

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 $+70^{\circ}\text{C}^*$.
- GRP corrosion-free flamepaths.
- 119dBA at 25 watts at 1 metre.
- 8, 15, 20 and 25 watt versions.
- Addressable capability.
- Power tappings, via integral transformer.
- Ratcheted swivel bracket.
- Stainless steel sinter.
- Stainless steel mounting bracket.
- Tapered flamepath.

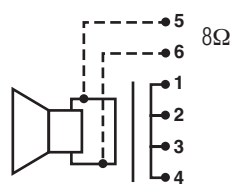
**Depending on version.*



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:	2Ex 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.

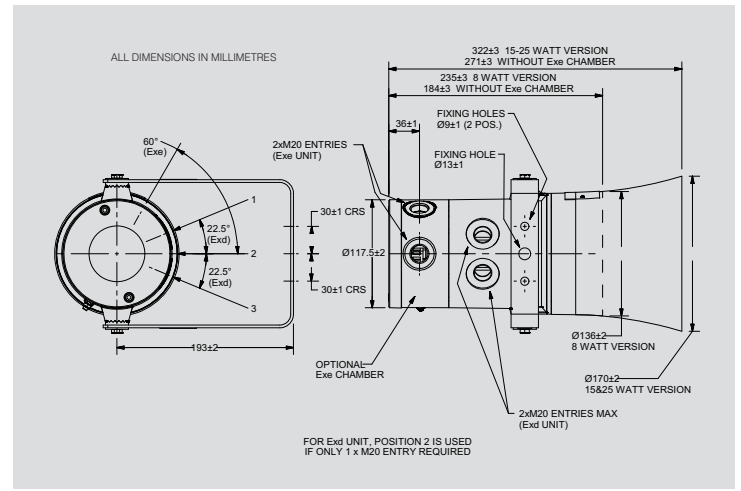
Material:	Body & horn in anti-static, UV stable, glass reinforced polyester. Swivel bracket in stainless steel. Captive cover screws in 316 stainless steel.
Finish:	Body and horn, natural black or painted to client's colour requirements.
Rated Power:	8, 15, 20 or 25 watts RMS continuous (at 25°C).
Weight:	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: Short Flare: 107 dBA at 1 Watt at 1 metre. 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 tapplings (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:

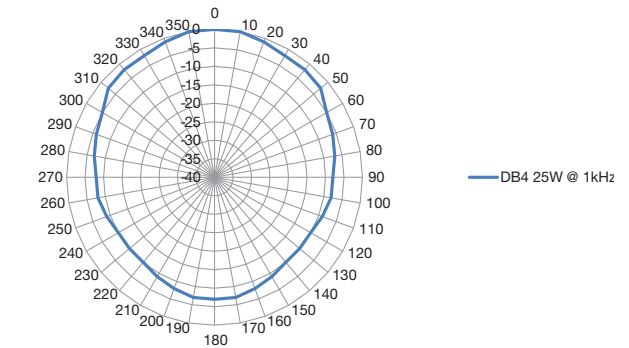
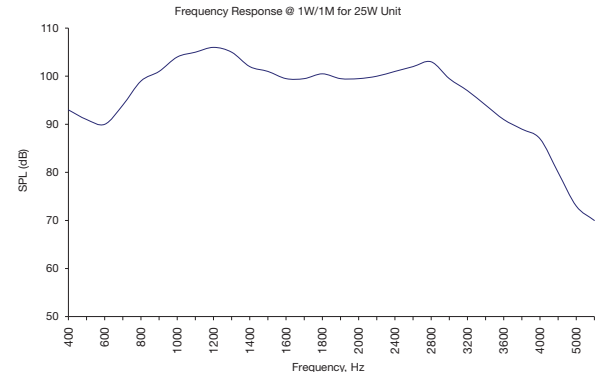
Standard: i) Loop in/loop out (4 x 2) power tap change; 8 terminals.
Optional: ii) 4 terminal tap change with 2 terminals (5 & 6) directly connected to driver (8 ohms).



Certified Temperature:

	Exd (≤5W)	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.

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

All specifications, dimensions, weights and tolerances are nominal (typical) and MEDC reserve the right to vary all data without prior notice. No liability is accepted for any consequence of use.

