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 tappings, 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.

ATEX IECEx cULus EAC CQST INMETRO DNV

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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)

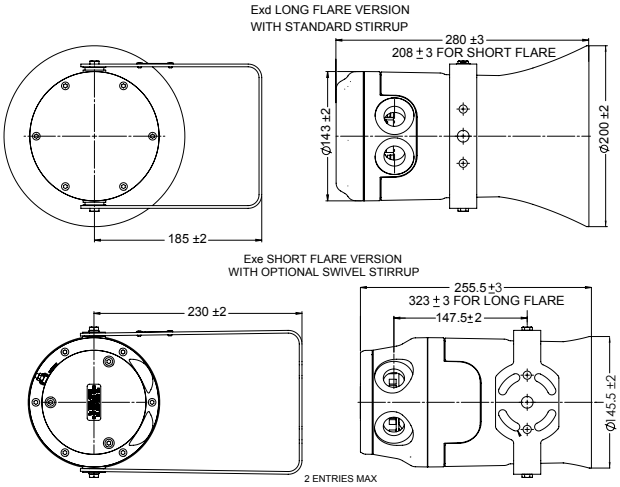
Specifications

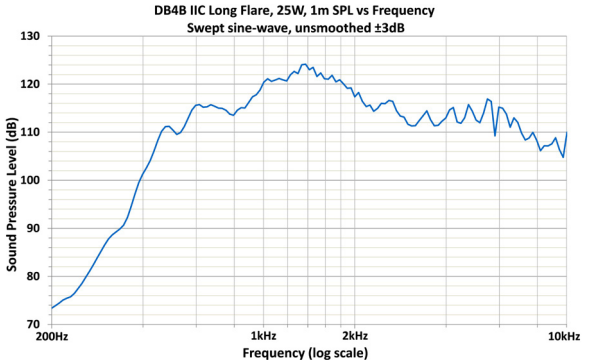
Material	Ex enclosure - flame retardant, UV stable, glass reinforced polyester Flare - flame retardant, high impact, UV stable, thermoplastic polyester (UV stability tested to ISO 4892 part 3) Hardware - bracket, fixings and captive cover screws in 316 stainless steel
Fire retardancy	Body - glass reinforced 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 2.5mm² (4mm² solid conductor)/ 12AWG. Ex de - 8 x 4.0mm²
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			

General arrangement drawing (all dimensions in mm)





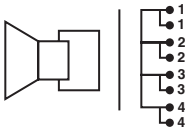
Transformer: Used by combining the rated power tappings below

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

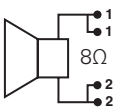
Sound pressure level at 1m (dB):

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 & IIIC Gas & Dust	1.0kHz	110	107	112	109	115	112
IIC & IIIC Gas & Dust	1.4kHz	114	111	117	114	119	116

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



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 **DB4B** | **Certification** | **Ex atmosphere** | **Wattage** | **Transformer** | **Labels** | **Entries** | **Options** | **Finish**

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 & IIIC 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 inc 1 x plug	2BP
1 x ½" NPT	1C*
2 x ½" NPT	2C*
2 x ½" NPT 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