

Exd(e), Weatherproof



Introduction

This range of loudspeakers, intended for use in potentially explosive gas and dust atmospheres, has a power rating of up to 25 watts and is suitable for use in all gas groups including hydrogen.

The flamepaths, flare and the body, are manufactured completely from a UV stable glass reinforced polyester.

Stainless steel screws and sinter are incorporated thus ensuring a corrosion free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths.

An optional Exe terminal chamber is available.

An uncertified version is available for use in non-explosive atmospheres.

Features

- Zone 1, Zone 2 & non-Ex use.
- Exd IIC T4/T5.
- ATEX approved, EEx II 2GD.
- BASEEFA certified.
- UL listed for USA and Canada:
 - Class I, Div 2, Groups A-D.
 - Class II, Div 2, Groups F & G
 - Class I, Zones 1 & 2, AExd IIC, T5.
- IECEX certified Gb, Db.
- CUTR certified.
- Chinese (CQST) certified.
- Brazilian (Inmetro) certified.
- Optional Exe terminal chamber.
- IP66 and IP67.
- SIL 2 Certified.
- Certified temperature: -55°C to +70°C*.
- GRP corrosion-free flamepaths.
- 119dBA at 25 watts at 1 metre.
- 8, 15, 20 and 25 watt versions.
- Addressable capability.
- Power tapings, via integral transformer.
- Ratcheted swivel bracket.
- Stainless steel sinter.
- Stainless steel mounting bracket.
- Tapered flamepath.

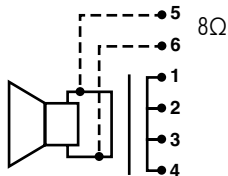
**Depending on version.*



Certification and Specification

ATEX EEx d:	Cert. no. BAS00ATEX2097X. Certified to: EN50014, EN50018. Ex II 2GD, EEx d IIC T4/T5.
ATEX EEx de:	Cert. no. BAS00ATEX2098X. Certified to: EN50014, EN50018, EN50019. Ex II 2GD, EEx de IIC T4/T5.
IECEx Ex d:	Cert. no. IECEx BAS 11.0083X. Certified to: IEC60079-0, IEC60079-1, IEC60079-31. Ex d IIC T4/T5 Gb, Ex tb IIIC T100°C/T135°C Db.
IECEx Ex de:	Cert. no. IECEx BAS 11.0084X. Certified to: IEC60079-0, IEC60079-1, IEC60079-7, IEC60079-31. Ex de IIC T4/T5 Gb, Ex tb IIIC T100°C/T135°C Db.
UL Haz Locs:	Listing no. E203310. Class I, Div 2, Groups A - D. Class II, Div 2, Groups F & G. Class I, Zones 1 & 2, AExd IIC T5.
CUTR Ex d:	1Ex d IIC T4/T5 Gb, Ex tb IIIC T100°C/T135°C Db. Russian Fire Approved.
CUTR Ex de:	1Ex de IIC T4/T5 Gb, Ex tb IIIC T100°C/T135°C Db. Russian Fire Approved.
Inmetro Ex d:	Ex d IIC T4/T5 Gb.
Inmetro Ex d e:	Ex d e IIC T4/T5 Gb.
CQST:	Exd IIC T5.
ABS:	American Bureau of Shipping for DB4D and DB4E only.
SIL:	SIL2 certification to IEC61508. Cert. No. Sira FSP 11011.

Material:	Body & horn in anti-static, UV stable, glass reinforced polyester. Swivel bracket in stainless steel. Captive cover screws in 316 stainless steel.
Finish:	Body and horn, natural black or painted to client's colour requirements.
Rated Power:	8, 15, 20 or 25 watts RMS continuous (at 25°C).
Weight:	5.0kg approx. dependent on model. (Add 0.5kg for Exe version).
Ingress Protection:	IP66 & 67.
Entries:	1 x M20 Exd. 2 x M20 Exd/Exde. 2 x 1/2" NPT.
Terminals:	8 x 2.5mm ² . Other terminal arrangements available on request.
Output:	Long Flare: 107 dBA at 1 Watt at 1 metre. Short Flare: 100 dBA at 1 Watt at 1 metre. 119 dBA at 25 Watts at 1 metre. 109 dBA at 8 Watts at 1 metre. Measured in accordance with IEC 268.
Frequency Range:	400Hz to 8kHz.
Voice Coil Impedance:	8 ohms.
Fire Retardancy:	GRP is fire retardant to ISO 1210.
Mounting:	Bracket with ratchet facility.
Earth Continuity:	Included on Exe version.
Addressable:	Consult MEDC for specification.
Labels:	Duty and tag labels optional.
Transformer:	Used to vary the rated power by selecting different tappings (see table).



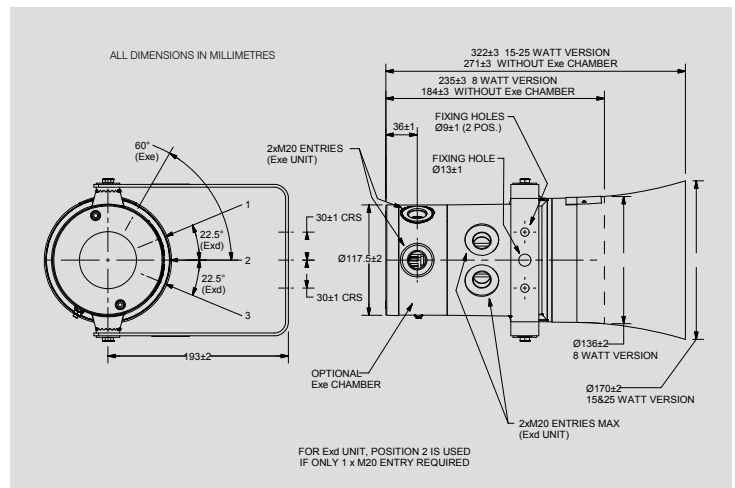
Transformer Tappings	Power			
	25W	20W	15W	8W
1:2	25.0	20.0	15.0	8.0
2:3	12.5	10.0	7.5	4.0
3:4	6.0	6.0	5.0	2.0
1:3	4.0	5.0	4.0	1.5
2:4	2.0	2.0	2.0	0.7
1:4	1.0	1.5	0.8	0.4

Transformer Tapping Options:

Standard: i) Loop in/loop out (4 x 2) power tap change; 8 terminals.

Optional: ii) 4 terminal tap change with 2 terminals (5 & 6) directly connected to driver (8 ohms).

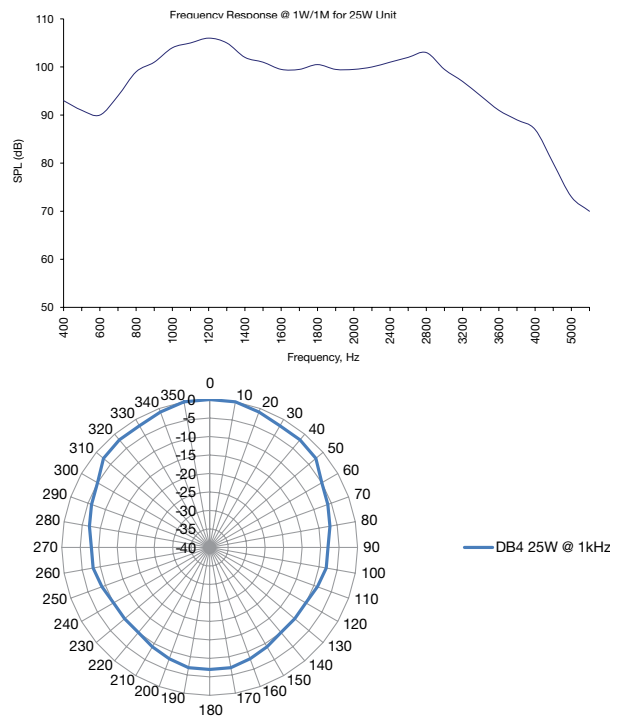
Model	Max Rated Power	Certification	Transformer	Tag/Duty	Entries	Finish
DB4 DB4L*†	Power Code 8 watt 8 15 watt 15 20 watt 20* 25 watt 25	Certification Code Uncertified W EExd D EExde E IECEx Exd DJ IECEx Exde EJ UL listed UL CUTR Exd GD* CUTR Exde GE* Chinese (CQST) Exd Q Inmetro Exd DM Inmetro Exde EM	Transformer Code Yes X* None N	Label Code Duty D* Tag T* None N	Entries Code 1 x M20 1B 2 x M20 2B (Exd/Exde) 1 x 1/2" NPT 1C (UL listed only) 2 x 1/2" NPT 2C (UL listed only)	Finish Code Natural Black N Red R Special S*
* DB4L available unpainted only. † Min IECEx temp - 40°C.						
* Not available. UL listed.						
* Std 100V. Other values available, specify voltage.						
* Please specify.						
To specify certified plug suffix appropriate code with 'P', e.g. 2BP is 2 x 20mm entries with one certified plug.						
* Russian Fire Approval as standard.						



Certified Temperature:

	Exd (≤15W)	Exd (>15W)	Exde (≤15W)	Exde (>15W)	UL
DB4	-20°C + 70°C	-20°C + 55°C	-20°C + 70°C	-20°C + 50°C	-55°C + 70°C
DB4L*	-55°C + 70°C	-55°C + 55°C	-50°C + 70°C	-50°C + 50°C	n/a

*DB4L IECEx Min Temp - 40°C.



Ordering Requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.