

## Exd(e), Weatherproof



## Introduction

This range of lightweight all GRP, flameproof sounders is intended for use in potentially explosive gas and dust atmospheres and has been designed with high ingress protection to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

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

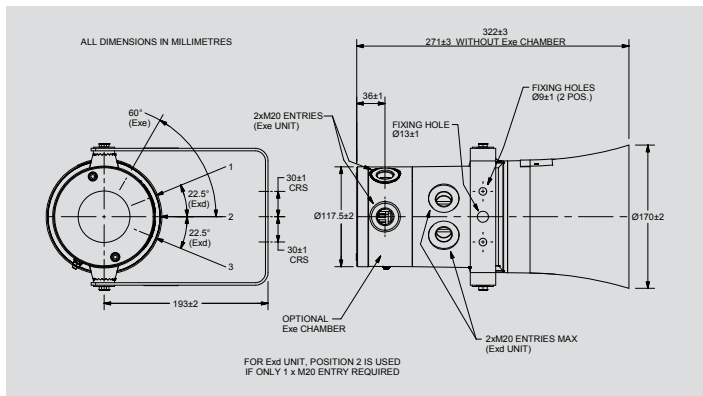
- Zone 1, Zone 2 and non-Ex use.
- Ex de IIC T4/T5.
- ATEX approved, EEx II 2GD.
- Optional Exe terminal chamber.
- IECEx certified Gb, Db.
- UL Listed for USA and Canada:
  - Hazardous locations:
    - Class I, Div 2, Groups A-D.
    - Class II, Div 2, Groups F & G.
    - Class I, Zones 1 & 2, AExd IIC T5.
  - Ordinary locations: Audible-Signal Device.
- ULC certified for Class I, Zone 1 AEx d IIC. Class I & II, Division 2.
- CUTR certified.
- Chinese (CQST) certified.
- Brazilian (Inmetro) certified.
- IP66 and IP67.
- SIL 1 Certified.
- Designed in accordance with EN54-3.
- \*Certified temperature: -55°C to +70°C.
- All GRP corrosion free flamepaths.
- Up to 118dB(A) output.
- Integral volume control.
- 27 tones, user selectable.
- Tones comply with UKOOA/PFEER guidelines.
- Two tones may be switched via the external voltage supply – now available in a.c. and d.c. versions.
- Tones may be programmed to customer specification.
- d.c. version accepts any voltage between 12V d.c. and 48V d.c.
- End of line resistor option.
- Sounder/Beacon Combination Unit available.

*\*Depending on version.*



## Certification and Specification

<b>ATEX EEx d:</b>	Cert. no. BAS00ATEX2097X. Certified to: EN50014, EN50018. Ex II 2GD, EEx d IIC T4/T5.
<b>ATEX EEx de:</b>	Cert. no. BAS00ATEX2098X. Certified to: EN50014, EN50018, EN50019. Ex II 2GD, EEx de IIC T4/T5.
<b>IECEX Ex d:</b>	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.
<b>IECEX Ex de:</b>	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.
<b>UL Haz Locs:</b>	Listing no. E203310. Class I, Div 2, Groups A - D. Class II, Div 2, Groups F & G. Class I, Zones 1 & 2, AExd IIC T5.
<b>UL Ord Locs:</b>	Listing no. S8116. Audible signal device.
<b>CUTR Ex d: †</b>	1Ex d IIC T4/T5 Gb, Ex tb IIIC T100°C/T135°C Db. Russian Fire Approved.
<b>CUTR Ex de: †</b>	1Ex de IIC T4/T5 Gb, Ex tb IIIC T100°C/T135°C Db. Russian Fire Approved.
<b>Inmetro Ex d:</b>	Ex d IIC T4/T5 Gb.
<b>Inmetro Ex d e:</b>	Ex d e IIC T4/T5 Gb.
<b>CQST:</b>	Exd IIC T4.
<b>ABS:</b>	American Bureau of Shipping for DB4D and DB4E only.
<b>SIL:</b>	SIL1 certification to IEC61508. Cert. No. Sira FSP 11010/01.
<b>EN54:</b>	Designed in accordance with EN54-3.
<b>Material:</b>	Body & horn in anti-static, UV stable, glass reinforced polyester. Swivel bracket & captive cover screws in stainless steel.
<b>Finish:</b>	Body and horn, natural black or painted to customer colour requirements.
<b>Voltage:</b>	Up to 48V d.c. Up to 254V a.c.
<b>Weight:</b>	6.0kg approx. dependent on model (+0.5kg for Exe).
<b>Ingress Protection:</b>	IP66 & 67.
<b>Entries:</b>	Up to 2 x M20 Exd 2 x M20 Exe. Up to 2 x 1/2" NPT UL. Note: ATEX/UL Dual Listed version up to 2 x 1/2". NPT or 2 x M20 via adapter (fitted).
<b>Terminals:</b>	4 x 2.5mm <sup>2</sup> (a.c.), 6 x 2.5mm <sup>2</sup> (d.c.).
<b>Output:</b>	Long Flare: 115dB(A) ± 3dB(A) (tone dependent). Short Flare: 108dB(A) ± 3dB(A) (tone dependent).
<b>Fire Retardancy:</b>	GRP is fire retardant to ISO 1210.
<b>Mounting:</b>	Stainless steel bracket with ratchet facility.
<b>Earth Continuity:</b>	Included on Exde version.
<b>Labels:</b>	Duty and tag labels optional.
<b>Tone Selection:</b>	27 user selectable tones available.
<b>Sounder/Beacon Unit:</b>	The DB3 may be combined with an MEDC beacon to create a combined audio/visual alarm. Contact MEDC for price and specification.



**Certified Temperature:**

	Exd	Exde	UL	GOST R Exde	Chinese Exd
DB3 & DB3P	-20°C to +70°C	-20°C to +70°C	-55°C to +70°C	-20°C to +40°C	-20°C to +55°C
DB3L&DB3LP*	-55°C to +70°C	-50°C to +70°C	n/a	-55°C to +55°C	n/a

\* DB3L & DB3LP IECEx Min Temp - 40°C

### Two Stage Unit DB3P:

Switchable between two tones:

- D.C. (i) Reversing the polarity of the supply, or  
(ii) by a 3 wire common +ve system, switching between the two -ve lines.
- A.C. (iii) Closing/opening connection between 2 terminals e.g. by using a volt free relay contact at the panel. 2 tones must be specified at time of order.

**3 & 4 Tone unit:** Remote 3 & 4 tone unit available – contact sales office for details.

### Volume Control

*Nominal Output dB(A)	Input Current mA
93	50
105	100
108	150
111	200
112	250
114	300
115	350

\*Output measured with 24V input voltage. Tone set to 970Hz continuous.

### Current Consumption

V	I	V	I
12V d.c.	760mA	220V a.c.	68mA
24V d.c.	380mA	230V a.c.	65mA
48V d.c.	190mA	240V a.c.	62mA
110V a.c.	135mA	254V a.c.	59mA
120V a.c.	124mA		

## 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		Voltage		Labels		Entries		Options		Finish	
<b>Model</b>	<b>Details</b>	<b>Certification</b>	<b>Code</b>	<b>Voltage</b>	<b>Code</b>	<b>Label</b>	<b>Code</b>	<b>Entries</b>	<b>Code</b>			<b>Finish</b>	<b>Code</b>
DB3	Standard unit	Uncertified	W	12V-48V d.c.	048	Duty	D*	1 x M20 (Exd)	1B			Natural Black	N
DB3P	Two stage	Exd	D	110V a.c.	110	Tag	T*	2 x M20 (Exd/Exde)	2B			Red	R
DB3L*†	Low temp. standard unit	IECEx Exd	DJ	120V a.c.	120	None	N	1 x 1/2" NPT (UL only)	1C			Special	S*
DB3LP*†	Low temp. two stage	IECEx Exde	EJ	220V a.c.	220			2 x 1/2" NPT (UL only)	2C				
		UL Listed	UL*	230V a.c.	230								
		UL (Ordinary Locations)	UW	240V a.c.	240								
		ATEX/UL Dual Listed	AU	254V a.c.	254								
		CUTR Exd	DG										
		CUTR Exde	EG										
		Chinese (CQST)	Q										
		Inmetro Exd	DM										
		Inmetro Exde	EM										

\* Available unpainted only.

† Min IECEx temp - 40°C.

\* Please specify wording.

To specify certified plug, suffix appropriate code with 'P', e.g. 2BP is 2 x M20 entries with one certified plug.

\* Please specify.

\* Not all options are available UL listed.  
For ULC ordering codes and technical details please refer to the US data sheet.

\* State value.

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.



6DS094/Y 06 /14