

## Ex d(e), Weatherproof



### Introduction

The DB3B is a high power explosion proof sounder, introduced as a replacement for the current DB3 with improved functionality and 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.

Capable of producing 125dB @ 1m and with a range of pre-recorded tones, the DB3B includes an integral volume control which is ideal when a lower output is required.

The unit is provided with versatile control options allowing compatibility with a wide range of control methods and PLCs. The standard DC unit provides 3 tone stages, each stage has 28 tones available which can be independently selected. The unit can be controlled by reversing the polarity of the power supply (2 stage) or providing a common negative and switching between multiple positive supplies. The DB3B proves its versatility by additionally being able to work with a common positive supply and switching the negatives. The tone stages of the DB3B can also be controlled via voltage free contacts provided by a control panel.

The flexibility of the range continues with a wide range of supply voltages. The short flare option is a worthy addition to the range offering a high SPL in a compact unit.

### Features

- Ex d / Ex de IIC/IIIC T4/T5/T6.
- ATEX certified.
- IECEx certified.
- UL listed 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
  - Fire alarm and general use
- CUTR Certified.
- CQST Certified.
- Brazilian (Inmetro) certified.
- Certified temperature -55°C to +70°C.\*
- IP66 & IP67/NEMA 4X & 6.
- Optional Ex e terminal chamber.
- Up to 125dB output @ 1m.
- Integral volume control.
- 28 tones, user selectable.
- 3 stage unit remotely switchable.
- Tones can be programmed to customer's specification.
- DC supply voltage between 12V and 48V.
- End of line resistor option.
- Sounder & beacon combination units available, for further details contact MEDC.
- 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.

\*Model Dependent.



Short Flare Version

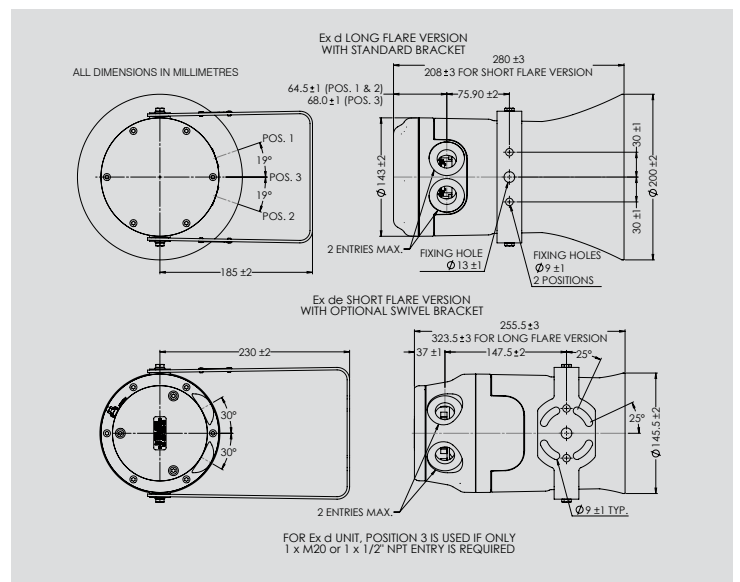


# Certification and Specification

- 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 Gas:** 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 Listed for USA and Canada, fire alarm or general use, listing no. E203310. 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.
- UL Ord Locs:** UL Listed for USA and Canada, fire alarm or general use, listing no. S8116.
- CUTR Ex d Gas:** 1Ex d IIC T4/T5/T6 Gb.
- CUTR Ex d Gas & Dust:** 1Ex d IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db.
- CUTR Ex de Gas:** 1Ex de IIC T4/T5/T6 Gb.
- CUTR 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 CUTR 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.

<b>Material:</b>	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.
<b>Fire retardancy:</b>	Body - Glass reinforced polyester. V0 flammability rating. Outer Flare - Thermoplastic Polyester. V0 flammability rating.
<b>Finish:</b>	Body - natural black. Flare - natural black, natural red or painted as specified. (Black short flare painted black).
<b>Voltage:</b>	DC: 12 - 48V AC: Up to 254V. If using an EOL resistor with a value between 700Ω and 2KΩ the maximum voltage must be limited to 28.8Vdc, if using an EOL resistor with a value between 470Ω and 700Ω the maximum voltage should be limited to 26Vdc.
<b>Weight:</b>	Ex d/UL - 4.6kg, Ex de - 5.4kg. Based on long flare DC unit.
<b>Ingress Protection:</b>	IP66 & IP67, NEMA 4X & 6. (IPx7 & NEMA 6 on terminal chamber only).
<b>Earth Continuity:</b>	Optional for Ex de version. Not available on Ex d unit.
<b>Entries:</b>	Up to 2 x M20 or 1/2" NPT. Blanking plug available.
<b>Terminals:</b>	AC: 7 x 2.5mm <sup>2</sup> (4 for loop in/out power, 3 for tone selection) (Standard unit only). DC: 8 x 2.5mm <sup>2</sup> (8 for loop in/out power and tone selection) (Standard unit only).
<b>Mounting arrangement:</b>	Stainless steel bracket with ratchet facility, optional swivel bracket available.
<b>Labels:</b>	Optional duty and tag labels available.
<b>Tone information:</b>	28 tones per stage. Additional custom tones available (Contact MEDC) Suitable for use with 200Hz tones.

<b>Max output (dB)</b> <b>1400Hz @ 1m.</b>	Short GD	Long GD	Short G	Long G
	116dB	122dB	119dB	125dB
<b>Certified Temperature</b>	Ex d/UL Min.	Ex de Min.	Max.	
	-55°C	-50°C	+70°C	



## Tone activation and selection

Voltage	Unit	No. of stages	Tone activation	Tone selection
DC	Standard.	1	Apply power.	1 x DIP switch.
		2	Reverse polarity.	2 x DIP switches.
			Common -ve with 2 +ve supplies.	2 x DIP switches.
			*Common +ve with 2 -ve supplies.	2 x DIP switches.
		Independent control 2 -ve & 2 +ve	2 x DIP switches.	
		3	Common -ve with 3 +ve supplies.	3 x DIP switches.
Alternative tone activation. (Option M)		2	*Common -ve with 2 +ve supplies.	2 x DIP switches.
		3	Common +ve with 3 -ve supplies.	3 x DIP switches.
		1 - 5	Volt free activation (remote switching). (Option R).	1 x DIP switch for stage 1. Tones preselected for subsequent stages.
AC	Standard.	1	Apply power.	1 x DIP switch
		1 - 2	Volt free activation (remote). (Option R).	1 x DIP switch for stage 1. Tone preselected for the 2nd stage.

\*Reverse polarity line monitoring can be used with common positive or negative switching to give up to 2 operational stages and a 3rd monitoring connection. An EOL resistor can be fitted as shown in the technical manual. All connection details are shown in the technical manual.

## Current Consumption: Based on a continuous 970Hz tone.

Voltage	Current for IIC unit	Current for IIIC unit
12Vdc	700mA	716mA
24Vdc	329mA	339mA
48Vdc	171mA	173mA
110Vac	115mA	122mA
120Vac	106mA	113mA
220Vac	59mA	63mA
230Vac	52mA	55mA
240Vac	55mA	58mA
254Vac	59mA	63mA

# 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	Voltage	Labels	Entries	Options	Finish
DB3B							
<b>Certification Code</b>	ATEX Ex d D ATEX Ex de E IECEX Ex d DJ IECEX Ex de EJ UL UL UL (ordinary locations) UW Dual ATEX/UL AU Dual IECEX/UL JU CUTR Ex d DG CUTR Ex de EG CQST Ex d Q Inmetro Ex d DM Inmetro Ex de EM Weatherproof W	<b>Ex Atmosphere Code</b> None N* IIC Gas G IIIC Gas & Dust GD  * If Weatherproof or UL (ordinary locations), select N for Ex Atmosphere.	<b>Voltage Code</b> 12-48V d.c. 048* 110V a.c. 110 120V a.c. 120* 220V a.c. 220 230V a.c. 230 240V a.c. 240* 254V a.c. 254†  * Complies with UL regulated power supply requirements. † Not available UL.	<b>Labels Code</b> None N Duty D* Tag T*  * Please specify.	<b>Entries Code</b> 1 x M20 1B* 2 x M20 2B 2 x M20 2BP Inc 1 x plug 1 x 1/2" NPT 1C* 2 x 1/2" NPT 2C* 2 x 1/2" NPT 2CP* Inc 1 x plug  * Not available Ex e.	<b>Options Code</b> None N Swivel bracket B EOL E* Earth cont. G† Alternative tone activation M** Volt free activation (remote) R** Short flare S Custom tones (not std 28) T†  * Specify value (Min 470Ω). Please note voltage limitation. ** These options cannot be selected together † Ex e only. † Specify details	<b>Finish Code</b> Natural Black NT Natural Red R Yellow Y Grey G Blue B Special S*  * Please specify. † Short flare painted black.

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.

