec IIC T3 Gc Ta -55°C to +75°C Ex tc IIIC T109°C Dc Ta –55°C to +75°C
D2xL2-V100/ D2xL2-V725/ D2xL2-R008/ D2xL2-R016	Ex ec IIC T3 Gc Ta -55°C to +75°C Ex tc IIIC T119°C Dc Ta –55°C to +75°C
See Product table for electrical ratings of each unit model	

Certificate No.	DEMKO 14ATEX4786493904X IECEx ULD 14.0004X UKEx UL UL21UKEX2131X
Epsilon x Equipment Group and Category:	**II 3G** **II 3D**
CE Marking and Notified Body No.	**2813**
UKCA Marking and Notified Body No.	**0518**

4) Zones, Gas Group, Category and Temperature Classification

The units can be installed in locations with the following conditions:

Area Classification Gas	
Zone 2	Explosive gas air mixture not likely to occur in normal operation, 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
Temperature Classification for Gas Applications	
T1	450º C
T2	300º C
T3	200º C
T4	135º C (D2xL1 only up to 50°C)
Area Classification Dust	
Zone 22	Explosive dust air mixture not likely to occur in normal operation, and if it does, it will only exist for a short time.
Dust Groupings	
Group IIIA	Combustible Dusts
Group IIIB	Non-Conductive Dusts
Group IIIC	Conductive Dusts
Equipment Category	
3G, 3D	
Equipment Protection Level	
Gc, Dc	
Maximum Surface Temperature for Dust Applications	
109°C (D2xL1) 119°C (D2xL2)	
Ambient Temperature Range	
-55°C to +75°C (-67°F to +167°F)	
IP Rating	
IP66/67 to EN60529 4 / 4X / 3R / 13 to UL50E / NEMA250	
Installation must be carried out in compliance with the latest issue of the following standards: EN60079-14 / IEC60079-14: Explosive atmospheres - Electrical installations design, selection and erection EN60079-10-1 / IEC60079-10-1: Explosive atmospheres - Classification of areas. Explosive gas atmospheres EN60079-10-2 / IEC60079-10-2: Explosive atmospheres - Classification of areas. Explosive dust atmospheres	

5) Specific Conditions of Installation

The plastic horn is not anti-static and the metallic enclosure has a non-conductive coating. These may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions that might cause a build-up of electrostatic charges on non-conducting surfaces.

6) Product Mounting and Access

6.1 Mounting

The D2x Loudspeaker may be secured to any flat surface using at least two of the three or four 7mm fixing holes. The enclosure provides IP66 protection and is suitable for installation in exterior locations providing it is positioned so that water cannot collect in the horn, and the cable entry is sealed.

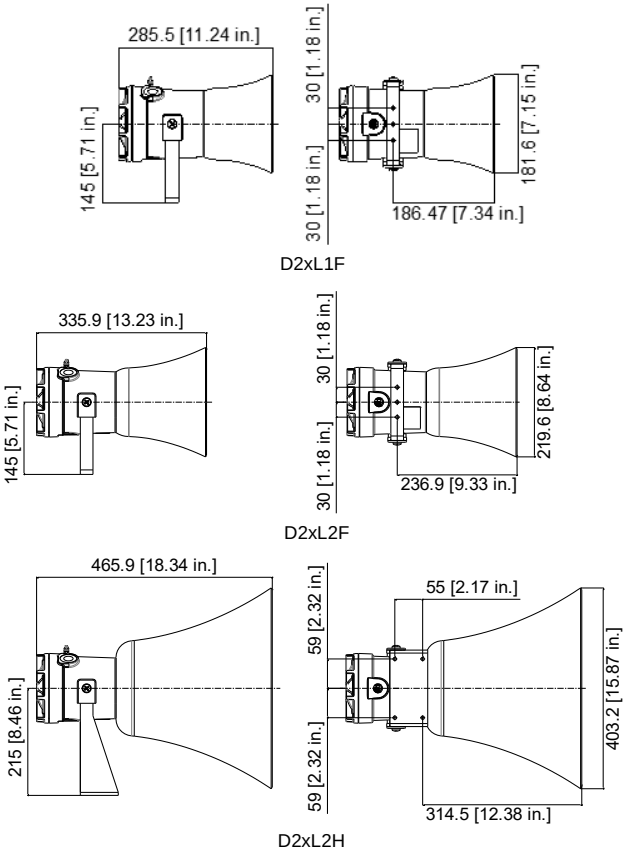
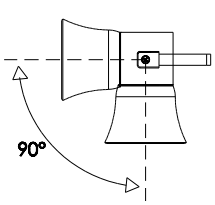


Fig 1: Mounting Locations

The Equipment must not be installed with the horn facing upwards of horizontal.



6.2 Installation procedure

a. Secure the D2x unit to a flat surface via the three 7mm fixing holes in the mounting bracket.
b. Remove the cover of the alarm horn by unscrewing it, taking care not to damage the threads in the process (Refer to section 6.4).
c. Fit an M20/NPT suitably rated cable gland or conduit entry into the hole in the enclosure and connect the field wiring to the appropriate terminals as shown in D190-06-201. The power supply terminals are duplicated so that units may be connected in parallel. An end of line monitoring resistor may be fitted to units (see section 9). If the second and third M20/NPT entries are not used, suitably rated stopping plugs must always be fitted.
d. Replace the cover of the loudspeaker, taking care not to damage the threads. Tighten fully.

6.3 Hornless Variants

The D2x Loudspeaker is also available as a variant with no horn fitted in the factory. The Horn threaded nose portion has a fitment thread of 1-3/8" – 18 UNF (to BS1580 or ANSI B1.1). The customer is responsible for sourcing and correctly fitting a suitable horn that meets all of the relevant safety requirements.

6.4 Access to the Enclosure

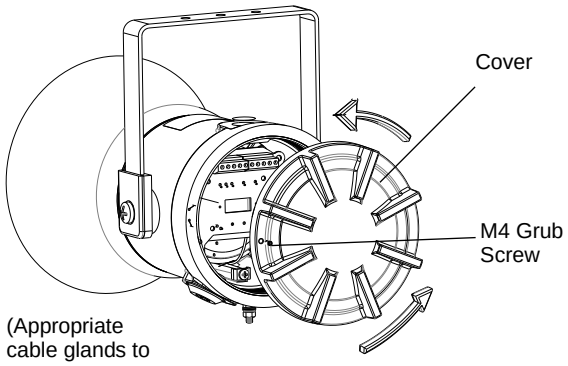


Fig 2: Accessing the enclosure

To access the unit, loosen the M4 grub screw on the cover. Open the enclosure by turning the cover counter-clockwise and remove the cover. Take extreme care not to damage the threads in the process.

On completion of the installation the threaded joint should be inspected to ensure that they are clean and that they have not been damaged during installation.

Ensure the O-ring seal is in place and undamaged.

When fitting the cover ensure the thread is engaged correctly. Fully tighten the cover all the way, ensure no gap is visible between the cover and base of the sounder enclosure.

7) Installation Requirements

7.1 Safe Installation Requirements

Warning – High voltage may be present, risk of electric shock.
DO NOT open when energised, disconnect power before opening.

The product must only be installed by suitably qualified personnel in accordance with the latest issues of the relevant standards.

The installation of the units must also be in accordance with the NEC / CEC and any local regulations and should only be carried out by a competent electrical engineer who has the necessary training.

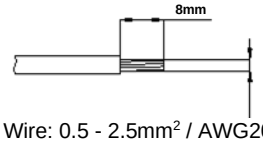
7.2 Cable Selection and Connections

When selecting the cable size, consideration must be given to the input current that each unit draws (see table 1), the number of sounders 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 the sounders connected to the line.

Electrical connections are to be made into the terminal blocks on the PCBA, using solid wire 0.5-4mm2 / AWG 20-12 or stranded wire, sizes 0.5-2.5mm2 / AWG 24-14.

D2xL2 and D2xL1 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 4.0mm² can be connected to each terminal.

Wire insulation needs to be stripped 8mm. Wires may be fitted securely with crimped ferrules. Terminal screws need to be tightened down with a tightening torque of 0.45 Nm / 3.5 Lb-in.



Stranded Wire: 0.5 - 2.5mm^2 / AWG20 - AWG12
Solid Wire: 0.5 - 4mm^2 / AWG24 - AWG14

Figure 3: Wire Preparation.

When connecting wires to the terminals great care should be taken to dress the wires 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.

7.3 Earthing

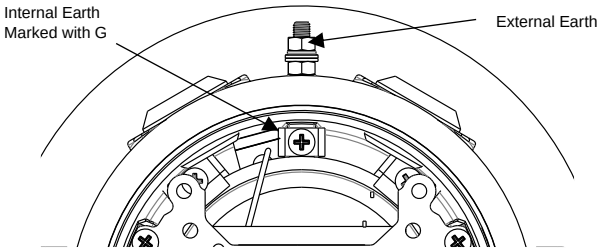


Figure 4: Earth Locations.

The unit has both a primary internal and secondary external earth fixing point.

Internal earth connections should be made to the internal Earth terminal in the base of the housing using a ring crimp terminal to secure the earth conductor under the earth clamp.

External earth connections can be made to the M5 earth stud (see Fig. 4), using a ring crimp terminal to secure the earth conductor to the earth stud. The external earth conductor should be at least 4mm^2 in size.
The external earth crimp ring should be located between the two M5 plain washers provided and securely locked down with the M5 spring washer and M5 nut.

The earth conductor should be at least equal in size and rating to the incoming power conductors.

7.4 Cable Glands, Blanking Elements & Adapters

Ingress Protection

If a high IP (Ingress Protection) rating is required then a suitable sealing washer must be fitted under the cable glands or blanking plugs. A minimum ingress protection rating of IP6X must be maintained for installations in explosive dust atmospheres.

To maintain the ingress protection rating and mode of protection, the cable entries must be fitted with suitably rated cable entry and/or blanking devices during installation.

Adapters

The D2x Loudspeaker range can be supplied with the following types of adapters:

M20 to ½" NPT
M20 to ¾" NPT
M20 to M25

It is important to note that stopping plugs cannot be fitted onto adapters, only directly onto the M20 entries.

To maintain the ingress protection rating and mode of protection, the cable entries must be fitted with suitably rated, certified cable entry and/or blanking devices during installation.

8) Wiring

The cable connections are made into the terminal blocks on the PCB assembly located in the enclosure. See section 6.4 of this manual for access to the enclosure.

Refer to Wiring Schematic D190-06-201 Configs. 1a -2d or 4a-5f for Line in Loudspeakers and Config. 3 for Low impedance wiring details.

9) End of Line Monitoring (DC Units)

DC line monitoring can be used if required. Both the Line In 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 resistor must be connected directly across the terminals. Whilst keeping its leads as short as possible, a spacing of at least 1/16" (1.58mm) must be provided through air and over surfaces between uninsulated live parts.

For Line in units the end of line resistor used must have minimum resistance values of:

70/25V Line in Loudspeaker:

Minimum resistance 3K9 Ohms	Minimum Power 0.5W
Minimum resistance 1K Ohms	Minimum Power 2.0W

100V Line in Loudspeaker:

Minimum resistance 15K Ohms	Minimum Power 0.5W
Minimum resistance 3K9 Ohms	Minimum Power 2.0W

For Low Impedance units the end of line resistor used must have minimum resistance values of:

Minimum resistance 2K Ohms	Minimum Power 0.5W
Minimum resistance 500 Ohms	Minimum Power 2.0W

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 Fig 5).

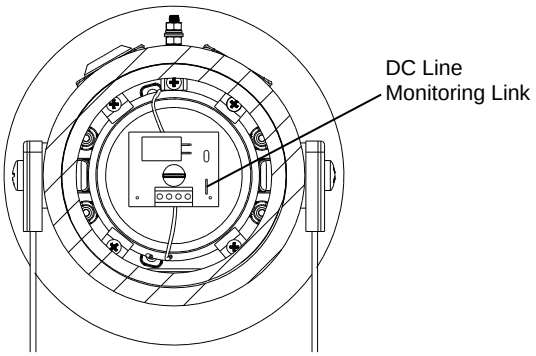


Fig. 5 Low Impedance Line Monitoring Link

10) Maintenance, Overhaul and Repair

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

For ATEX/IECEx or UKEx:

EN60079-19/IEC60079-19
Explosive atmospheres – Equipment repair, overhaul and reclamation

EN 60079-17/IEC60079-17
Explosive atmospheres – Electrical installations inspection and maintenance

Units must not be opened while an explosive atmosphere is present.

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

Potential electrostatic charging hazard – Clean only with a damp cloth.

FIRE INSTRUCTION & SERVICE MANUAL
D2xL1F, D2xL2F & D2xL2H

D2xL1FV100, D2xL2FV100, D2xL2HV100, D2xL1FV725, D2xL2FV725, D2xL2HV725, D2xL1FR008, D2xL2FR008, D2xL2HR008, D2xL1FR016, D2xL2FR016 & D2xL2HR016 are approved for use as Loudspeakers for Fire Alarm Systems: UL1480 (Ed 6) CAN/ULC-S541 (Ed 4)

Attention: Installation must be carried out by an electrician in compliance with the National Electrical Code, NFPA 70, and the National Fire Alarm Signaling Code, NFPA 72 or CSA 22.1 Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32. / L'installation doit exclusivement être réalisée par du personnel qualifié, conformément au code national d'électricité américain, NFPA 70, et le code national d'alarrme incendie et de signalisation NFPA 72 ou CSA 22.1 Code canadien de l'électricité, première partie, norme de sécurité relative aux installations électriques, Section 32

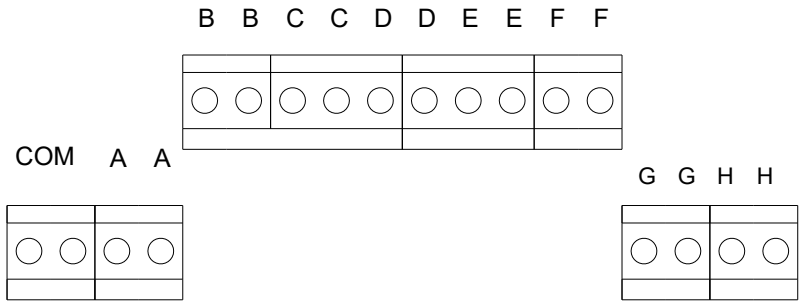
Attention: Disconnect from power source before installation or service to prevent electric shock / Débranchez-le de la source d'alimentation avant l'installation ou l'entretien pour éviter tout choc électrique.

Attention: Fire Alarm Device—Do not paint / Ne pas Peinturer—Dispositif D'Alarme

Attention: Do not change factory applied finishes / Ne pas changer le revetement applique en usine

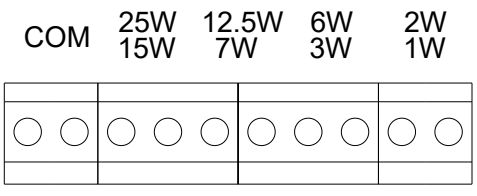
- Type 4 / 4X / 3R / 13, IP66/IP67
- -55°C to +80°C / -67°F to +176°F
- Units should be mounted using at least 2 of the 3-off/4-off ø7mm holes in the mounting bracket.
- The Equipment must not be installed with the horn facing upwards of horizontal.
- If a high IP (Ingress Protection) rating is required then a suitable sealing washer or O-ring must be fitted under any cable gland or blanking device with metric threads.
- Check that the 'O' ring seal is in place before replacing the cover.
- To maintain the enclosure rating, the cable entries must be fitted with suitably rated cable entry and/or blanking devices or suitably sized conduit during installation. If entries are fitted with adaptors they must be suitable for the application.
- Connections are to be made into the terminal blocks using solid or stranded wire, sizes 0.5-2.5mm² / AWG 20-14. Wire insulation needs to be stripped 8mm. Wires may be fitted securely with crimped ferrules. Terminal screws need to be tightened down with a tightening torque of 0.45 Nm / 4 Lb-in.
- A single wire with a cross sectional area of up to 2.5mm² / AWG14 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.
- Units can be located indoor or outdoor wet use, wall or ceiling mounted.

D2xL1FV725, D2xL2FV725, D2xL2H725 Wiring Terminals



	D2xL1FV725		D2xL2FV725, D2xL2HV725	
	Voltage		Voltage	
Terminals	70.7V	25V	70.7V	25V
COM - A	-	15W	-	25W
COM - B	-	7.5W	-	12.5W
COM - C	15W	5W	25W	6W
COM - D	7.5W	4W	12.5W	4W
COM - E	5W	2W	6W	2W
COM - F	4W	-	4W	1W
COM - G	2W	-	2W	-
COM - H	-	-	1W	-

D2xL1FV100, D2xL2FV100 & D2xL2HV100 Wiring Terminals



Terminals	D2xL1FV100	D2xL2FV100, D2xL2HV100
COM – 25W/15W	15W	25W
COM – 12.5W/7W	7W	12.5W
COM – 6W/3W	3W	6W
COM – 2W/1W	1.1W	2.1W

Sound Pressure Level

UL1480 Product Data												
Unit Type Code	Input	Power	Max Input	SPL Output (dB(A)) at different Transformer Tappings								
				1W	2W	3W	4W	5W	6W	7.5W	12.5W	15W	25W
D2xL1FV725	70V Line	15W	70.7V	-	92.38	-	95.34	97.99	-	100.64	-	103.24	-
	25V Line	15W	25V	-	89.23	-	91.16	96.89	-	100.10	-	102.33	-
D2xL2FV725	70V Line	25W	70.7V	92.84	96.05	-	98.89	-	100.45	-	103.08	-	105.56
	25V Line	25W	25V	90.12	91.83	-	95.07	-	98.18	-	102.71	-	103.91
D2xL2HV725	70V Line	25W	70.7V	93.37	96.26	-	99.04	-	100.31	-	103.35	-	105.67
	25V Line	25W	25V	90.38	92.29	-	95.39	-	98.18	-	102.61	-	103.56
Unit Type Code	Input	Power	Max Input	SPL Output (dB(A)) at different Transformer Tappings									
				1.1W	2.1W	3W	-	-	6W	7.5W	12.5W	15W	25W
D2xL1FV100	100V Line	15W	100V	92.9	-	97.27	-	-	-	100.83	-	103.32	-
D2xL2FV100	100V Line	25W	100V	-	96.08	-	-	-	100.36	-	103.11	-	105.41
D2xL2HV100	100V Line	25W	100V	-	96.2	-	-	-	100.39	-	103.02	-	105.34
D2xL1FR008	8 Ohm	15W	10.95V	102.56									
D2xL1FR016	16 Ohm	15W	15.49V	102.24									
D2xL2FR008	8 Ohm	25W	14.14V	104.6									
D2xL2FR016	16 Ohm	25W	20.00V	105.18									
D2xL2HR008	8 Ohm	25W	14.14V	105.18									
D2xL2HR016	16 Ohm	25W	20.00V	104.92									

CAN/ULC-S541 Product Data												
Unit Type Code	Input	Power	Max Input	SPL Output (dB(A)) at different Transformer Tappings								
				1W	2W	3W	4W	5W	6W	7.5W	12.5W	15W	25W
D2xL1FV725	70V Line	15W	70.7V	-	98.3	-	101.3	104.0	-	106.9	-	109.4	-
	25V Line	15W	25V	-	95.34	-	98.38	101.5	-	106.7	-	109	-
D2xL2FV725	70V Line	25W	70.7V	96.36	102.9	-	106.0	-	107.5	-	110.3	-	112.7
	25V Line	25W	25V	96.44	99.14	-	102.4	-	105.3	-	110.2	-	111.6
D2xL2HV725	70V Line	25W	70.7V	102.8	105.5	-	108.6	-	110.2	-	113.4	-	115.7
	25V Line	25W	25V	100.1	101.8	-	104.8	-	107.8	-	112.6	-	113.8
Unit Type Code	Input	Power	Max Input	SPL Output (dB(A)) at different Transformer Tappings									
				1.1W	2.1W	3W	-	-	6W	7.5W	12.5W	15W	25W
D2xL1FV100	100V Line	15W	100V	99.29	-	103.7	-	-	-	107.3	-	109.7	-
D2xL2FV100	100V Line	25W	100V	-	103.3	-	-	-	107.8	-	110.6		112.8
D2xL2HV100	100V Line	25W	100V	-	105.9	-	-	-	110.2	-	113.2	-	116.1
D2xL1FR008	8 Ohm	15W	10.95V	109.4									
D2xL1FR016	16 Ohm	15W	15.49V	108.9									
D2xL2FR008	8 Ohm	25W	14.14V	112.6									
D2xL2FR016	16 Ohm	25W	20.00V	113.6									
D2xL2HR008	8 Ohm	25W	14.14V	115.5									
D2xL2HR016	16 Ohm	25W	20.00V	115.3									

Directional Characteristics

CAN/ULC-S541 Directional Characteristics							
Unit Type Code	Rated Angle	Horizontal Axis			Vertical Axis		
		-3dB(A)	-6dB(A)	Reduction @ 90°	-3dB(A)	-6dB(A)	Reduction @ 90°
D2xL1FV100	0°	+/-25	+/-65	-9.1	+/-30	+/-65	-8.8
D2xL1FV725							
D2xL1FR008							
D2xL1FR016							
D2xL2FV100	0°	+/-30	+/-50	-11.4	+/-25	+/-45	-11.4
D2xL2FV725							
D2xL2FR008							
D2xL2FR016							
D2xL2HV100	0°	+/-20	+/-30	-16.2	+/-20	+/-30	-16.3
D2xL2HV725							
D2xL2HR008							
D2xL2HR016							

ISSUE	MOD No.	REASON - INITIAL - DATE
1		INTRODUCTION RSR 12/10/2023

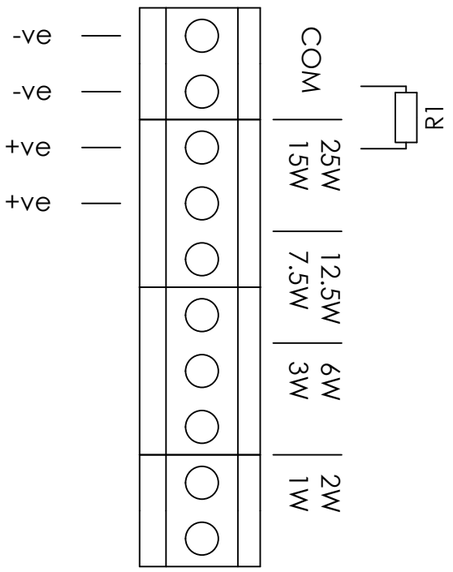
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,
MINIMUM VALUE:
15KΩ MIN, 0.5W MIN OR 3K9Ω MIN, 2.0W MIN

R1

D2xL1V100 Line in Config.: 1a

Optional Line Monitoring

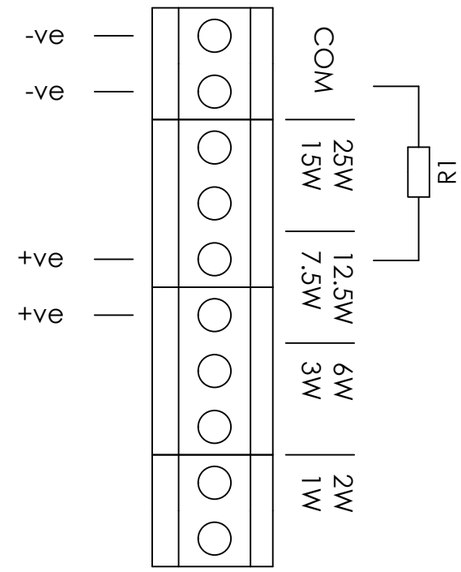
15W: Apply Signal to Common & 15W



D2xL1V100 Line in Config.: 1b

Optional Line Monitoring

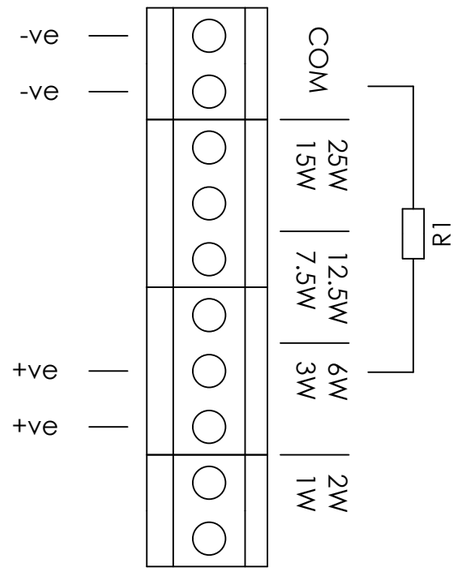
7.5W: Apply Signal to Common & 7.5W



D2xL1V100 Line in Config.: 1c

Optional Line Monitoring

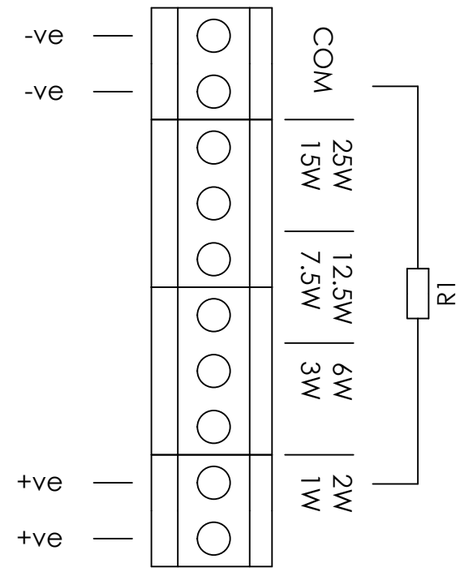
3W: Apply Signal to Common & 3W



D2xL1V100 Line in Config.: 1d

Optional Line Monitoring

1W: Apply Signal to Common & 1W



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

STANDARDS
D2xL1
D2xL2

DRAWN	D.HOWGILL	DATE 18/11/20
CHECKED	R.N.POTTS	DATE 18/11/20
APPROVED	R.N.POTTS	DATE 18/11/20

SURFACE FINISH | WEIGHT (Kg)

MATERIAL

ALTERNATIVE MATERIAL

e2S warning signals
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

TITLE **D2xL1 & D2xL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS**

SCALE	SHEET	DRAWING NUMBER
NTS	1 OF 5	D252-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
1		NEW SHEET RSR 12/10/2023

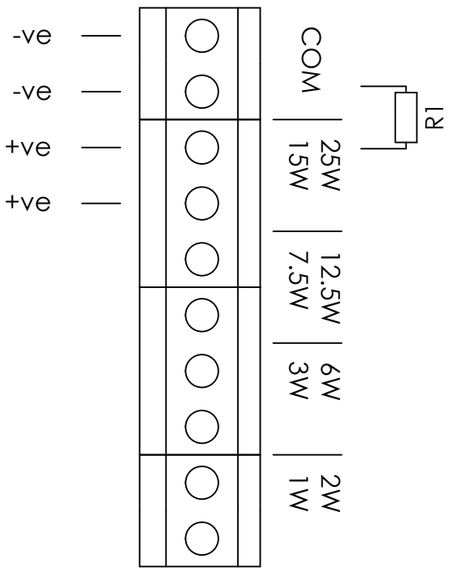
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,
MINIMUM VALUE:
15KΩ MIN, 0.5W MIN OR 3K9Ω MIN, 2.0W MIN

R1

D2xL2V100 Line in — Config.: 2a

Optional Line Monitoring

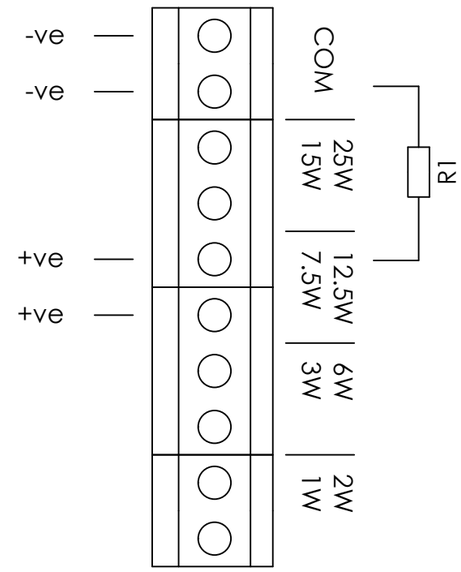
25W: Apply Signal to Common & 25W



D2xL2V100 Line in — Config.: 2b

Optional Line Monitoring

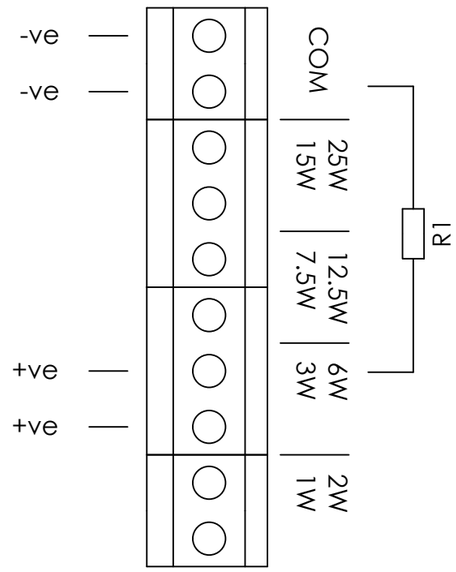
12.5W: Apply Signal to Common & 12.5W



D2xL2V100 Line in — Config.: 2c

Optional Line Monitoring

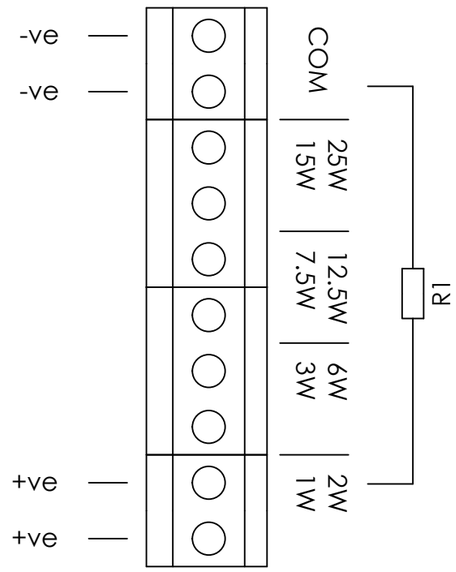
6W: Apply Signal to Common & 6W



D2xL2V100 Line in — Config.: 2d

Optional Line Monitoring

2W: Apply Signal to Common & 2W



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

STANDARDS
D2xL1
D2xL2

DRAWN	D.HOWGILL	DATE 18/11/20
CHECKED	R.N.POTTS	DATE 18/11/20
APPROVED	R.N.POTTS	DATE 18/11/20

SURFACE FINISH | WEIGHT (Kg)

MATERIAL

ALTERNATIVE MATERIAL

e2S warning signals
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

TITLE **D2xL1 & D2xL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS**

SCALE	SHEET	DRAWING NUMBER
NTS	2 OF 5	D252-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
1		INTRODUCTION RSR 12/10/2023

OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,
MINIMUM VALUES:
2KΩ MIN, 0.5W MIN OR 500Ω MIN, 2.0W MIN

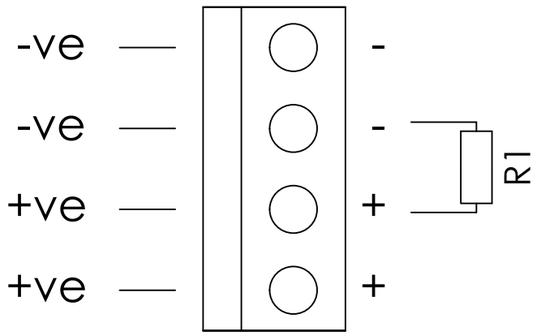
R1

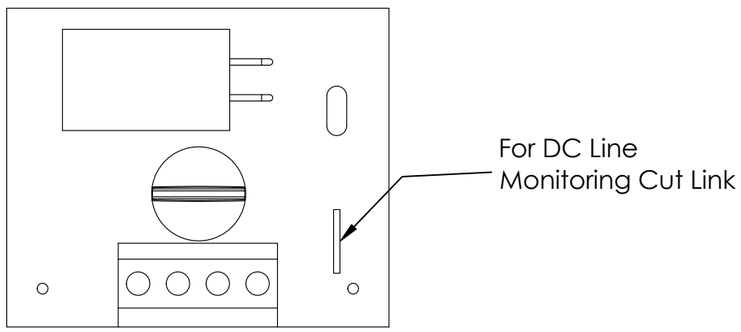
D2xL1R008, D2xL1R016, D2xL2R008, D2xL2R016
Low Impedance

Config.: 3

Optional Line Monitoring

Apply Signal to +ve & -ve





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

STANDARDS
D2xL1
D2xL2

DRAWN D.HOWGILL DATE 18/11/20

CHECKED R.N.POTTS DATE 18/11/20

APPROVED R.N.POTTS DATE 18/11/20

SURFACE FINISH

WEIGHT (Kg)

MATERIAL

ALTERNATIVE MATERIAL

e2S warning signals
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

TITLE **D2xL1 & D2xL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS**

SCALE NTS

SHEET 3 OF 5

DRAWING NUMBER **D252-06-201**

ISSUE	MOD No.	REASON - INITIAL - DATE
1		INTRODUCTION RSR 12/10/2023

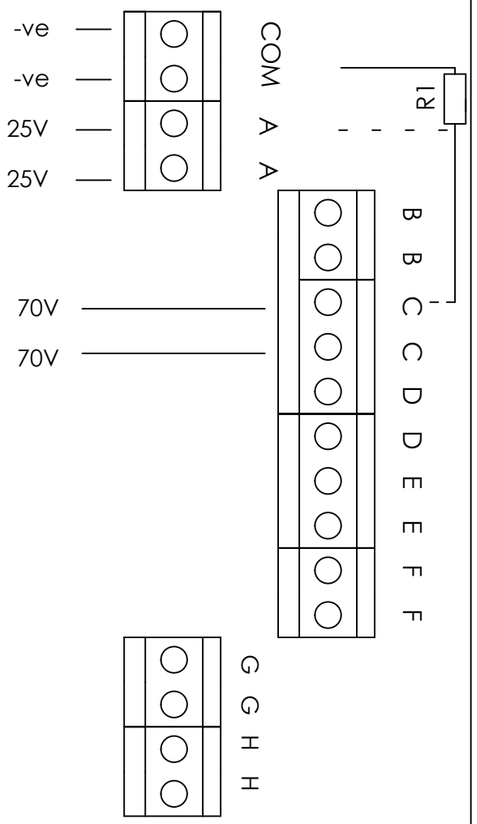
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, MINIMUM VALUE:
3K9Ω MIN, 0.5W MIN OR 1KΩ MIN, 2.0W MIN

R1

D2xL1V725 Line in — Config.: 4a

Optional Line Monitoring

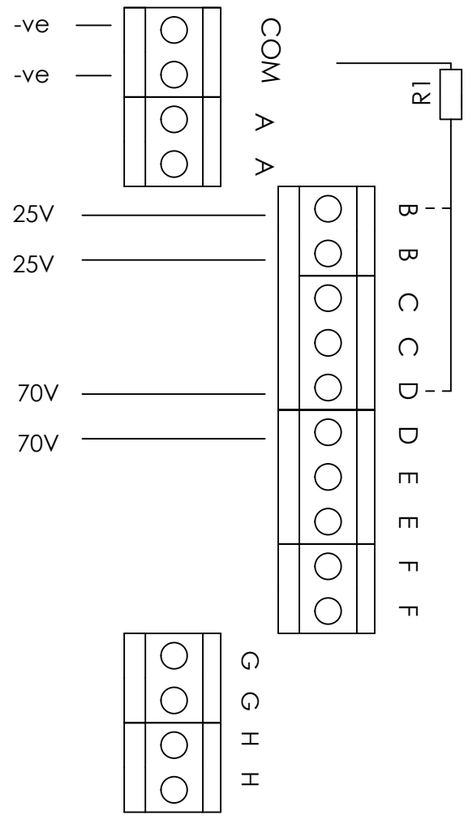
15W:
25V: Apply Signal to Common & A
70V: Apply Signal to Common & C



D2xL1V725 Line in — Config.: 4b

Optional Line Monitoring

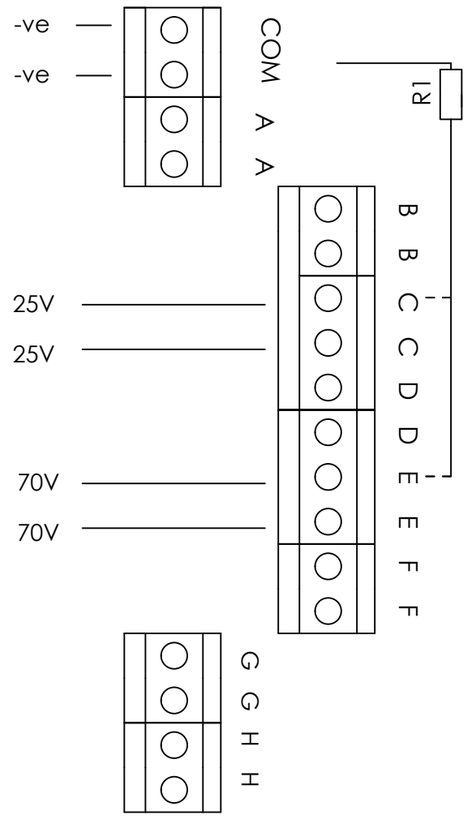
7.5W:
25V: Apply Signal to Common & B
25V: Apply Signal to Common & D



D2xL1V725 Line in — Config.: 4c

Optional Line Monitoring

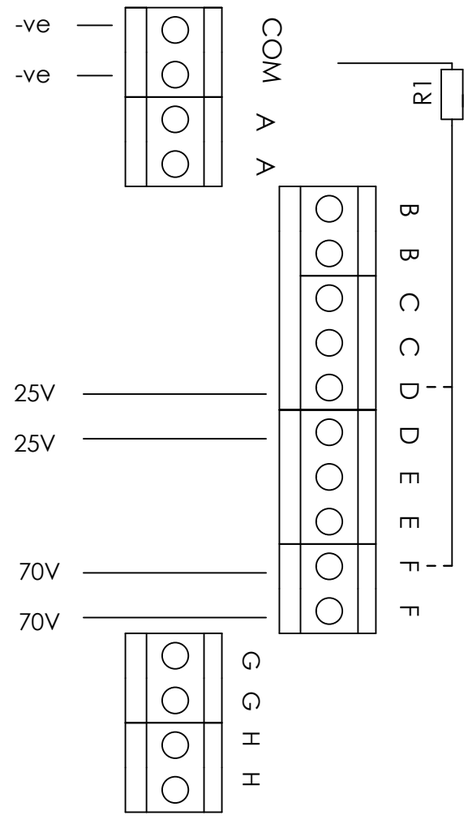
5W:
25V: Apply Signal to Common & C
70V: Apply Signal to Common & E



D2xL1V725 Line in — Config.: 4d

Optional Line Monitoring

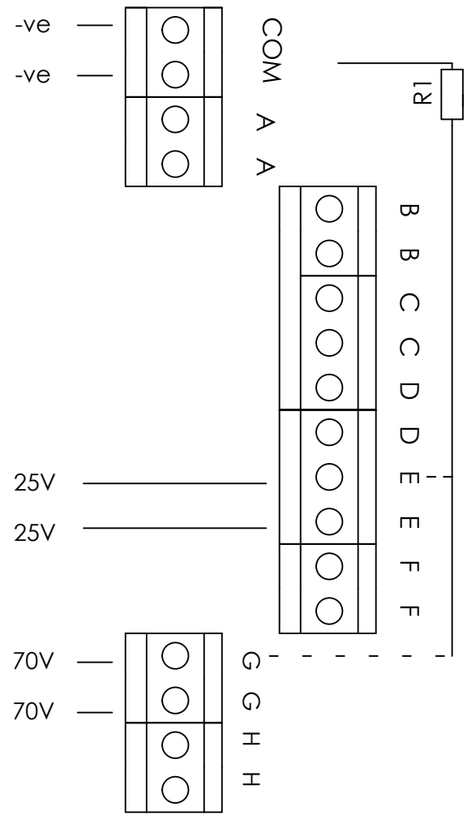
4W:
25V: Apply Signal to Common & D
70V: Apply Signal to Common & F



D2xL1V725 Line in — Config.: 4e

Optional Line Monitoring

2W:
25V: Apply Signal to Common & E
70V: Apply Signal to Common & G



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

STANDARDS
D2xL1
D2xL2

DRAWN	D.HOWGILL	DATE 18/11/20
CHECKED	R.N.POTTS	DATE 18/11/20
APPROVED	R.N.POTTS	DATE 18/11/20

SURFACE FINISH | WEIGHT (Kg)

MATERIAL

ALTERNATIVE MATERIAL

e2S warning signals
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

TITLE: D2xL1 & D2xL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	4 OF 5	D252-06-201

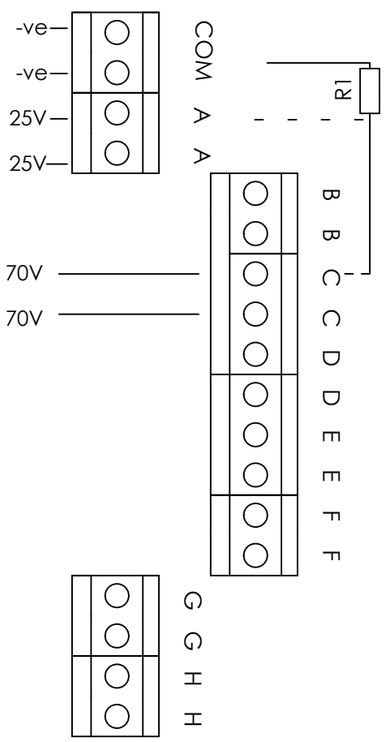
ISSUE	MOD No.	REASON - INITIAL - DATE
1		INTRODUCTION RSR 12/10/2023

OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, MINIMUM VALUE:
3K9Ω MIN, 0.5W MIN OR 1KΩ MIN, 2.0W MIN

D2xL2V725 Line in Config.: 5a

Optional Line Monitoring

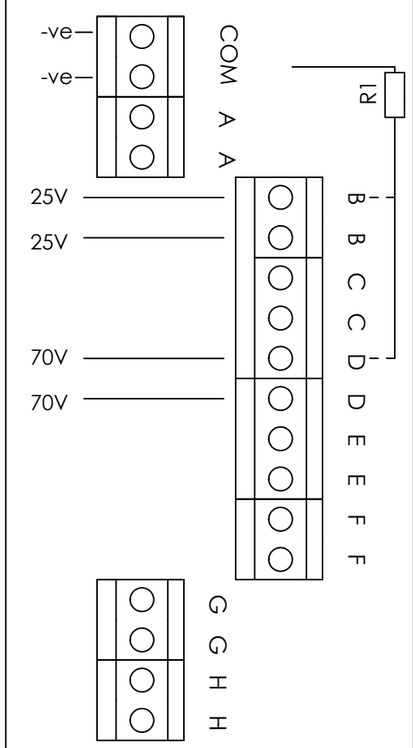
25W:
25V: Apply Signal to Common & A
70V: Apply Signal to Common & C



D2xL2V725 Line in Config.: 5b

Optional Line Monitoring

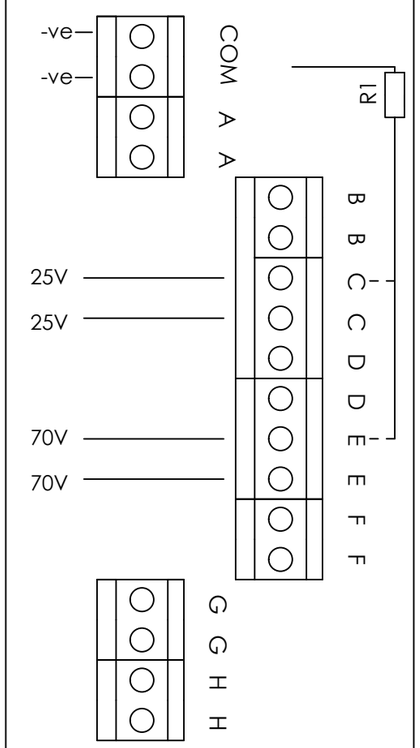
12.5W:
25V: Apply Signal to Common & B
70V: Apply Signal to Common & D



D2xL2V725 Line in Config.: 5c

Optional Line Monitoring

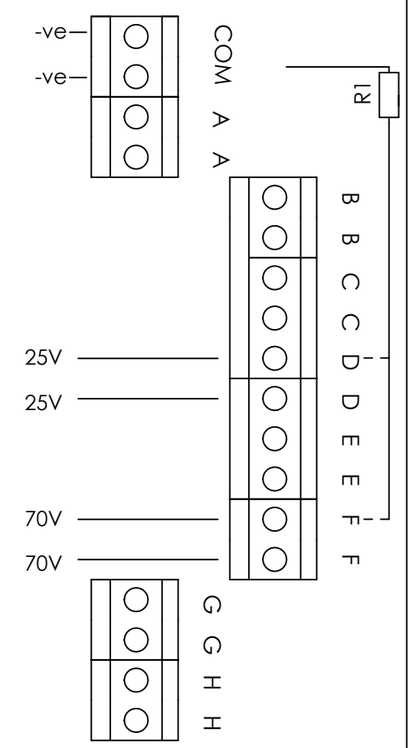
6W:
25V: Apply Signal to Common & C
70V: Apply Signal to Common & E



D2xL2V725 Line in Config.: 5d

Optional Line Monitoring

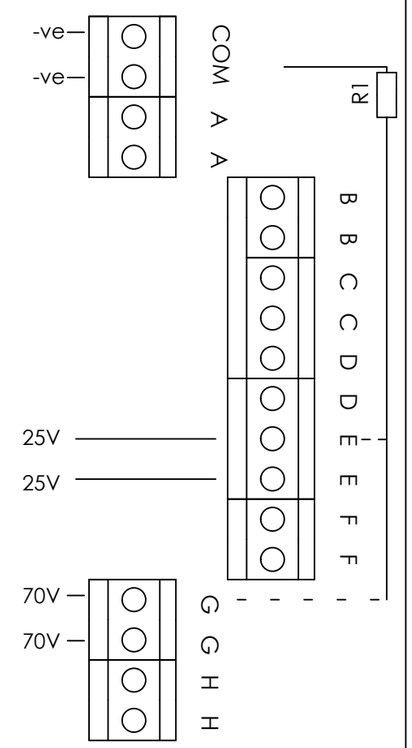
4W:
25V: Apply Signal to Common & D
70V: Apply Signal to Common & F



D2xL2V725 Line in Config.: 5e

Optional Line Monitoring

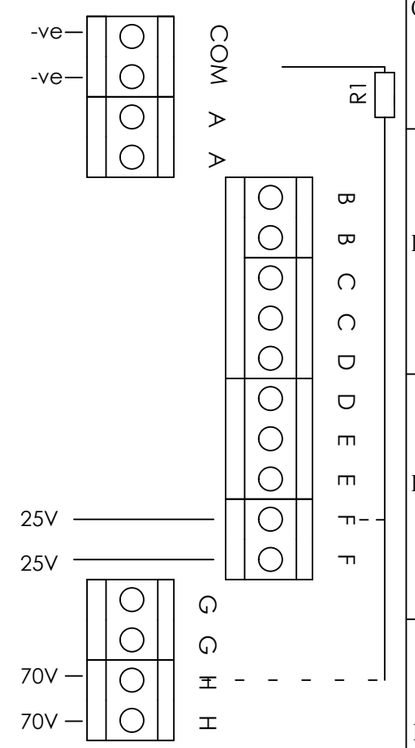
2W:
25V: Apply Signal to Common & E
70V: Apply Signal to Common & G



D2xL2V725 Line in Config.: 5f

Optional Line Monitoring

1W:
25V: Apply Signal to Common & F
70V: Apply Signal to Common & H



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

STANDARDS
D2xL1
D2xL2

DRAWN D.HOWGILL	DATE 18/11/20	
CHECKED R.N.POTTS	DATE 18/11/20	
APPROVED R.N.POTTS	DATE 18/11/20	

SURFACE FINISH | WEIGHT (Kg)

MATERIAL

ALTERNATIVE MATERIAL

e2S warning signals
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

TITLE **D2xL1 & D2xL2 LINE IN & LOW IMPEDANCE LOUDSPEAKER WIRING DIAGRAMS**

SCALE	SHEET	DRAWING NUMBER
NTS	5 OF 5	**D252-06-201**

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:	D2xS1, D2xS2, D2xL1, D2xL2, D2xC1X05, D2xC1X10 D2xB1X05, D2xB1X10, D2xB1LD2, D2xB1XH1, D2xB1XH2, D2xB1LD3 D2xC2X05, D2xC2X10, D2xC2LD2, D2xC2XH1, D2xC2XH2, D2xC2LD3 D2xJ1

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

Notified Body for EU type Examination (Module B):	UL International Demko A/S Notified Body No.: 0539 Borupvang 5A, 2750 Ballerup, Denmark
EU-type Examination Certificate (Module B):	DEMKO 14 ATEX 4786493904X
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 3G Ex ec IIC T6/T5/T4A/T4/T3C/T3/T2/T1 Gc II 3D Ex tc IIIC T55/75/80/85/90/93/95/105/109/110/119°C Dc Ingress / Dust Protection to EN60079-0 / EN60079-31: IP66
Standards applied:	EN IEC 60079-0:2018 EN IEC 60079-7:2015 +A1:2018 EN 60079-31:2014

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.

EU Declaration of Conformity

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 All units

IP66/67 D2xL1, D2xL2, D2xS2 only

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-061_Issue_K
Date and Place of Issue: London, 04/12/2023

UKCA Declaration of Conformity

Manufacturer:	European Safety Systems Ltd. Impress House, Mansell Road, Acton London, W3 7QH United Kingdom
Equipment Type:	D2xS1, D2xS2, D2xL1, D2xL2, D2xC1X05, D2xC1X10 D2xB1X05, D2xB1X10, D2xB1LD2, D2xB1XH1, D2xB1XH2, D2xB1LD3 D2xC2X05, D2xC2X10, D2xC2LD2, D2xC2XH1, D2xC2XH2, D2xC2LD3 D2xJ1

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):	UL International (UK) Ltd Notified Body No.: 0843 Unit 1-3 Horizon Kingsland Business Park, Wade Road, Basingstoke, Hampshire RG24 8AH UK
UK-type Examination Certificate (Module B):	UL21UKEX2131X
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 3G Ex ec IIC T6/T5/T4A/T4/T3C/T3/T2/T1 Gc II 3D Ex tc IIIC T55/75/80/85/90/93/95/105/109/110/119°C Dc Ingress / Dust Protection to EN60079-0 / EN60079-31: IP66 All units
Standards applied:	EN IEC 60079-0:2018 EN IEC 60079-7:2015 +A1:2018 EN 60079-31:2014

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.

UKCA Declaration of Conformity

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 All units

IP66/67 D2xL1, D2xL2, D2xS2 only

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-102_Issue_B
Date and Place of Issue: London, 04/12/2023