

DB4B loudspeaker range up to 25 watts

Ex d(e), weatherproof



Overview

The DB4B is a high power explosion proof loudspeaker, introduced as a replacement for the current DB4 with improved intelligibility and acoustic performance. Certified for use in a wide range of temperatures from -55°C to +70°C the Ex enclosure is manufactured from GRP with a rugged thermoplastic flare providing a corrosion free and aesthetically pleasing product.

Features

- Ex d / Ex de IIC/IIIC T4/T5/T6
Ex d IIC/AEx d IIC Gb
- ATEX certified
- IECEx certified
- UL certified for USA and Canada
Class I, Div 2, Groups A-D
Class I, Zone 1, Ex d IIC/AEx d IIC Gb
Class II, Div 2, Groups F & G
Zone 21, AEx tb IIIC
Class III, Div. 1
- TR CU certified
- CQST certified
- INMETRO certified
- CCOE certified
- SIL 2 certified
- DNV type approved (IEC60945)
- CSFM certified
- Certified temperature -55°C to +70°C*
- IP66 & IP67/ NEMA 4X & 6
- Optional Ex e terminal chamber
- 124dB at 25W, 1m*
- 8W, 15W & 25W versions
- Power tapings, via integral transformer
- Frequency response 350Hz - 8kHz
- Ex enclosure - glass reinforced polyester
- Flare - high impact thermoplastic polyester
- Internal earth stud fitted as standard
- Stainless steel mounting bracket and cover screws
- Mounting bracket has ratchet facility as standard
- Optional swivel bracket available
- Optional resettable fuse†
* Depending on version
† Contact MEDC for details

The frequency response of the unit ensures that critical voice messages and general alarm tones are highly intelligible. The specific SPL figure for sensitivity, 1W @ 1m is 110dB whilst at 1m the 25W unit produces 124dB, the 15W unit 122dB and the 8W unit 119dB.

Options include DC blocking capacitors for monitored systems, resettable fuses for compliance with marine regulations and a swivel bracket that gives the installer greater flexibility when positioning the unit. The short flare option is a worthy addition to the range offering a high SPL and wide dispersion angle in a compact unit.



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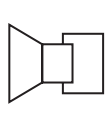
Thorne & Derrick
+44 (0) 191 410 4292
www.powerandcables.com

Certifications	
ATEX Ex d Gas	Cert. no. Baseefa13ATEX0229X. Certified to: EN60079-0,1 Ex II 2G, Ex d IIC T4/T5/T6 Gb
ATEX Ex d Gas & Dust	Cert. no. Baseefa13ATEX0231X. Certified to: EN60079-0,1,31 Ex II 2GD, Ex d IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
ATEX Ex de Gas	Cert. no. Baseefa13ATEX0232X. Certified to: EN60079-0,1,7 Ex II 2G, Ex de IIC T4/T5/T6 Gb
ATEX Ex de Gas & Dust	Cert. no. Baseefa13ATEX0233X. Certified to: EN60079-0,1,7,31 Ex II 2GD, Ex de IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
IECEX Ex d G	Cert. no. IECEX BAS 13.0112X. Certified to: IEC60079-0,1 Ex d IIC T4/T5/T6 Gb
IECEX Ex d Gas & Dust	Cert. no. IECEX BAS 13.0113X. Certified to: IEC60079-0,1,31 Ex d IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
IECEX Ex de Gas	Cert. no. IECEX BAS 13.0114X. Certified to: IEC60079-0,1,7 Ex de IIC T4/T5/T6 Gb
IECEX Ex de Gas & Dust	Cert. no. IECEX BAS 13.0115X. Certified to: EN60079-0,1,7,31 Ex de IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
UL Haz Locs	UL certified for USA and Canada, listing no. E203310 Class I, Div 2. T4/T5/T6, Groups A-D. Class I, Zone 1, Ex d IIC / AEx d IIC Gb Class II, Div 1. T135°C/T100°C/T85°C, Groups E,F&G (Canada only*) Class II, Div 2. T135°C/T100°C/T85°C, Groups F&G. Zone 21 AEx tb IIIC Class III Div 1 *Contact MEDC for ordering details
UL Ord Locs	UL certified for USA and Canada, listing no. S8847
TR CU Ex d Gas	1Ex d IIC T4/T5/T6 Gb
TR CU Ex d Gas & Dust	1Ex d IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db
TR CU Ex de Gas	1Ex de IIC T4/T5/T6 Gb
TR CU Ex de Gas & Dust	1Ex de IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db
Russian Fire Approval	All TR CU certified units are Russian Fire Approved
CQST Ex d Gas	Ex d IIC T4/T5/T6 Gb
CQST Ex d Gas & Dust	Ex d IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db
INMETRO Ex d Gas	Ex d IIC T4/T5/T6 Gb
INMETRO Ex d Gas & Dust	Ex d IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
INMETRO Ex de Gas	Ex de IIC T4/T5/T6 Gb
INMETRO Ex de Gas & Dust	Ex de IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66
SIL	SIL 2 certification to IEC61508. Cert number 20151119-4786827453
Type approval	DNV (IEC60945)

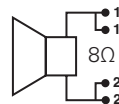
Specifications	
Material	Ex enclosure - flame retardant, UV stable, glass reinforced polyester Flare - flame retardant, high impact, UV stable, thermoplastic polyester (UV stability tested to ISO 4892 part 3) Hardware - bracket, fixings and captive cover screws in 316 stainless steel
Fire retardancy	Body - glass reinforced polyester. V0 flammability rating Outer flare - thermoplastic polyester. V0 flammability rating
Finish	Body - natural black. Flare - natural black, natural red or painted as specified (Black short flare painted black)
Rated power	8W, 15W or 25W (other ratings available, contact MEDC)
Frequency range	Frequency response 350Hz to 8kHz 8W and 15W units are available for use @ 200Hz
Weight	Ex d/UL - 5.0kg, Ex de - 5.8kg. Based on long flare with transformer
Ingress protection	IP66 & IP67, NEMA 4X & 6. (IPx7 & NEMA 6 on terminal chamber only)
Earth continuity	Optional for Ex de version. Not available on Ex d unit
Entries	Up to 2 x M20 or 1/2" NPT. Blanking plug available
Terminals	Ex d - 8 x 2.5mm ² (4mm ² solid conductor)/ 12AWG. Ex de - 8 x 4.0mm ²
Mounting arrangement	Stainless steel bracket with ratchet facility, optional swivel bracket available
Labels	Optional duty and tag labels available
Dispersion angle	Long flare (short in brackets), -6dB, 1kHz = 140° (240°), 4kHz = 40° (50°)
Driver impedance	8Ω
SPL 1W/1m (sensitivity)	IIC long flare, 1kHz - 106dB, 1.4kHz - 110dB

Certified temperature:

Protection type	Minimum temp	Maximum temp		
	All units	8W unit	15W unit	25W unit
Ex d/UL	-55°C	+70°C	+65°C	+55°C
Ex de	-50°C			



1) Loop in/loop out (4 x 2) power tap change; 8 terminals



2) Loop in/loop out (2 x 2) 8 ohm; 4 terminals

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

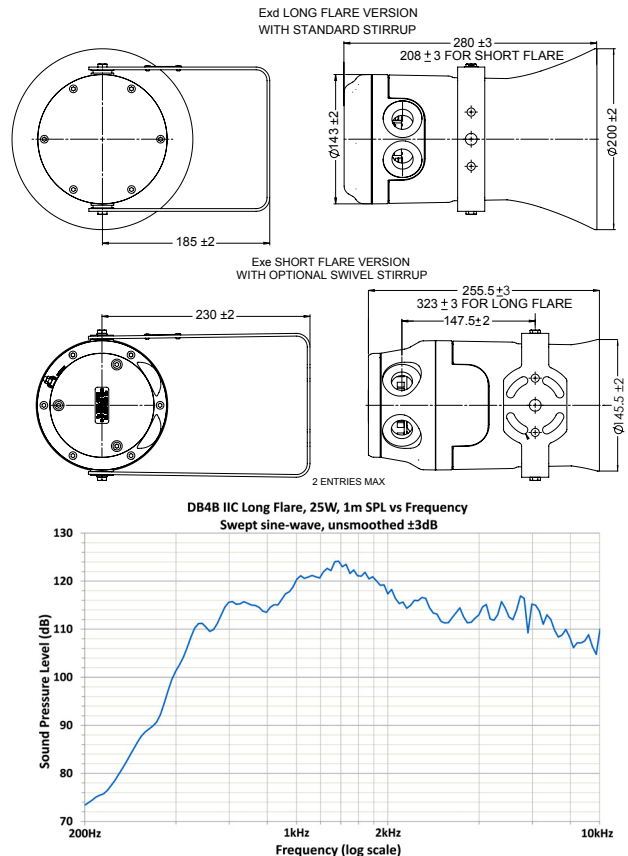
Model	Certification	Ex atmosphere	Wattage	Transformer	Labels	Entries	Options	Finish
DB4B								
	Certification Code ATEX Ex d D ATEX Ex de E IECEX Ex d DJ IECEX Ed de EJ UL UL UL (ordinary locations) UW Dual ATEX/UL AU Dual IECEX/UL JU TR CU Ex d DG TR CU Ex de EG CQST Ex d Q INMETRO Ex d DM INMETRO Ex de EM Weatherproof W	EX Atmosphere Code None N* IIC Gas G IIC & IIC Gas & Dust GD * If weatherproof or UL (ordinary locations) select N for Ex Atmosphere	Wattage Code 8 Watt 8 15 Watt 15 25 Watt 25* * Select 25 if 8Ω is required	Transformer Code 8Ω N 100V 100 70V 70 25V 25	Labels Code None N Duty D* Tag T* * Please specify	Entries Code 1 x M20 1B* 2 x M20 2B 2 x M20 2BP inc 1 x plug 1C* 1 x 1/2" NPT 2C* 2 x 1/2" NPT 2CP* inc 1 x plug 2CP* * Not available Ex e	Options Code None N Swivel bracket B Capacitor C* Earth cont. G† Short flare S * Specify value † Ex e only	Finish Code Natural black N† Natural red R Yellow Y Grey G Blue B Special S* * Please specify † Short flare painted black



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General arrangement drawing (all dimensions in mm)



Transformer: Used by combining the rated power tapings below

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

Sound pressure level at 1m (dB):

Values in dB @ 1m (Unsmoothed, peak values)		8W		15W		25W	
		Long	Short	Long	Short	Long	Short
IIC Gas	1.0kHz	115	112	117	114	120	117
IIC Gas	1.4kHz	119	116	122	119	124	122
IIC & IIC Gas & Dust	1.0kHz	110	107	112	109	115	112
IIC & IIC Gas & Dust	1.4kHz	114	111	117	114	119	116

The data is based on a swept sine wave.
Tolerance +/- 3dB