Horns and Sounders

The MEDC range of horns and sounders are suitable for a wide variety of applications and feature a variety of tone settings and traditional bells.

Sounders and Horns are used to warn of potentially dangerous situations or to relay instructions. In addition the alarms may operate as stand-alone units or be incorporated into a hazard warning system. A wide variety of sound output levels and other options are also available. The Sounders and Horns output in dB(A) is measured to European standards at 1 metre.



Range Certifications

PRODUCT	ATEX	IECEx	UL	ULC	CSA	Inmetro	CUTR	CQST	ABS	SIL	IP Rating	Page
Horns & Sounders												
DB1	-	-				-					66	68
DB3B	-	-									66 / 67	70
DB3	-	-	-	-		-	-	-	-	-	66 / 67	72
DB3V		-					-				66 / 67	74
dEV 20	-	-									66	76
DB5	-	-			-				-		65	78
DB7	-						-				66 / 67	80
DB12											66 / 67	82
DB15											66 / 67	84
DB6	-	-	_			-	0007				65	86
dGW21/dRGW21							GOST				66	88
				, ,		-					-	
DB1			[DB3			DB3V				DB3B	
DB3B (short flare			de	EV 20			DB5		,		DB7	

Ex d, Weatherproof



Introduction

This range of lightweight, flameproof Sounders have been designed with a high weatherproof rating to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

Electronic circuitry allows the DB1P and DB1HP to be switched between two selectable tones by either reversing the supply polarity, or connecting a second voltage supply.

The higher output DB1H and DB1HP are particularly suitable for noisy environments

Stainless steel, one of the most durable materials available on the market, is both hard wearing and corrosion resistant, increasing the life of products in harsh environments and therefore reducing maintenance costs.

Features

- Zone 1 and Zone 2 use.
- Ex d, IIB T5 /T6*.
- ATEX approved, Ex II 2G.
- CENELEC approved, BASEEFA certified.
- UL Listed Class I, Div 1. Groups C & D.
- IECEx certified, Gb.
- CUTR certified.
- Brazilian (Inmetro) certified.
- IP66
- Certified temperature: -20°C to +70°C.
- Up to 113 dB(A) output.
- Available in marine grade alloy or stainless steel.
- 27 output tones, user selectable.
- Telephone initiate option.
- Tones can be selected remotely.
- Tones comply with UKOOA/PFEER guidelines.
- Any two tones may be switched via the external voltage supply.
- End of line resistor option.

*Model dependent.





ATEX DB1P Ex d: Cert. no. BAS00ATEX0207X.

Certified to: EN60079-0, EN60079-1.

Ex II 2G, Ex d IIB T6.

ATEX DB1HP Ex d: Cert. no. BAS00ATEX0209X.

Certified to: EN60079-0, EN60079-1.

Ex II 2G, Ex d IIB T5.

Cert. no. IECEx BAS 10.0065X. IECEx DB1P Ex d:

Certified to: IEC60079-0, IEC60079-1.

Ex d IIB T6 Gb.

IECEx DB1HP Ex d: Cert. no. IECEx BAS 10.0064X.

Certified to: IEC60079-0, IEC60079-1.

Ex d IIB T5 Gb.

UL Haz Locs: Listing no. E187688

Class I, Div 1, Groups C & D.

CUTR DB1P Ex d: 1Ex d IIB T6 Gb. Inmetro DB1P Ex d: Ex d IIB T5/T6 Gb. Inmetro DB1HP Ex d: Ex d IIB T5/T6 Gb.

Material: LM25 corrosion resistant alloy or ANC4B stainless steel with

stainless steel cover screws.

ABS flare.

Epoxy paint finish as standard or to customer specification. Finish:

ATEX/CENELEC -20°C to +55°C (DB1 & DB1P). **Certified Temp:**

ATEX/CENELEC -20°C to +70°C (DB1H & DB1HP) UL -25° C to $+70^{\circ}$ C.

Weight: DB1(P) 3.5 Kg Alloy, 8.3 Kg stainless.

DB1H(P) 5.6 Kg Alloy, 12.7 Kg stainless

Ingress Protection:

Entries: Up to 3 x M25 or M20 ISO.

Terminals: Suitable to accept up to 4mm² cable.

Note: Terminals limited to 2.5mm² cable on a.c. version with

telephone initiate option only.

 $DB1(P) = 103 \pm 3dB(A) (96 \pm 3dB(A) \text{ for } 12V DB1).$ Output:

 $DB1H(P) = 110 \pm 3dB(A) @ 1 metre.$

Note: Sound level is dependent upon the tone selection.

Labels: Tag and Duty labels optional

Tone Selection: Single Stage Unit a.c.

27 user selectable tones including, PFEER/UKOOA tones.

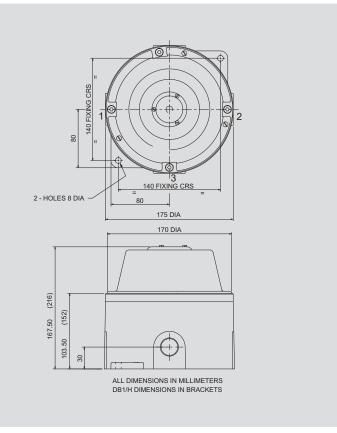
Two Stage Unit d.c.

Switchable between any two of the 27 tones by either:

Reversing the polarity of the supply, or

(ii) By a 3 wire common +ve system, switching between the two - ve lines.

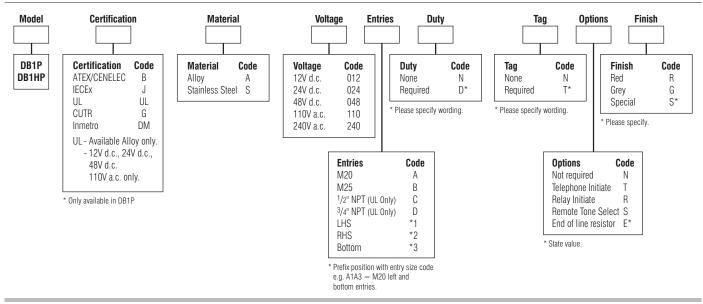
Note: Reverse monitoring is achievable on Two Stage Version by selection of terminals.



Current Consumption:

	DB1(P)	DB1H(P)
12V	125mA	900mA
24V	250mA	700mA
48V	250mA	350mA
120V	60mA	200mA
240V	50mA	100mA

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 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 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.
- Certified temperature -55°C to +70°C.*
- IP66 & IP67.
- 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.





Sales Eng. UK: +44 (0)1623 444 445 Sales Eng. USA: +1 (713) 937- 9772 E-Mail: MEDCSales@Eaton.com Web: www.medc.com

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.

IECEx Ex d Gas: Cert. no. IECEx BAS 13.0112X.

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).

Voltage: DC: 12 - 48V AC: Up to 254V.

Weight: Ex d - 4.6kg, Ex de - 5.4kg. Based on long flare DC unit.

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: AC: 7 x 2.5mm² (4 for loop in/out power, 3 for tone selection)

(Standard unit only).

DC: 8 x 2.5mm² (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.

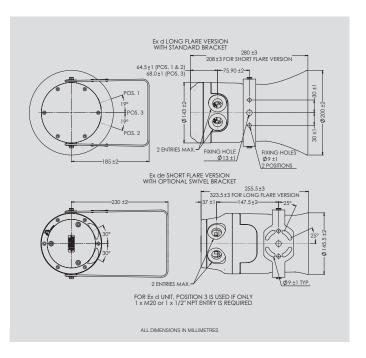
Tone information: 28 tones per stage. Additional custom tones available (contact MEDC).

Maximum output dB @ 1400Hz:

Flare type	Short	Long
IIC Gas	122dB	125dB
IIIC Gas & Dust	116dB	119dB

Certified Temperature:

Protection Type	Minimum Temp	Maximum Temp
Ex d	-55°C	+70°C
Ex de	-50°C	+70°0



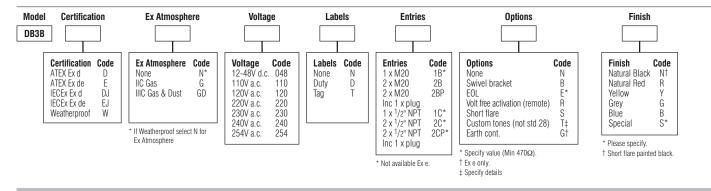
Tone activation and selection:

Voltage	Unit Number Stage activation of stages		Tone selection	
		1	Apply power.	1 x DIP switch.
			Apply power / Reverse polarity.	2 x DIP switches.
	Ctondord	2	Common negative and switch between 2 positives.	2 x DIP switches.
	Standard		Common positive and switch between 2 negatives.	2 x DIP switches.
DC		3	Common negative and switch between 3 positives.	3 x DIP switches.
			Common positive and switch between 3 negatives.	3 x DIP switches.
	Volt free activation (remote).	1 - 5	Volt free activation (remote switching).	1 x DIP switch for stage 1 Tones preselected for subsequent stages.
	Standard	1	Apply power.	1 x DIP switch
AC	Volt free activation (remote).	1 - 2	Volt free activation (remote switching).	1 x DIP switch for stage 1 Tones preselected for subsequent stage.

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.



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.











ATEX EEx d: Cert. no. BAS00ATEX2097X.

ATEX EEx de:

IECEx Ex de:

Certified to: EN50014, EN50018.

Ex II 2GD, EEx d IIC T4/T5. Cert. no. BAS00ATEX2098X

Certified to: EN50014, EN50018, EN50019.

Fx II 2GD FFx de IIC T4/T5 IECEx Ex d: 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.

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.

Class I, Div 2, Groups A - D. Class II, Div 2, Groups F & G. Class I, Zones 1 & 2, AExd IIC T5.

UL Ord Locs: Listing no. S8116. Audible signal device. 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. Inmetro Ex d: Ex d IIC T4/T5 Gb. Inmetro Ex d e: Ex d e IIC T4/T5 Gb.

COST Fxd IIC T4

American Bureau of Shipping for DB4D and DB4E only. ABS: SIL: SIL2 certification to IEC61508. Cert. No. Sira FSP 12003.

EN54: Designed in accordance with EN54-3.

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

Swivel bracket & captive cover screws in stainless steel.

Finish: Body and horn, natural black or painted to customer colour requirements.

Voltage: Up to 48V d.c. Up to 254V a.c.

Weight: 6.0kg approx. dependent on model (+0.5kg for Exe) Ingress Protection: IP66 & 67

Entries:

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).

4 x 2.5mm² (a.c.), 6 x 2.5mm² (d.c.) Terminals:

Output: Long Flare: $115dB(A) \pm 3dB(A)$ (tone dependent). Short Flare: $108dB(A) \pm 3dB(A)$ (tone dependent)

Fire Retardancy: GRP is fire retardant to ISO 1210.

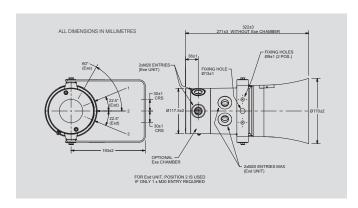
Mounting: Stainless steel bracket with ratchet facility.

Earth Continuity: Included on Exde version. Labels:

Duty and tag labels optional Tone Selection: 27 user selectable tones available

Sounder/Beacon Unit: 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

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.

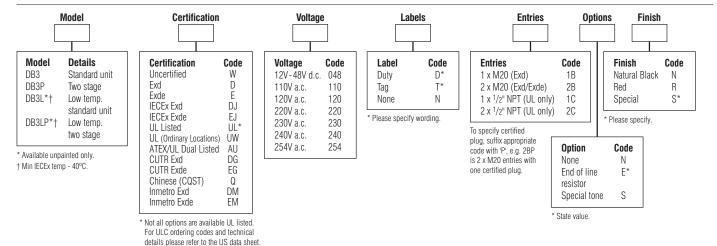
Current Concumption

ourront consumptio	"
V	Ţ
12V d.c.	760mA
24V d.c.	380mA
48V d.c.	190mA
110V a.c	135mA
120V a.c.	124mA

V	I
220V a.c.	68mA
230V a.c.	65mA
240V a.c.	62mA
254V a.c.	59mA

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 lightweight all GRP, flameproof voice 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.

This unit offers up to 20 seconds of speech which can be recorded via an integral microphone or an input from an external source. The unit incorporates a variable delay allowing speech to be repeated at equal intervals of up to approximately 15 seconds.

In addition, a 'mechanical bell' sound version is available.

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.
- BASEEFA certified.
- IECEx certified Gb, Db.
- CUTR certified.
- Chinese (CQST) certified.
- Brazilian (Inmetro) certified.
- IP66 and IP67.
- *Certified temperature: -55°C to +70°C.
- All GRP corrosion free flamepaths.
- Up to 110dB(A) output.
- Integral volume control.
- d.c. version accepts any voltage between 12V d.c. and 48V d.c.
- End of line resistor option.
- Sounder/Beacon Combination Unit available.
- Bell recording version available.

*Depending on version.





Cert. no. BASO0ATEX2097X. ATEX EEx d:

ATEX EEx de:

CUTR Ex d:

Certified to: EN50014, EN50018,

Ex II 2GD, EEx d IIC T4/T5. Cert. no. BAS00ATEX2098X

Certified to: EN50014, EN50018, EN50019.

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

Cert. no. IECEx BAS 11.0083X IECEx Ex d:

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. 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.

Inmetro Ex d: Ex d IIC T4/T5 Gb. Ex d e IIC T4/T5 Gb Inmetro Ex de: CQST: Exd IIC T4.

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

(GRP). Swivel bracket & captive cover screws in stainless steel.

Finish: Body and horn, natural black or painted to customer colour requirements.

Voltage: Up to 48V d.c.

Weight: 6.0kg approx. dependent on model (+0.5kg for Exe) IP66 & 67

Ingress Protection: Entries: Up to 2 x M20 Exd.

2 x M20 Exe. Terminals: 6 x 2.5mm² (d.c.).

Output: 110dB(A) (message dependent)

Volume Control: Potentiometer.

Voice Recordina: Up to 20 seconds recording time.

GRP is fire retardant to ISO 1210. Fire Retardancy: Mounting: Stainless steel bracket with ratchet facility.

Earth Continuity: Included on Exde version.

Sounder/Beacon Unit: The DB3V may be combined with an MEDC beacon to create a

combined voice/visual alarm.

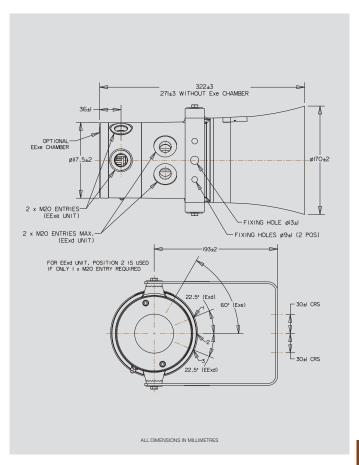
Contact MEDC for price and specification. Duty and tag labels optional

Certified Temperature:

Labels:

	Exd	Exde	GOST R&K Exd	GOST R Exde	Chinese Exd
DB3V	-20°C +70°C	-20°C +70°C	-20°C +50°C	-20°C +40°C	-20°C +55°C
DB3LV*	-55°C +70°C	-50°C +70°C	-55°C +55°C	-55°C +55°C	n/a

^{*} DB3LV IECEx Min Temp - 40°C.

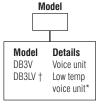


Current Consumption:

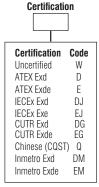
1.2A
600mA
300mA

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.



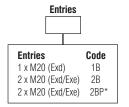
* Available unpainted only. † Min IECEx temp -40°C.



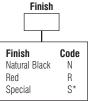
Options Code Duty D* Tag End of line E† resistor Bell tone 0 None

Options

* Please specify wording.



* With one certified plug fitted.







Explosion-proof Sounder dEV20 - Up to 115 dB(A)

Crouse-Hinds

Ex de



Introduction

Hazardous areas often require the use of acoustical signals for warning or information purposes. The ExII-sounder dEV20 offers both of these signalling features and is designed for continuous operation.

The ExII-sounder dEV20 has an ingress protection rating of IP66, meaning it is suitable for both indoor and outdoor installation.

The ExII-Sounder consists of a flame-proof housing manufactured from a light grade aluminium alloy and a sound channel made from impact-resistant polyester.

The sounder dEV20 includes two signal levels. The signal tone for the first level is adjusted with the slide switches 1-5 (S0) according to the signal choice list. The signal tone for the second signal level is adjusted with the slide switches 6-10 (S1).

Delivery condition: S0 = Tone 24,

S1 = Tone 4

Features

- Sound pressure level: up to 115 dB(A)
- 32 signal tones, 2-stage alarm
- Volume adjustable (3 steps of 10 dB)
- Aluminium housing, Polyamide
- ATEX Approval
- IP66
- II 2 G Ex d e IIB + H² T6 Gb
- II 2 D Ex tb IIIC T85°C Db

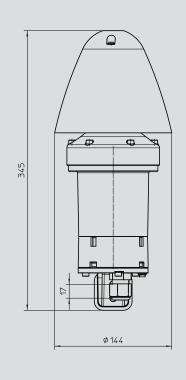
Warning in a chemical plant

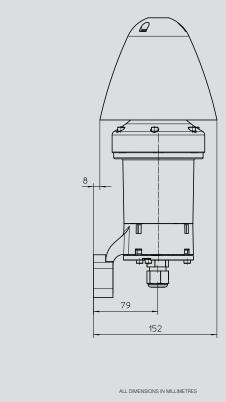
The Exll-sounder dEV20 is made to protection category IP66 and may be used in zones 1+2 and 21+22.





Ochuncation	and opcomeation		
Type of protection:	ATEX Cert. No. PTB 12 ATEX 1014. Il 2 G Ex d e IIB + H2 T6 Gb. Il 2 D Ex tb IIIC T85°C Db. IECEx Cert. No. IECEx PTB 13.0012 Ex d e IIB + H2 T6 Gb Ex tb IIIC T85°C Db		
Protection class:	I.		
Certified temp:	T6: -50° C to $+60^{\circ}$ C		
Housing:	Seawater resistant Aluminium, sound protection hood Polyamide (black).		
Weight:	2.8 kg		
IP rating:	IP66.		
Cable entries:	M20 x 1.5 (cable 5.5 to 13 mm).		
Signal selection:	By DIP switches.		
Volume:	Max. 115 dB(A) reducible in 3 levels each by 10 dB.		
Signal tone:	32 for each signal level.		
Current consumption:	93 - 460mA (dep. on voltage variation).		
Power consumption:	Max. 14 W.		
Clamping capacity:	To 2.5 mm ² .		
Dimensions:	~ Ø 144 x 345 mm.		





Ordering Information

Туре	Name	Voltage	Current Consumption	Article no.
dEV20	Ex-Sounder	24 VDC	460 mA	F215 910 13
dEV20	Ex-Sounder	85 - 265 VAC	93 mA (230 V)	F215 910 07

Intrinsically Safe (Exia)



Introduction

This range of lightweight, intrinsically safe Sounders have been designed with a high weatherproof rating to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The unit is available in 2 models: 12V and 24V.

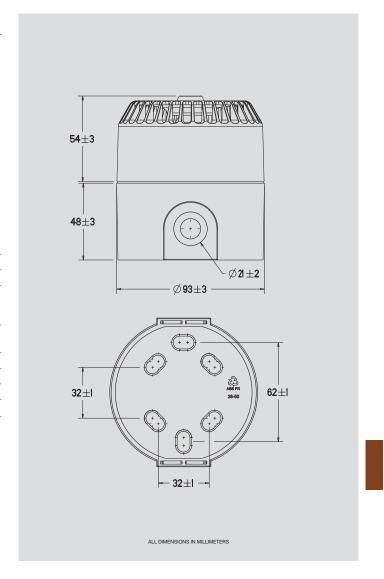
Features

- Zone 0, Zone 1 and Zone 2 use.
- Ex ia IIC T4.
- ATEX approved Ex II 1G & Ex 1 M1.
- BASEEFA certified.
- IECEx certified, Ga.
- FM Approved Class I, Div. 1, Groups A-D.
- CSA certified.
- Brazilian (Inmetro) certified.
- IP65
- Certified temperature: -20°C to +55°C.
- Volume control as standard.
- Up to 103 dB(A).
- 26 different sound outputs, user selectable by internal switches.
- Encapsulated electronics.
- Second tone selectable using third wire.

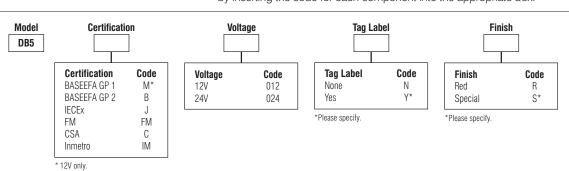




Gertillication	on and Specification
Certification:	Certified to IEC60079-0, IEC60079-11, IEC60079-26. Certified to EN60079-0, EN60079-11, EN60079-26. ATEX Cert. No. BAS00ATEX1259X. Ex II 1 G Ex ia IIC T4 Ga. System Cert. No. (BAS no.) Ex 01E2024. HSE(M) to EN50014, EN50020 and EN50303. Exia 1 Cert. No. MECS01ATEX4260 (unit) and 94Y7095 (system). IECEX BAS 08.0043x Exia IIC T4 Ga. FM Approved to Class 1, Div 1 groups A, B, C and D. J.I. 3008604. Refer to FM Data sheet at rear of catalogue for complete information. CSA to C22.2 Nos. 0, 0.4, 0.5, 25, 30, 205. Class 1 groups A, B, C and D. Cert. No. 79122. Brazilian (Inmetro) certified Ex ia IIC T4 Ga. American Bureau of Shipping Type Approval.
Material:	A.B.S. (Acrylonitrile Butadiene Styrene).
Finish:	Available in Red as standard.
Sound Output:	100± 3dB(A) for 12V and 24V versions. Typical max value only – variable with tone. Tones comply with BS 5839 Part 1.
Current Consumption:	24V model – 14 mA max. nominal. 12V model – 12 mA max. nominal.
Certified Temp:	$-20^{\circ}\text{C to } +55^{\circ}\text{C}.$
Weight:	0.3kg.
Entries:	2 x M20 side entries.
Terminals:	6 off suitable to accept up to 2.5mm ² cable, for looping.



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.



Crouse-Hinds

Intrinsically Safe (Ex ia), Weatherproof



Introduction

This range of ruggedised, intrinsically safe and weatherproof sounders, intended for use in potentially explosive atmospheres, 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 unit is available in 12V and 24V versions and for gas groups IIB or IIC.

A lower cost, uncertified version is available for use in non-explosive atmospheres.

Features

- Zones 0, 1, 2 and safe area use.
- Ex ia IIB/IIC T4.
- ATEX approved Ex II 1G.
- Weatherproof uncertified version.
- BASEEFA certified.
- CUTR certified.
- IP66 & IP67.
- Certified temperature: -55°C to +70°C.
- Corrosion resistant red painted GRP.
- Up to 110 dB(A) output.
- 27 tones, user selectable.
- Tones comply with UKOOA/PFEER guidelines.
- Any two tones may be switched by the external voltage supply.
- Retained stainless steel cover screws.





Cortinoati	on and opcomoducin
ATEX EEx ia:	Cert. no. BAS00ATEX1260X. (Apparatus)
	Cert. no. 96D2362. (System)
	Certified to: EN50014, EN50020, EN50039.
	Ex II 1G, EEx ia IIC T4.
CUTR EEx ia:	Ex II 1G, EEx ia IIB T5. OFFx ia IIC T4
CUIN EEX IA:	OFFX IA IIC 14.
	Russian Fire Approved.
Material:	
Material:	UV stable glass reinforced polyester. Retained stainless steel cover screws.
Finish:	Painted red as standard or to customer specification.
Voltage:	12V or 24V via suitable barrier.
Current Consumption:	24V models 34mA – 68mA.
	12V models 25mA – 55mA.
Sound Output:	107 ± 3dB(A) at 1 metre for 12V and 24V IIB versions.
	103 ± 3 dB(A) at 1 metre for 12V and 24V IIC versions.
	Typical value only – variable with tone.
Tone Selection:	Switchable between any two of the 27 tones by reversing the
	polarity of the supply.
Certified Temp:	-55° C to $+70^{\circ}$ C.
Weight:	1.0 kg.
Ingress Protection:	IP66 & IP67.
Entries:	Up to 3 x M20 via knockouts.
Terminals:	8 x 2.5mm ² .
Labels:	Duty and tag labels available.

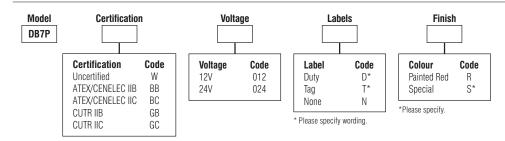
INSTALLATION DRAWING NON-HAZARDOUS **HAZARDOUS AREA** AREA NON-HAZARDOUS AREA APPARATUS UNSPECIFIED EXCEPT THAT BEACON TYPE DB7 IT MUST NOT BE SUPPLIED EExia IIC / IIB T4 FROM NOR CONTAIN UNDER BASOOATEX1260 NORMAL OR ABNORMAL CONDITIONS, A SOURCE OF Tamb = -55° C to $+70^{\circ}$ C POTENTIAL WITH RESPECT TO EARTH IN EXCESS ONE SHUNT ZENDER OF 250 VOLTS R.M.S. OR DIODE SAFETY 250 VOLTS D.C. BARRIFR

REFER TO TECHNICAL MANUAL FOR SUITABLE BARRIERS

NOTE: REFER TO UNIT INSTRUCTION SHEET FOR FULL INSTALLATION DRAWING

120±3 20±2 50±3 40±1 FIXING HOLES Ø 6.5 ENTRY C ENTRY B ALL DIMENSIONS IN MILLIMETRES

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.



Harsh Industrial & Marine Environments



Introduction

This range of sounders have been specially designed for use in demanding industrial and marine environments where a robust construction and highingress 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 sounders suitable for use in potentially explosive atmospheres.

For more information please contact MEDC.

Features

- IP66 & IP67.
- Operating temperature: -55°C to +70°C.
- Corrosion resistant red painted GRP.
- Up to 110 dB(A) output.
- 27 tones, user selectable.
- Tones comply with UKOOA/PFEER guidelines.
- Any two tones may be switched by the external voltage supply (d.c. version).
- Retained stainless steel cover screws.
- Available compliant to AFNOR NF S 32 001.

IP66/67 Weatherproof

Corrosion Free All GRP



	l l		
Certification:	UV stable glass reinforced polyester. Retained stainless steel cover screws.		
Finish: Voltage:	Painted red as standard or to customer specification. d.c. 12V, 24V. a.c. 115/230V.		
Current Consumption:	24V operation 55mA - 100mA. 12V operation 55mA - 90mA.	115V operation 8.5mA - 14mA. 230V operation 4.5mA - 7mA.	
Operating Temp:	-55°C to +70°C.		
Weight:	1.2kg approx. Dependent on model.		
Ingress Protection:	IP66 & IP67.		
Entries:	Up to 3 x M20 via knockouts.		
Terminals:	6 x 2.5mm ² .		
Output:	107 ± 3dB(A) at 1 metre. Typical value only – variable with tone.		
Labels:	Duty and tag labels optional for detail	ls.	

Volume Control

*Nominal Output dB(A)	Input Current mA
92	60
100	70
104	80
109	90

^{*}Output measured with 24V input voltage. Tone set to 2850Hz continuous.

Tone Selection:

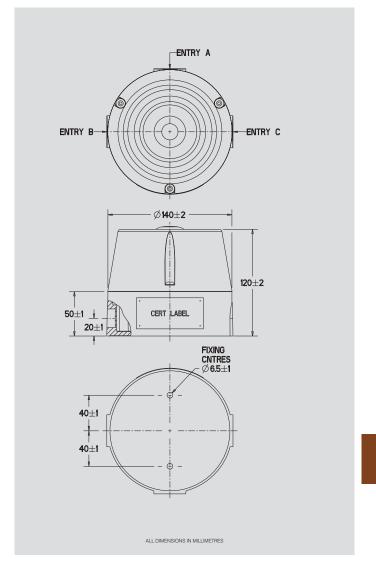
Single Stage DB12: DB12P (Two stage unit): 27 user selectable tones available.

Switchable between any two tones by either:

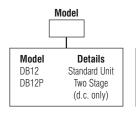
- (i) Reversing the polarity of the supply, or
- By a 3 wire common +ve system, switching between the two -ve lines.

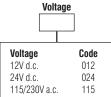
Note: Two stage unit available in d.c. versions only.

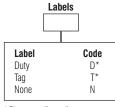
AFNOR NF S 32 001 compliant version available – contact sales office.



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 companyation the conceptible have by inserting the code for each component into the appropriate box.











Please specify.

Crouse-Hinds

Harsh Industrial & Marine Environments



Introduction

This range of sounders have been specially designed for use in demanding industrial and marine 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 sounders 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 grey painted GRP.
- Up to 117dB(A) output.
- 27 user selectable tones.
- Tones may be programmed to customer specification.
- Stainless steel ratcheted mounting bracket.
- Earth continuity available.
- Paint finish to customer requirement.
- Available compliant to AFNOR NF S 32 001.

IP66/67 Weatherproof

Corrosion Free All GRP

Certification:	Body & horn in UV stable, glass reinforced polyester.
	Swivel bracket in stainless steel.
	Cover screws in stainless steel.
Finish:	Painted to customer specification.
Voltage:	Up to 48V d.c. Up to 254V a.c.
Operating Temp:	-55°C to $+70$ °C.
Weight:	2.6kg approx. Dependent on model.
Ingress Protection:	IP66 & IP67.
Entries:	2 x M20 ISO.
Terminals:	4 x 2.5mm ² (a.c.), 6 x 2.5mm ² (d.c.).
Output:	DB15 117dB(A) maximum.
Mounting:	Stainless steel bracket with ratchet facility.
Earth Continuity:	Available.
Labels:	Duty and tag labels optional.

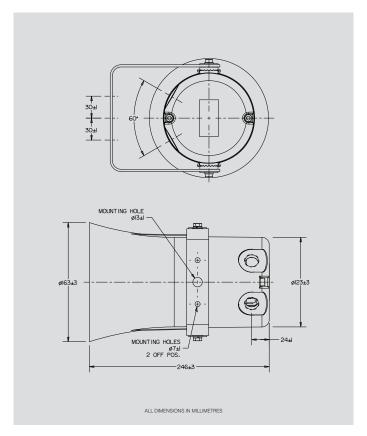
Volume Control:

*Nominal Output dB(A)	Input Current mA
100	150
105	250
108	350
110	450
112	550

^{*}Output measured with 24V input voltage. Tone set to 970Hz continuous.

Current Consumption:

V	I	
12V d.c.	900mA	
24V d.c.	600mA	
48V d.c.	280mA	
110V a.c	150mA	
120V a.c.	175mA	
220V a.c.	93mA	
240V a.c.	86mA	
254V a.c.	80mA	



Tone Selection:

DB15: (Single): 27 user selectable tones available.

Additional 5 tones may be programmed.

DB15P (Two stage unit): Switchable between any two of the 27 tones by either:

(i) Reversing the polarity of the supply, or

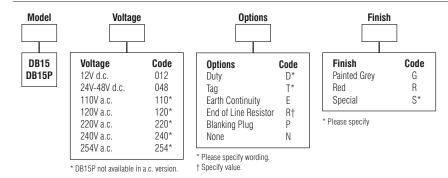
(ii) by a 3 wire common + ve system, switching between

the two -ve lines.

Note: Two stage unit available in d.c. versions (DB15P) only.

AFNOR NF S 32 001 compliant version available - contact sales office for details.

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, Weatherproof



Introduction

This explosion-proof bell is available in two voltages.

The bell is manufactured from cast iron, finished in epoxy paint.

Colour to customer's specification.

Features

- Zone 1 and Zone 2 use.
- Exd IIB T5.
- ATEX approved Ex II 2G.
- BASEEFA certified.
- IECEx certified, Gb.
- Brazilian (Inmetro) certified.
- IP65
- Certified temperature: -20°C to +55°C.
- 2 cable entries.
- Captive cover screws.



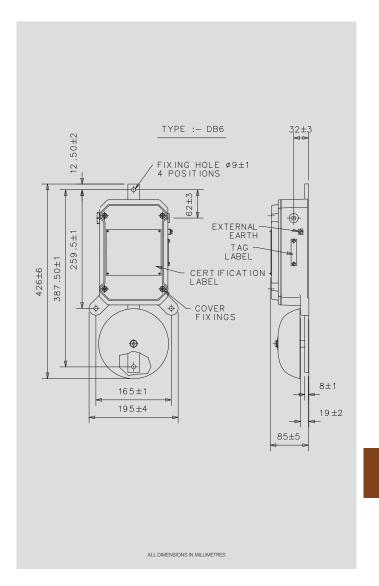


Certification:	Certified to IEC60079-0, IEC60079-1. Certified to EN60079-0, EN60079-1. ATEX Cert. No. Baseefa03ATEX0257, EX II 2 G EX d IIB T5 Gb. IECEX Cert. No. IECEX BAS 09.0040 Exd IIB T5 Gb. Brazilian (Inmetro) Certified: EX d IIB T5 Gb.
Material:	Cast Iron.
Finish:	Grey epoxy paint as standard or to customer specification.
Voltage:	24V d.c. or 200/254V a.c. 50/60 Hz.
Contact Spring:	Phosphor Bronze.
Contacts:	Silver.
Coil:	Bakelite former.
Magnet:	Laminated iron.
Armature:	Pivoted to operate shaft and hammer at back of gong through flameproof bearing.
Certified Temp:	-20°C to +55°C.
Weight:	11 kg.
Ingress Protection:	IP65.
Earthing:	M6 Internal and external earthing points provided.
Entries:	2 x M20 ISO with one Exd blank fitted.
Labels:	Tag label optional.
Termination:	Terminals suitable for 4 x 4mm ² cables.

Ratings:

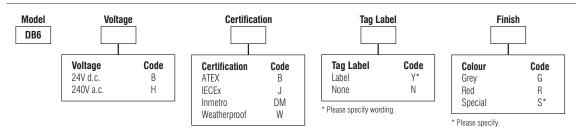
Voltage	VA	Amps	dB(A) rating
24V d.c.	1.92	0.08	98 ± 3
200/254 a.c.	6/12.7	0.03/0.05	106 ± 3

 $24\mbox{V}$ d.c. unit polarised and suppressed for use on monitored fire alarm system sounder circuits.



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-Signalling bell dGW 21 / dRGW 21 - Up to 105dB(A)

Crouse-Hinds

Ex de



Introduction

The signalling bell dGW21 was designed to warn, call and signal in group II explosive atmospheres and rough environmental conditions in hazardous areas

The signalling bell produces a sound volume of approx. 105dB(A) at 1 meter distance.

The frequency of the sound of the bell is approx 1kHz, meaning the signal can be clearly heard against lower frequency background noise. The bell can also be activated with the presence of a telephone ringing signal in the dRGW 21 version.

The protection of this product is a mixture of Exd "flameproof" for the driver system and Exe "increased safety" for the termination chamber. The dRGW 21 offers initiation by a relay from a telephone ringing voltage. The flameproof chamber contains the electromagnetic driver system and the enclosure is made from GRP (glass-fibre reinforced polyester), guaranteeing protection against corrosion. As the dGW 21 is safety class II, so there is no equipotential bonding necessary.

All D.C. versions are also equipped with an electronic contact breaker, increasing product service life.

Features

- ATEX II 2 G Ex de IIC T6
- Housing made of glass-fibre reinforced polyester (GRP)
- Volume: approx: 105 dB(A)
- Protection: IP 66
- Safety class II
 (no equipotential bonding necessary)
- Version dRGW 21 with integrated telephone call relay
- Integrated terminal box realized in Ex protection mode increased safety

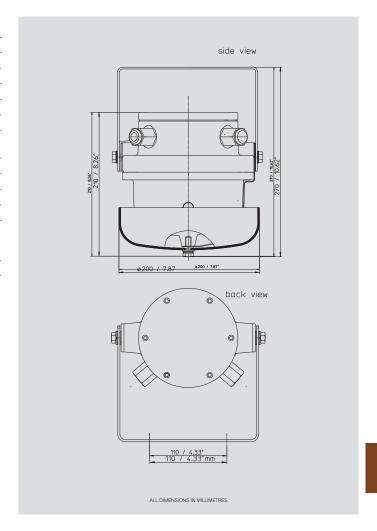
Acoustic signalling device in a chemical plant

The frequency of the sound of the bell is approx 1kHz, meaning the signal can be clearly heard against lower frequency background noise.





0 0 1 1111 0 0 111 0	ii aiia opoomoation	
Explosion Protection:	II 2 G Ex de IIC T6.	
Protection:	IP 66.	
Safety class:	II (no equipotential bonding necessary).	
Housing:	GRP glass-fibre reinforced polyester.	
Colour:	Black or red.	
Cable gland:	1x M20 x 1.5 cable gland and 1 blind plug M20 x 1.5.	
Connection terminals:	1.5 mm ² fine wire. 2.5 mm ² single wire.	
Operating conditions:	Indoors and outdoors.	
Operating position:	Bell dome to the front (tappet downwards).	
Volume:	Approx. 105 dB(A) at 1m distance.	
Operating mode:	Continuous.	
Temperature range:		
Operation:	$-20^{\circ}\text{C to} + 40^{\circ}\text{C}$.	
Storage:	-30° C to $+80^{\circ}$ C.	
Weight:	Approx. 5.5 kg.	



Ordering Information

Туре	Name	Voltage Ue	Oper. Volt range Ue	Current Cons	Article no.
Housing black					
dGW 21	Ex-Signalling Bell	12 VDC	+10/-15%	0.60 A	F910 122 10*
dGW 21	Ex-Signalling Bell	24 VDC	+10/-15%	0.35 A	F910 242 10*
dGW 21	Ex-Signalling Bell	110 VAC	+10/-15%	0.14 A	F911 101 10*
dGW 21	Ex-Signalling Bell	110 VDC	+10/-15%	0.13 A	F911 102 10*
dGW 21	Ex-Signalling Bell	230 VAC	+10/-15%	0.06 A	F912 301 10*
dGW 21	Ex-Signalling Bell	240 VAC 60 Hz	+10/-15%	0.07 A	F912 401 1060*
dRGW 21	Ex-Signalling Bell with telephone relay	230 VAC	+10/-15%	0.06 A	F912 301 1000*
Housing red					
dGW 21	Ex-Signalling Bell	12 VDC	+10/-15%	0.60 A	F910 122 1013*
dGW 21	Ex-Signalling Bell	24 VDC	+10/-15%	0.35 A	F910 242 1013*
dGW 21	Ex-Signalling Bell	110 VAC	+10/-15%	0.14 A	F911 101 1013*
dGW 21	Ex-Signalling Bell	110 VDC	+10/-15%	0.13 A	F911 102 1013*
dGW 21	Ex-Signalling Bell	230 VAC	+10/-15%	0.06 A	F912 301 1013*

*All article-numbers are ATEX-variants

