

# DB3B sounders range up to 122dB

Ex d(e), weatherproof



## Overview

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 +85°C the Ex enclosure is manufactured from GRP with a rugged thermoplastic flare providing a corrosion free and aesthetically pleasing product.

Capable of producing 122dB @ 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 certified for USA and Canada
  - Class I, Div 2, Groups A-D
  - Class I, Zone 1
  - Class II, Div 2, Groups F & G
  - Zone 21
  - Class III, Div. 1
  - Fire alarm and general use
- TR CU certified
- CCC certified
- CCOE certified
- Chinese Compulsory Certification for Fire systems (CCCF) certified
- INMETRO certified
- SIL 1 certified
- EN54-3 certified and LPCB approved
- Certified temperature: -55°C to +85°C (model dependent)
- IP66 & IP67/NEMA 4X & 6 (EN54-3, IP33C)
- Optional Ex e terminal chamber
- Up to 122dB 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. EN54-3 between 11V and 57.6V absolute
- 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



Short flare version



Certifications	
ATEX Ex d Gas	Cert. no. Baseefa13ATEX0229X. Certified to: EN60079-0,1 Ex II 2G, Ex db IIC T4/T5/T6 Gb
ATEX Ex d Gas & Dust	Cert. no. Baseefa13ATEX0231X. Certified to: EN60079-0,1,31 Ex II 2GD, Ex db IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
ATEX Ex de Gas	Cert. no. Baseefa13ATEX0232X. Certified to: EN60079-0,1,7 Ex II 2G, Ex db eb IIC T4/T5/T6 Gb
ATEX Ex de Gas & Dust	Cert. no. Baseefa13ATEX0233X. Certified to: EN60079-0,1,7,31 Ex II 2GD, Ex db eb IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
IECEX Ex d Gas	Cert. no. IECEX BAS 13.0112X. Certified to: IEC60079-0,1 Ex db IIC T4/T5/T6 Gb
IECEX Ex d Gas & Dust	Cert. no. IECEX BAS 13.0113X. Certified to: IEC60079-0,1,31 Ex db IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
IECEX Ex de Gas	Cert. no. IECEX BAS 13.0114X. Certified to: IEC60079-0,1,7 Ex db eb IIC T4/T5/T6 Gb
IECEX Ex de Gas & Dust	Cert. no. IECEX BAS 13.0115X. Certified to: EN60079-0,1,7,31 Ex db eb IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
UL Haz Locs	UL certified for USA and Canada, fire alarm or general use, listing no. E203310 Class I, Div 2. Groups A-D. Class I, Zone 1, Ex db IIC / AEx db IIC T4/T5/T6 Gb Class II, Div 2. Groups F&G. Zone 21 Ex tb IIIC / AEx tb IIIC T135°C/T100°C/T85°C Db Class III Div 1
UL Ord Locs	UL certified for USA and Canada, fire alarm or general use, listing no. S8116
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
CCC Ex d Gas	Ex d IIC T4/T5/T6 Gb
CCC Ex d Gas & Dust	Ex d IIC T4/T5/T6 Gb, Ex tD A21 IP6X T135°C/T100°C/T85°C
CCCF	Chinese Compulsory Certification for Fire systems (CCCF) Ex d only
INMETRO Ex d Gas	Ex db IIC T4/T5/T6 Gb
INMETRO Ex d Gas and Dust	Ex db IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
INMETRO Ex de Gas	Ex db eb IIC T4/T5/T6 Gb
INMETRO Ex de Gas and Dust	Ex db eb IIC T4/T5/T6 Gb, Ex tb IIIC T135°C/T100°C/T85°C IP66 (IP65 short flare)
SIL	SIL 1 certified to IEC61508. Cert number 20151119-4786827453
EN54-3	Certified to EN54-3, LPCB approved. Ambient Temperature -25°C to +70°C

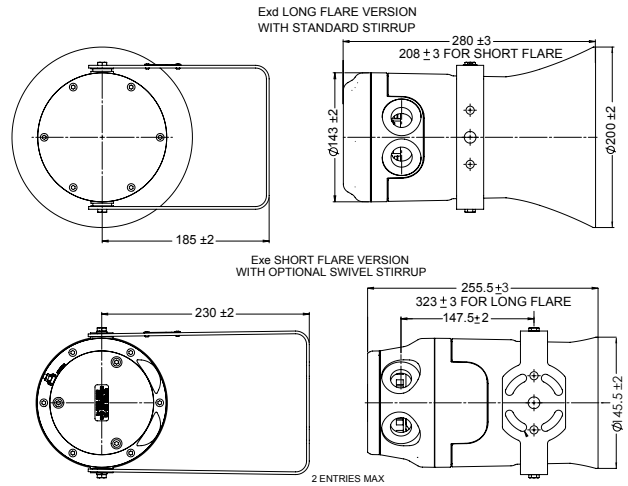
Specifications	
Material	Ex enclosure - flame retardant, UV stable, glass reinforced polyester Flare - flame retardant, high impact, UV stable, thermoplastic polyester (UV stability tested to ISO 4892 part 3) Hardware - bracket, fixings and captive cover screws in 316 stainless steel
Fire retardancy	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)
Voltage	DC: 12 - 48V (EN54-3: 11-57.6V) 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
Weight	Ex d/UL - 4.6kg, Ex de - 5.4kg. Based on long flare DC unit
Ingress protection	IP66 & IP67, NEMA 4X & 6. (IPx7 & NEMA 6 on terminal chamber only) EN54-3 certified product approved to IP33C
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	AC: 4 x 1.5mm <sup>2</sup> (loop in/out power), 3 x 2.5mm <sup>2</sup> (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)
Mounting arrangement	Stainless steel bracket with ratchet facility, optional swivel bracket available
Labels	Optional duty and tag labels available
Tone information	28 tones per stage. Additional custom tones available (contact MEDC) Suitable for use with 200Hz tones
Relative Humidity	99% Non-condensing

## 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</b>	<b>Code</b>	<b>Ex atmosphere</b>	<b>Code</b>	<b>Labels</b>	<b>Code</b>	<b>Options</b>	<b>Code</b>
ATEX Exd	D	None	N†	None	N	None	N†
ATEX Exd EN54-3	54D	IIC Gas	G	Duty	D*	Swivel bracket	R
ATEX Ex de	E	IIC & IIIC gas and dust	GD‡	Tag	T*	EOL	Y
IECEX Ex d	DJ					Earth cont	G
IECEX Ex de	EJ					Alternative tone activation	Y
UL	UL					Volt free activation (remote)	G
UL (ordinary locations)	UW	*If weatherproof or UL (ordinary locations), select N for Ex Atmosphere				Short flare	B
Dual ATEX/UL	AU	‡EN54 must be IIC & IIIC gas and dust				Custom tones (not std 28)	S
Dual IECEX/UL	JU						‡Specify value (min 470Ω) please note voltage limitation
TR CU Ex d	DG						**These options cannot be selected together
TR CU Ex de	EG						†Ex e only ΔSpecify details ‡EN54 only available with no extra options selected
CCC Ex d	QT						
CCC/CCCF Ex d	QF						
INMETRO Ex d	DM						
INMETRO Ex de	EM						
Weatherproof	W						
Weatherproof EN54-3	54W						
†Not suitable for use in China on fire alarm system							

## General arrangement drawing (all dimensions in mm)



## 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
		3	Common -ve with 3 +ve supplies	3 x DIP switches
		Alternative tone activation (Option M)	2	*Common -ve with 2 +ve supplies
3	Common +ve with 3 -ve supplies		3 x DIP switches	
Alternative tone activation (remote) (Option R)	1-5		Volt free activation (remote switching)	1 x DIP switch for stage 1. Tone preselected for subsequent stages
	Standard		1	Apply power
AC	Alternative tone activation (remote) (Option R)	1-2	Volt free activation (remote switching)	1 x DIP switch for stage 1. Tone preselected for the 2nd stage

Restrictions apply to permissible connections for EN54-3 certified product. See technical manual for details

\*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

Certified temperature	Ex d/UL min	Ex de min	Max
	-55°C	-50°C	+70°C/+85°C*

\* Higher maximum temperatures not on TRCU certified units

Max output (dB) 1400Hz @ 1m	Short GD	Long GD	Short G	Long G
	113dB	116dB	119dB	122dB

For CCC/CCCF certified units use the following code DB3BQFG048\_ \_ \_ R. For Labels and Entries select any option as required. For Options select either (N) None or (E) EOL as required

Tolerance +/-3dB. EN54-3; see technical manual (TM264) for SPL  
Please see the technical manual for tone specific SPL values