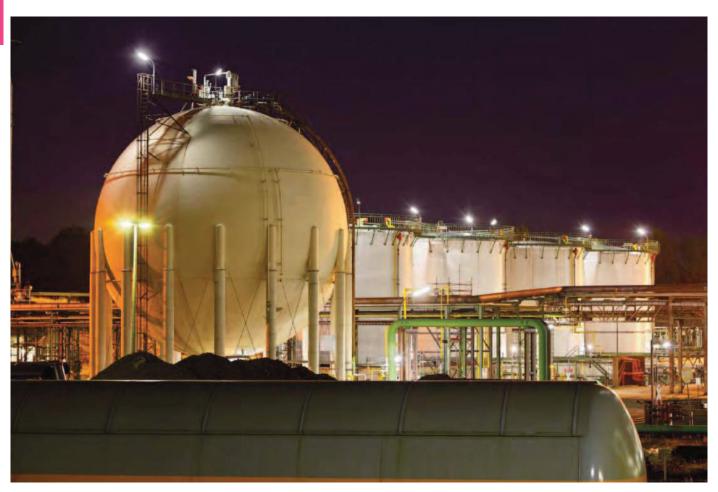
Loudspeakers

MEDC's range of explosion protected, heavy duty, industrial and commercial speakers are designed to meet the requirements for public address, voice alarm and evacuation procedures. This range of loudspeakers, specifically designed for potentially explosive gas and dust atmospheres, is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The units can be operated as part of 100 or 70 volt line systems, and include a wide range of sound output levels, which are all measured in dB(A) at 1 watt / 1 metre.

MEDC ensures the production of rugged, hard wearing products by using corrosion free materials such as GRP (glass reinforced polyester) and stainless steel.



Range Certifications

PRODUCT	ATEX	IECEx	UL	ULC	CSA	Inmetro	CUTR	CQST	ABS	SIL	IP Rating	Page
Loudspeakers												
DB4B											66 / 67	92
DB4											66 / 67	94
DB20C											66 / 67	96
DB20											66 / 67	98
DB10											66 / 67	100
DB16											66 / 67	102
DB18											66 / 67	104
DB14											66 / 67	106



DB4B Range - LOUDSPEAKERS - Up to 25 Watts

Crouse-Hinds

Ex d(e), Weatherproof



Introduction

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.

The frequency response of the unit ensures that critical voice messages and general alarm tones are highly intelligible. The specific SPL figure for sensitivity is 1W @ 1m is 113dB whilst at 1m the 25W unit produces 127dB, the 15W unit 125dB and the 8W unit 123dB.

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.

Features

- Ex d / Ex de IIC / IIIC T4/T5/T6.
- ATEX certified.
- IECEx certified.
- Certified temperature -55°C to +70°C.*
- IP66 & IP67.
- Optional Ex e terminal chamber.
- 127dB 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.
- Stainless steel mounting bracket and cover screws.
- Mounting bracket has ratchet facility as standard.
- Optional swivel bracket available.

*Depending on version.





ATEX Ex d Gas: Cert. no. Baseefa13ATEX0229X.

Certified to: EN60079-0, EN60079-1. Ex II 2 G, Ex d IIC T4/T5/T6 Gb.

ATEX Ex d Gas & Dust: Cert. no. Baseefa13ATEX0231X

Certified to: EN60079-0, EN60079-1, EN60079-31

Ex II 2 GD, 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, EN60079-1, EN60079-7.

Ex II 2 G. Ex de IIC T4/T5/T6 Gb.

ATEX Ex de Gas & Dust: Cert. no. Baseefa13ATEX0233X.

Certified to: EN60079-0, EN60079-1, EN60079-7, EN60079-31.

Ex II 2 GD, Ex de IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66.

Cert. no. IECEx BAS 13.0112X. IECEx Ex d Gas: Certified to: IEC60079-0, IEC60079-1.

Ex d IIC T4/T5/T6 Gb.

IECEx Ex d Gas & Dust: Cert. no. IECEx BAS 13.0113X.

Certified to: IEC60079-0, IEC60079-1, IEC60079-31

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, IEC60079-1, IEC60079-7.

Ex de IIC T4/T5/T6 Gb.

IECEx Ex de Gas & Dust: Cert. no. IECEx BAS 13.0115X.

Certified to: IEC60079-0, IEC60079-1, IEC60079-7, IEC60079-31. Ex de IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66

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 Weight: Ex d - 5.0kg, Ex de - 5.8kg. Based on long flare with transformer. Ingress Protection: IP66 & IP67 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. 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. Long flare (-6dB) $1kHz = 140^{\circ}$, $4kHz = 40^{\circ}$ Dispersion angle:

Short flare (-6dB) 1kHz = 240°, 4kHz = 50° Driver Impedance:

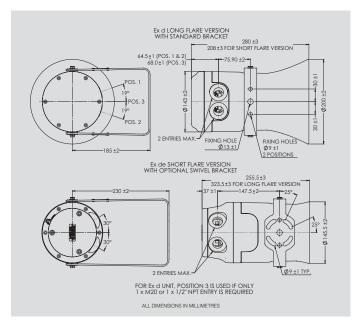
SPL 1W/1m (Sensitivity): 113dB (IIC long flare).

Maximum Output dB (1/3 octave average smoothed):

	8W unit		15W unit		25W unit	
Flare type	Short	Long	Short	Long	Short	Long
IIC Gas	119dB	123dB	122dB	125dB	124dB	127dB
IIIC Gas & Dust	114dB	117dB	117dB	119dB	119dB	121dB

Certified Temperature:

Protection Type	Minimum Temp	Maximum Temp		
	All units	8W unit	15W unit	25W unit
Ex d	-55°C	+70°C	+65°C	+55°C
Ex de	-50°C	+70%	+65°0	+55°C

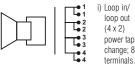


Transformer:

Used by combining the rated power tappings below.

8W	Power 15W	25W
8.0	15.0	25.0
4.0	7.5	12.5
2.0	5.0	6.0
1.5	4.0	4.0
0.7	2.0	2.0
0.4	0.8	1.0
	8.0 4.0 2.0 1.5 0.7	8W 15W 8.0 15.0 4.0 7.5 2.0 5.0 1.5 4.0 0.7 2.0

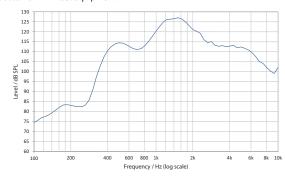
Transformer Tapping Options:



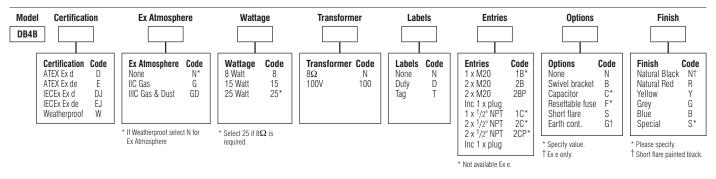


ii) Loop in/loop out (2 x 2) 8 ohm; 4 terminals

Frequency Response for IIC long flare unit @ 25W, 1m with 1/3 octave averaging. Test data from NTI test equipment.



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.



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 tappings, via integral transformer.
- Ratcheted swivel bracket.
- Stainless steel sinter.
- Stainless steel mounting bracket.
- Tapered flamepath.

*Depending on version.













ATEX EEx d: Cert. no. BAS00ATEX2097X.

Certified to: EN50014, EN50018. Ex II 2GD, EEx d IIC T4/T5.

ATEX EEx de: Cert. no. BASOOATEX2098X.

Certified to: EN50014, EN50018, EN50019.

Ex II 2GD, EEx de IIC T4/T5. 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.

IECEx Ex d:

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. | Ex d | IC T4/T5 Gb. | Ex d e | IC T4/T5 Gb. | Ex d e | IC T4/T5 Gb. | Ex d | IC T5. | Exd | IC 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 2.5mm². Other terminal arrangements available on request.

Output: Long Flare: Short Flare: 107 dBA at 1 Watt at 1 metre.

107 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.

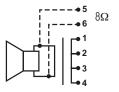
Mounting: Bracket with ratchet facility.

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).

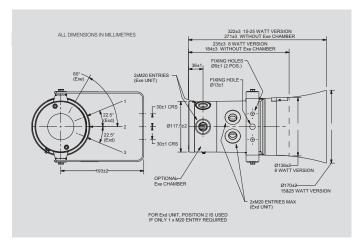


Transformer Tapping Options:

Transformer	Power						
Tappings	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			

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

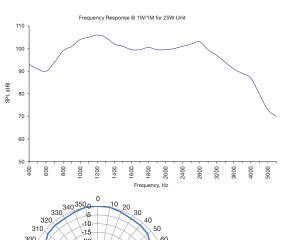
Optional: ii) 4 terminal tap change with 2 terminals (5 & 6) directly connected to driver (8 ohms).

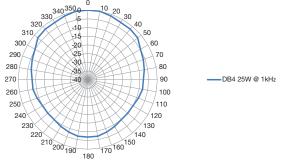


Certified Temperature:

	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

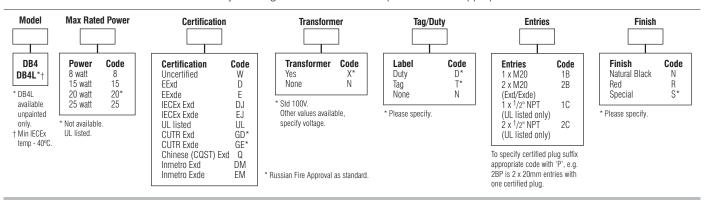
*DB4L IECEx Min Temp - 40°C





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.



DB20C Range - CEILING LOUDSPEAKERS

Crouse-Hinds

Exde, Weatherproof



Introduction

This range of Ceiling-Mounted loudspeakers, intended for use in potentially explosive atmospheres, has a power rating of up to 8 Watts (upon request) and is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The lightweight, patented design provides self-supporting and self-locking mounting onto a ceiling tile from 0.5 to 55mm thick. The speaker is held in the mount via a twist-fit support and locking grille, giving access from above or below and allowing first fit of either ceiling or speakers. The DB20C's compact design will fit a ceiling cavity of limited space and its aesthetically pleasing appearance will enhance the surroundings.

- Zone 1& 2 and Zone 21 & 22 use.
- Ex II 2 GD.
- BASEEFA certified.
- CUTR certified.
- Brazilian (Inmetro) certified.
- IECEx Approved.
- IP66 & IP67.
- Certified temperature –50°C to +70°C*.
- GRP and Flame-Retardant ABS corrosion free construction.
- 100dB (A) at 1 watt at 1 metre.
- Power tappings via integral transformer.
- Tool-free mounting method.
- 100V or 70V line versions available.
- Earth continuity available.
- 8 terminal option to facilitate 'loop in and loop out' wiring.
- *Temperature class relates to ambient temperature (see over).





ATEX Ex de IIB: Cert. no. Baseefa05ATEX0198.

Certified to: EN60079-0. EN60079-1. EN60079-7.

Ex II 2 G, Ex de IIB T3 (-50° C to $+70^{\circ}$ C). Ex II 2 G. Ex de IIB T4 (-50° C to $+40^{\circ}$ C).

ATEX Ex de IIC: Cert. no. Baseefa05ATEX0198.

Certified to: EN60079-0, EN60079-1, EN60079-7, EN61241-0,

EN61241-1

Ex II 2 GD, Ex de IIC T4, Ex tD A21 T130°C (-50° C to $+70^{\circ}$). Ex II 2 GD, Ex de IIC T4, Ex tD A21 T115°C (-50°C to +55°). Ex II 2 GD, Ex de IIC T5, Ex tD A21 T100°C (-50°C to +40°).

IECEx Ex de IIB: Cert. no. IECEx BAS 05.0082.

IECEx Ex de IIC:

Certified to: IEC60079-0, IEC60079-1, IEC60079-7.

Ex de IIB T3 (-50° C to $+70^{\circ}$ C). Ex de IIB T4 (-50° C to $+40^{\circ}$ C) Cert. no. IECEx BAS 05.0083.

Certified to: EN60079-0, EN60079-1, EN60079-7, EN61241-0,

EN61241-1.

Ex de IIC T4. Ex tD A21 T130°C (-50°C to +70°). Ex de IIC T4, Ex tD A21 T115°C (-50°C to +55°) Ex de IIC T5, Ex tD A21 T100°C (-50°C to +40°).

CUTR: 2Exde IIB T3 (-50° C to $+70^{\circ}$ C)

2Exde IIC T4, Ex tD A21 T130°C (-50°C to +70°).

Inmetro: Ex d e IIB T3/T4 Gb, Ex d e IIC T4/T5 Gb.

Material: Body & Cover - Natural black, UV stable, glass reinforced

Outer flare - UV stable ABS.

Natural ABS finish equivalent to RAL9010. Finish:

Rated Power: 4 Watts RMS continuous (at 25°C) Output: Maximum output at 1W/1M is 100 dB(A).

Maximum output at 4W/1M is 106 dB(A).

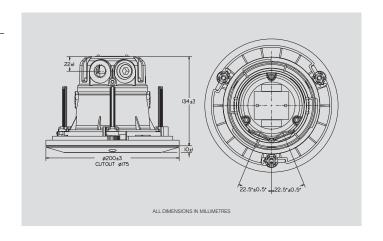
*Other wattages available contact MEDC sales for details.

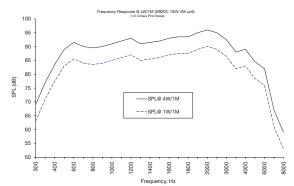
Frequency Range: 400Hz to 7kHz. Voice Coil Impedance: 8 ohms. Certified Temp: -50° C to $+70^{\circ}$ C (T4) and Tamb -50° C to $+40^{\circ}$ C (T5). Weight: 1.5kg approx. Ingress Protection: IP66 & IP67 **Entries:** 2 x M20 ISO + 1 x certified plug

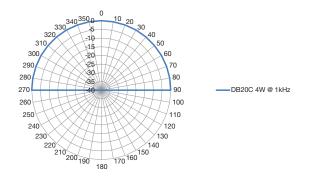
 $4\,x\,4.0 mm^2$ as standard. $\overline{8\,x\,2.5 mm^2}$ optional, ATEX and IECEx only. Terminals: Mounting: Via integral ceiling-mount bezel.

Ceiling Cutout: Ø175mm. Earth Continuity: Available via optional earthing stud.

Iransformer: Used by combi	Iransformer: Used by combining the rated power tappings below.				
Transformer Tappings	Power (Watts) (4W unit)				
1:2	4.00				
2:3	2.00				
3:4	1.00				
1:3	0.75				
2:4	0.38				
1:4	0.20				





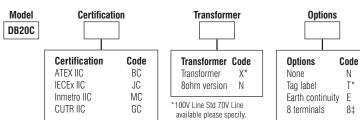


Transformer Tapping Options:



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.





[‡] Option only available with ATEX and IECEx certified units, if not selected will be supplied with 4 terminals as standard.

Exde, Weatherproof



Introduction

This range of loudspeakers, intended for use in potentially explosive atmospheres, has a power rating of up to 8 Watts and is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The body and cover are manufactured from a UV stable glass reinforced polyester. The flare is manufactured from UV stable ABS.

Stainless steel screws and mounting stirrup are incorporated to ensure a corrosion-free product.

- Zone 1& 2 (and Zone 21 & 22 : IIC version) plus non-Ex use.
- ATEX Approved.
- Ex II 2G Ex de IIB T3/T4.
- IIC Gas Group and Dust approved version available.
- Brazilian (Inmetro) certified.
- CUTR certified.
- IECEx Approved.
- IP66 & IP67.
- Certified temperature: -50°C to +70°C*.
- GRP corrosion-free flamepath.
- 112dB(A) at 8 watts at 1 metre (IIB Version).
- Power tappings via integral transformer.
- Ratcheted swivel mounting stirrup.
- Stainless steel fixtures.
- 100V or 70V line and 8Ω versions available.
- Earth continuity available.
- 8 terminal option to facilitate 'loop in and loop out' wiring.
- *Temperature class relates to ambient temperature (see over)





ATEX Ex de IIB: Cert. no. Baseefa05ATEX0198.

Certified to: EN60079-0, EN60079-1, EN60079-7.

Ex II 2 G, Ex de IIB T3 (-50° C to $+70^{\circ}$ C). Ex II 2 G. Ex de IIB T4 (-50°C to +40°C).

ATEX Ex de IIC: Cert. no. Baseefa05ATEX0198.

Certified to: EN60079-0, EN60079-1, EN60079-7, EN61241-0,

EN61241-1

Ex II 2 GD, Ex de IIC T4, Ex tD A21 T130°C (-50°C to +70°). Ex II 2 GD, Ex de IIC T4, Ex tD A21 T115°C (-50°C to +55°) Ex II 2 GD, Ex de IIC T5, Ex tD A21 T100°C (-50°C to +40°).

IECEx Ex de IIB: Cert. no. IECEx BAS 05.0082.

IECEx Ex de IIC:

Certified to: IEC60079-0, IEC60079-1, IEC60079-7.

Ex de IIB T3 (-50° C to $+70^{\circ}$ C) Ex de IIB T4 (-50° C to $+40^{\circ}$ C) Cert. no. IECEx BAS 05.0083.

Certified to: EN60079-0, EN60079-1, EN60079-7, EN61241-0,

EN61241-1.

Ex de IIC T4. Ex tD A21 T130°C (-50° C to $+70^{\circ}$). Ex de IIC T4, Ex tD A21 T115°C (-50°C to +55°). Ex de IIC T5, Ex tD A21 T100°C (-50°C to +40°).

CUTR: 2Exde IIB T3 (-50°C to +70°C)

2Exde IIC T4, Ex tD A21 T130°C (-50°C to +70°). Inmetro:

Ex d e IIB T3/T4 Gb, Ex d e IIC T4/T5 Gb.

Material: Body & Cover - UV stable, glass reinforced polyester. Outer flare - UV stable ABS.

Mounting stirrup and fixtures in stainless steel.

Finish: Natural black or painted or to client's requirements.

8 Watts RMS continuous (at 25°C) Rated Power:

IIC version:

Output: IIB version: Maximum output at 1W/1M is 103 dB(A)

Maximum output at 4W/1M is 109 dB(A) Maximum output at 8W/1M is 112 dB(A) Maximum output at 1W/1M is 100 dB(A).

Maximum output at 4W/1M is 106 dB(A) Maximum output at 8W/1M is 109 dB(A)

Frequency Range: 400Hz to 7kHz

Voice Coil Impedance: 8 ohms.

Certified Temp: IIB version: Tamb -50°C to +70°C (T3) and

> Tamb -50°C to +40°C (T4). Tamb -50°C to +70°C (T4) and

IIC version: Tamb -50°C to +40°C (T5).

Weight: 1.5kg approx. **Ingress Protection:** IP66 & IP67.

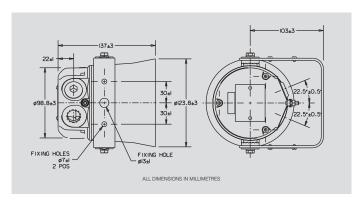
Entries: 2 x M20 ISO + 1 x certified plug.

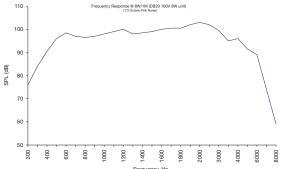
4 x 4.0mm² as standard, 8 x 2.5mm² optional, ATEX and IECEx only. Terminals: Mounting: Via Stirrup with ratchet facility.

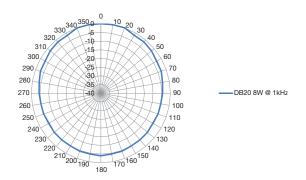
Earth Continuity: Available.

Labels: Optional stainless steel tag and duty labels

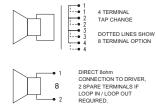
Transformer: Used by combining the rated power tappings below



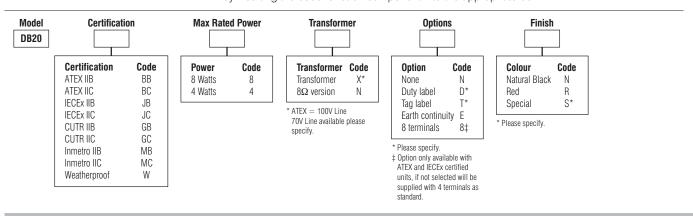




Transformer	Power (Watts)				
Tappings	8W unit	4W Unit			
1:2	8.00	4.00			
2:3	4.00	2.00			
3:4	2.00	1.00			
1:3	1.50	0.75			
2:4	0.75	0.38			
1:4	0.40	0.20			



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.



Ex de, Weatherproof



Introduction

This range of loudspeakers, intended for use in potentially explosive gas atmospheres, has a power rating of up to 15 Watts and is suitable for use in gas groups IIB plus hydrogen and IIC.

The flamepaths, flare and body, are manufactured from a UV stable glass reinforced polyester. Stainless steel screws and mounting stirrup are incorporated to ensure a corrosion-free product.

- Zone 1, Zone 2 & non-Ex use.
- Ex de IIB + H2 or IIC T4/T5/T6.
- ATEX certified, Ex II 2G.
- IECEx certified, Gb.
- Certified by BASEEFA.
- CUTR certified.*
- Chinese (CQST) certified.*
- Brazilian (Inmetro) certified.*
- IP66 and IP67.
- Certified temperature: -40°C to +65°C.**
- GRP corrosion-free flamepath.
- 115dB(A) at 15 Watts at 1 metre.
- 8 & 15 Watt versions.
- Power tappings via integral transformer.
- Ratcheted swivel mounting stirrup.
- Fitted with 316L stainless steel fixtures.
- Earth continuity available.
- Retained cover screws.
- Internal earth stud fitted as standard.
- *Please contact MEDC Technical Sales.
- ** Model dependent, please contact MEDC Technical Sales for -50°C products.







Cert. no. Baseefa11ATEX0101X. ATEX Ex de IIB+H₂:

Certified to: EN60079-0, EN60079-1, EN60079-7.

Ex II 2G, Ex de IIB + H₂ T4/T5/T6 Gb.

ATEX Ex de IIC: Cert. no. Baseefa11ATEX0102X.

Certified to: EN60079-0, EN60079-1, EN60079-7.

Ex II 2G, Ex de IIC T4/T5/T6 Gb.

IECEx Ex de IIB+H₂: Cert. no. IECEx BAS 11.0041X.

Certified to: IEC60079-0, IEC60079-1, IEC60079-7.

Ex de IIB + H₂ T4/T5/T6 Gb. Cert. no. IECEx BAS 11.0042X.

IECEx Ex de IIC: Certified to: IEC60079-0, IEC60079-1, IEC60079-7.

> Ex de IIC T4/T5/T6 Gb. $2Ex de IIB + H_2 T4/T5/T6 Gb.$

CUTR Ex de IIB+H₂: CUTR Ex de IIC:7 2Ex de IIC T4/T5/T6 Gb. Inmetro Ex de: Ex d e IIB + H₂ T4/T5/T6 Gb. CQST: Ex d e IIB $+ H_2^{-}$ T4/T5/T6 Gb.

Material: Body & horn in anti-static, UV stable, glass reinforced polyester.

Mounting stirrup and fixtures in 316L stainless steel

Finish: All natural or body and horn can be painted to customer specification.

Rated Power: 8 & 15 Watts RMS continuous (25°C).

Weiaht: Long Flare (15W): 4.5kg Gross weight, 3.6kg Net weight,

Short Flare (8W): 4kg Gross weight. 3.1kg Net weight.

Ingress Protection: IP66 and IP67

Entries: Up to 2 x M20 ISO into Exe chamber.

Terminals: 8 x 4.0mm² or 4 x 4.0mm²

Output: Maximum output for IIB unit @ 1W/1M is 105dB(A)

Maximum output for IIB unit @ 15W/1M is 115dB(A) Maximum output for IIC unit @ 1W/1M is 98dB(A). Maximum output for IIC unit @ 15W/1M is 107dB(A)

400Hz to 8kHz Frequency Range:

 -40° C to $+40^{\circ}$ C (T6)** **Certified Temp:**

-40°C to + 55°C (T5)** -40° C to $+65^{\circ}$ C (T4)**

Voice Coil Impedance: 8 ohms.

Fire Retardancy: GRP is fire retardant to ISO 1210.

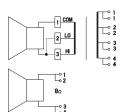
Mounting: Via stirrup with ratchet facility (supplied fitted).

Earth Continuity: Internal/External earth stud linked to gland continuity.

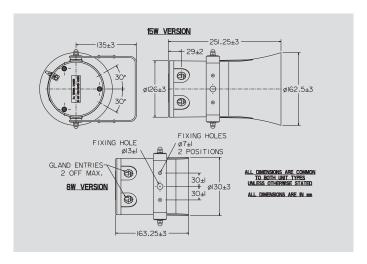
Labels: Optional stainless steel tag and duty labels.

Transformer: 100V line as standard. Use by combining the rated power tappings

below



T	Power				
Terminals	15W	8W			
1:2 (HI)	15.0W	8.0W			
1:3 (HI)	7.5W	4.0W			
1:4 (HI)	3.75W	2.0W			
1:2 (LO)	2.5W	1.0W			
1:3 (LO)	1.25W	0.5W			
1:4 (LO)	0.75W	0.25W			

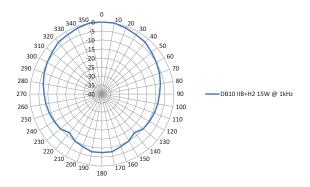


Transformer Tapping Options:

Standard:

- 8 terminals (4 x 2), loop in/loop out for 6 tappings.
- Optional: 4 terminals (2 x 2), loop in/loop out, direct 8Ω connection to

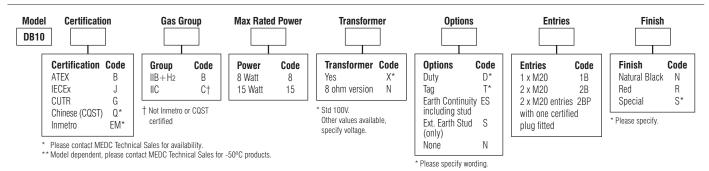
nse @ 1W/1M for IIB+H2 Long Flare version (1/3 Octave Pink Noise 110 80 60 8000



3rd Octave Frequency, Hz

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.



Ex de, Weatherproof



Introduction

This range of loudspeakers, intended for use in potentially explosive gas and dust atmospheres, has a power rating of up to 30 Watts and is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

With an integral increased safety chamber, for termination, this unit offers both high output and easy installation.

In addition, the 25 Watt version still offers superior output with a higher ambient certified temperature $(+65^{\circ}\text{C})$.

The flamepaths, flare and body, are manufactured from a UV stable glass reinforced polyester. Stainless steel screws and mounting stirrup are incorporated to ensure a corrosion-free product.

Features

- Zone 1, Zone 2 & non-Ex use.
- Ex de IIB/IIC, T3/T4*.
- ATEX certified, Ex II 2G/Ex II 2GD*.
- IECEx certified Gb, Db
- BASEEFA certified.
- UL listed for USA and Canada:
 - Hazardous locations:

Class I, Div 2, Groups A-D*.

Class I, Zone 1, AExde IIB/IIC T3/T4*.

- Ordinary locations: Signalling Speaker.
- CUTR certified.
- Brazilian (Inmetro) certified.
- IP66 and IP67.
- Certified temperature: -50°C to +65°C*.
- GRP corrosion-free flamepath.
- Up to 122dBA at 30 Watts at 1 metre*.
- 25 and 30 Watt versions.
- Power tappings via integral transformer.
- Ratcheted swivel mounting stirrup.
- Stainless steel fixtures.
- 100V line or 8Ω.

*Depending on version.





ATEX Ex de IIB: Cert. no. Baseefa04ATEX0166X.

Certified to: EN60079-0, EN60079-1, EN60079-7.

30 Watt ATEX Ex II 2G, Ex de IIB T3 Gb. 25 Watt ATEX Ex II 2G, Ex de IIB T3 Gb.

ATEX Ex de IIC: Cert. no. Baseefa04ATEX0167X.

Certified to: EN60079-0, EN60079-1, EN60079-7, EN60079-31.

30 Watt ATEX Ex II 2GD

Ex de IIC T3 Gb, Ex tb IIIC T110°C Db.

25 Watt ATEX Ex II 2GD

Ex de IIC T3 Gb, Ex tb IIIC T110°C Db.

IECEx Ex de IIB: Cert. no. IECEx BAS 12.0076X.

Certified to: IEC60079-0, IEC60079-1, IEC60079-7.

30 Watt, Ex de IIB T3 Gb. 25 Watt, Ex de IIB T3 Gb.

IECEx Ex de IIC: Cert. no. IECEx BAS 12.0077X.

Certified to: IEC60079-0, IEC60079-1, IEC60079-7, IEC60079-31.

30 Watt, Ex de IIC T3 Gb, Ex tb IIIC T110°C Db. 25 Watt, Ex de IIC T3 Gb, Ex tb IIIC T110°C Db.

UL Haz Locs: Listing no. E203310A.

Class 1, Div 2, Groups C & D, Class 1, Zone 1, AExde IIB T3. Class 1, Div 2, Groups A - D, Class 1, Zone 1, AExde IIC T110°C.

UL Ord Locs:Listing no. 58847.Ordinary locations:Signalling Speaker.CUTR Ex de IIB:2Ex de IIB T3 Gb.

CUTR Ex de IIC: 2Ex de IIC T3 Gb, Ex tb IIIC T110°C Db.

Inmetro Ex d e IIB: Ex d e IIB T3 Gb. Inmetro Ex d e IIC: Ex d e IIC T3 Gb.

Material: Body & horn in anti-static, UV stable, glass reinforced polyester.

Mounting stirrup and fixtures in stainless steel.

Finish:

All natural or body and horn can be painted to client requirements.

Rated Power:

30 Watts RMS continuous (at 25°C).

Certified Temp:

-50°C to +40°C (30W version) -50°C to +65°C (25W version).

Weight:

5.5kg approx.

Ingress Protection:

IP66 & IP67.

Entries:

Up to 2 x M25 ISO, 2 x 1/2" NPT or 2 x 3/4" NPT into

Terminals: Up to 8 x 2.5mm².

Output: IIB Version: Maximum output at 1W/1m is 110dBA.

termination (Exe) chamber.

Maximum output at 25W/1m is 121dBA. Maximum output at 30W/1m is 122dBA.

Maximum output at 30W/1m is 119dBA

IIC Version: Maximum output at 1W/1m is 107dBA.

Maximum output at 25W/1m is 118dBA.

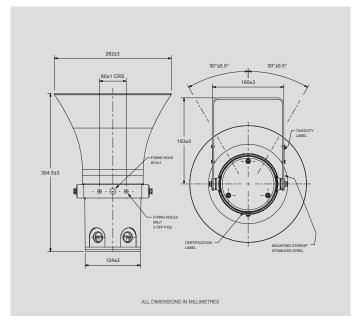
Frequency Range: 370Hz to 8kHz.

Voice Coil Impedance: 8 ohms.

Mounting: Via stirrup with ratchet facility.

Earth Continuity: Available via optional earthing stud or by internal earth arrangement.

Labels: Optional stainless steel tag and duty labels



Transformer:

Used by combining the rated power tappings below.

Transformer Tappings	Power (30W unit) W	Power (25W unit) W
1:2	30.0	25
2:3	25.0	12.5
3:4	12.0	6.0
1:3	6.0	4.0
2:4	4.0	2.0
1:4	2.0	1.0

Transformer Tapping Options:



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

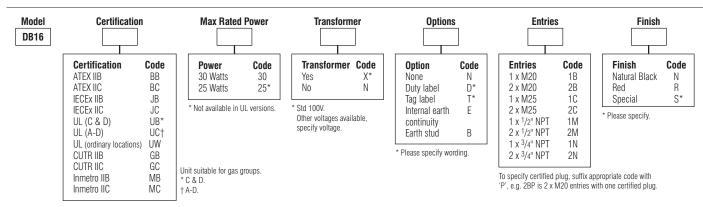


ii) Loop in/loop out (2 x 2) 8 ohm; 4 terminals.



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.



Ex nA, Weatherproof



Introduction

This loudspeaker, intended for use in Zone 2, potentially explosive gas and dust atmospheres, has a power rating of up to 15 Watts and is suitable for use in all gas groups including hydrogen.

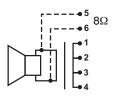
The flare and body are manufactured from a UV stable glass reinforced polyester. Stainless steel screws and mounting stirrup are incorporated to ensure a corrosion-free product.

- Zone 2 use.
- Ex nA II T4.
- ATEX compliant, Ex II 3 GD.
- BASEEFA tested.
- IP66 & 67.
- Ambient temperature: -55°C to +55°C.
- 117dbA at 15 Watts at 1 metre.
- Power tappings via integral transformer.
- Stainless steel ratcheted swivel mounting stirrup.
- Stainless steel fixtures.
- 100V line or 8Ω .





0 0 1 1111 0 011	
Certification:	CENELEC EN50014, 21. Ex nA II T 135°C (-55°C to +55°C) T4, Zone 2.
Material:	Body & horn in anti-static, UV stable, glass reinforced polyester. Mounting stirrup and fixtures in stainless steel.
Finish:	Natural Black or body and horn can be painted to client requirements.
Rated Power:	15 watts RMS continuous (at 25°C).
Certified Temp:	−55°C to +55°C.
Weight:	2.6kg approx.
Ingress Protection:	IP66 & IP67.
Entries:	2 x M20 ISO.
Terminals:	Up to 8 x 2.5mm ² .
Output:	Maximum output at 1W/1m at 900Hz is 107 dBA. Maximum output at 15W/1m at 900Hz is 117 dBA.
Frequency Range:	400Hz to 7kHz.
Voice Coil Impedanc	e: 8 ohms.
Fire Retardancy:	GRP is fire retardant to ISO 1210.
Mounting:	Via stirrup with ratchet facility.
Earth Continuity:	Available.
Labels:	Optional stainless steel tag and duty labels.
Transformer:	Used by combining the rated power tappings below.



Transformer Tappings	Power W
1:2	15.0
2:3	7.5
3:4	5.0
1:3	4.0
2:4	2.0
1:4	0.8

Transformer Tappings (Option (iii) shown)

Transformer Options:

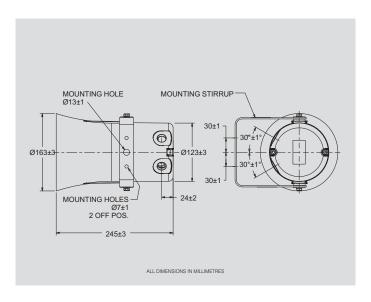
Standard:

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

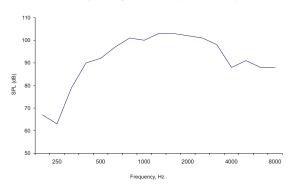
Optional:

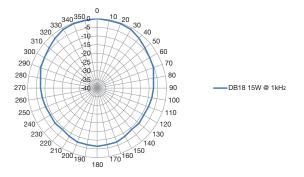
Loop in/loop out (2 x 2) 8 ohm; 4 terminals.

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

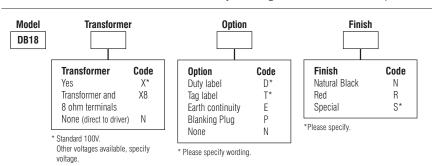


Frequency Response @ 1W/1M for 15W Unit (1/3 Octave Pink Noise)





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.



DB14 Range - LOUDSPEAKERS - Up to 15 Watts

Crouse-Hinds

Harsh Industrial & Marine Environments



Introduction

This range of loudspeakers has a power rating of 15 Watts and is suitable for use in demanding environments where a robust construction and high ingress protection rating is required.

The body is manufactured completely from a UV stable glass reinforced polyester which is also highly flame retardant and impact resistant. Stainless steel screws are incorporated thus ensuring a corrosion free product.

MEDC can also provide a range of speakers suitable for use in potentially explosive atmospheres.

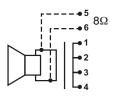
For more information please contact MEDC.

Features

- IP66 and IP67.
- Temperature range: -55°C to +70°C.
- Corrosion resistant GRP.
- 117dBA at 15 watts at 1 metre.
- 100V line transformer.
- Power tappings, via integral transformer.
- Addressable capability.
- Stainless steel ratcheted mounting bracket.
- Earth continuity available.
- BS5839 part 8 compliant version available.

IP66/67 Weatherproof Corrosion Free

Material:	Body & horn in UV stable, glass reinforced polyester. Swivel bracket in stainless steel.	
	Cover screws in stainless steel.	
Finish:	Painted to customer's specification.	
Rated Power:	15 watts RMS continuous (at 25°C).	
Certified Temp:	-55°C to +70°C.	
Weight:	2.6kg approx. dependent on model.	
Ingress Protection:	IP66 & IP67.	
Entries:	2 x M20 ISO.	
Terminals:	Up to 8 x 2.5mm ² . Other terminal arrangements available on request.	
Output:	Maximum output at 1W/1m at 900Hz is 107 dBA. Maximum output at 15W/1m at 900Hz is 117 dBA.	
Frequency Range:	400Hz to 7kHz.	
Voice Coil Impedanc	e: 8 ohms.	
Mounting:	Via stirrup with ratchet facility.	
Earth Continuity:	Available.	
Labels:	Duty and tag labels optional.	
Transformer:	Used to vary the rated power by selecting different tappings (see table below).	

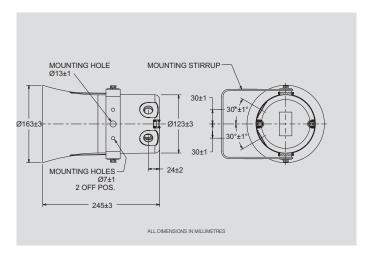


Transformer Tappings	Power W
1:2	15.0
2:3	7.5
3:4	5.0
1:3	4.0
2:4	2.0
1:4	0.8

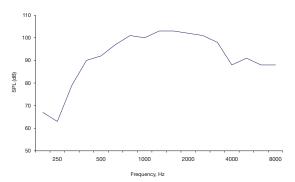
Transformer Options:

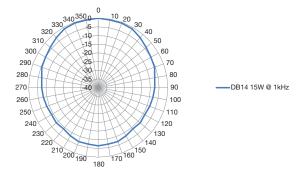
Standard:

- Standard Tapping: Loop in/Loop out (4 x 2) terminal tap change (8 terminals).
- Optional Tapping: 4 terminal tap change with 2 terminals (5 & 6), directly connected to driver (8 ohms).



ncy Response @ 1W/1M for 15W Unit (1/3 Octave Pink Noise)





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.

