



## SOUNDERS

DB5

DB7



# DB-5 Intrinsically Safe Sounder

100dBA with 26 user-selectable tones

**ATEX certified Ex II 1G  
EEx ia IIC T4**

**Greater than 100dBA output**

**26 user selectable sounds**

**Two distinctive signals can be  
switched remotely**

**Easy to install in all hazardous  
areas**

**Low power consumption offers  
application flexibility**

**IP65 weatherproof rating**

The DB-5 intrinsically safe multitone Sounder is ideally suited for use in areas of high ambient noise. Additionally, for extreme noise levels, they can be linked with the DA135 Intrinsically Safe Beacons to combine audible and visual warnings. They are designed with a re-entrant configuration to combine compactness with maximum efficiency.

One of 26 tones can be selected using a 5-way DIL switch and by switching the incoming negative supply to a third terminal a second tone is sounded. The sounders have suitable low frequencies to conform to BS 5839 Part 1, making them ideal for fire alarm systems and other annunciator applications.

The IP65 enclosure enables the DB-5 Sounder to cope with the harsh environmental conditions found offshore as well as those of the onshore oil, gas and chemical industries.



# Specification

## Sound

26 user selectable tones, see table below for tone types and related volumes. The volume can be adjusted via a single turn potentiometer by 15dB. To obtain the second tone, the negative supply is switched to a third terminal marked "2nd sound".

## Certification

ATEX certified to EN50014:1997, EN50020:1994 and EN50284:1999 Group II, Category 1G, EEx ia T4 (Ta -20°C to +55°C)

## Location

Zones 0, 1 or 2. Gas Group, IIC, IIB or IIA, Temp Class up to T4

## Certificate No.

BAS00ATEX1259

## Supply

12 or 24VDC ±20%, depending on model, current 14mA @ 24V, 12mA @ 12V

## Safety Parameters

### 24V Version

$U_i = 28V$   
 $I_i = 28mA$   
 $P_i = 0.81W$   
 $C_i = 0$   
 $L_i = 20mH + 1000\Omega$

### 12V Version

$U_i = 15.7V$   
 $I_i = 37mA$   
 $P_i = 0.56W$   
 $C_i = 0$   
 $L_i = 20mH + 325\Omega$   
 $(L_i/R_i = 61.5\mu H/\Omega)$

Please refer to to EC Type Examination Certificate and related System Certificate for full details on suitable interface devices.

## Recommended Interfaces

Zener Barriers: 24V version MTL7728+, 12V version MTL7715+  
 IS Isolators: MTL5025

## Environment

Operating temperature: 0 to 55°C  
 Storage temperature: -20 to 80°C  
 Humidity: 0-95% RH, non condensing

## Protection

IP65

## Construction

ABS enclosure with encapsulated electronic module. Colour – red

## Connections

Six terminals suitable for cable up to 2.5mm<sup>2</sup>

## Installation Details

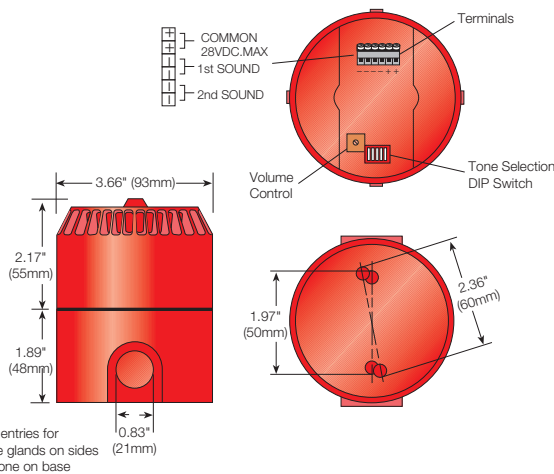
Having a deep base and two terminals per input makes these units convenient for looping to other circuits or for siting 'end-of-line' resistors. The base has three knock-outs, two on the side and one on the base, to accommodate PG13.5/20mm conduit or cable glands. The units are polarised and a chain may be fitted with an 'end-of-line' resistor for reverse polarity testing and to permit line monitoring.

## EMC Compliance

Immunity to EN61000-6-2:2001  
 Emissions to EN61000-6-4:2001

## Weight

300g



## Tone and Sound Levels with IS Interface

No	Tones	2nd Tone	Switch Code	Sound Type	Level dBA
1	Alternating 800/970Hz at 0.25s	14	11111		88
2	Sweeping 800-970Hz at 7Hz	14	11110	Fast Sweep (LF)	91
3	Sweeping 800-970Hz at 1Hz	14	11101	Med Sweep (LF)	94
4	Continuous at 2850Hz	14	11100		102
5	Sweeping 2400-2850Hz at 7Hz	4	11011	Fast Sweep	100
6	Sweeping 2400-2850Hz at 1Hz	4	11010		103
7	Slow Whoop	14	11001	Slow Sweep	94
8	Sweeping 1200-500Hz at 1Hz	14	11000		91
9	Alternating 2400/2850Hz at 2Hz	4	10111		100
10	Intermittent 970Hz at 1Hz	14	10110	Back-up Alarm (LF)	83
11	Alternating 800/970Hz at 7/8Hz	14	10101		87
12	Intermittent 2850Hz at 1Hz	4	10100	Back-up Alarm (HF)	100
13	970Hz at 0.25s on, 1s off	14	10011		83
14	Continuous 970Hz	4	10010		85
15	554Hz for 100ms, 440Hz for 400ms	14	10001	French fire	91
16	Intermittent 660Hz: 150ms on, 150ms off	14	10000	Swedish fire	86
17	Intermittent 660Hz: 1.8s on, 1.8s off	14	01111	Swedish fire	87
18	Intermittent 660Hz: 6.5s on, 13s off	14	01110	Swedish fire	88
19	Continuous 660Hz	14	01101	Swedish fire	87
20	Alternating 554/440Hz at 1Hz	14	01100	Swedish fire	93
21	Intermittent 660Hz at 7/8Hz	14	01011	Swedish fire	88
22	Intermittent 2850Hz: 150ms on, 100ms off	14	01010	Pelican Crossing	100
23	Sweeping 800-970Hz at 50Hz	14	01001	Low buzz	92
24	Sweeping 2400-2850Hz at 50Hz	14	01000	High buzz	99
25	3 970Hz pulses, 0.5s on/0.5s off, 1.5s off	14	00111		83
26	3 2850Hz pulses, 0.5s on/0.5s off, 1.5s off	14	00110		102

## Approvals

Country & Authority	Standard	Certificate number	Approved for
Europe Baseefa	EN50014, EN50020 and EN50284	BAS00ATEX1259	EX II 1G EEx ia IIC T4
Europe MECS Mining	EN50014, EN50020 and EN50303	MECSO1ATEX4260	Ex I 1M EEx ia I
Canada CSA	C22.2 Nos 0, 0.4 0.5, 25, 30, 205	79122	Class 1 Groups A, B, C and D
USA FM		J. I. 3008604	Class1 Div1 FM Groups A, B

Due to our policy of continuous product development, we reserve the right to amend specifications without notice.



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## DB-7 Intrinsically Safe Sounder

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Up to 110dBA with 26 user-selectable tones

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**ATEX certified to Ex II 1G  
EEx ia IIC T4**

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**Greater than 107dBA output**

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**26 user-selectable tones**

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**IP66 weatherproof rating**

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**Second tone switched by  
reversing supply polarity**

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**Tones comply to UKOOA/PFEER  
guidelines**

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**Corrosion-resistant red glass-  
reinforced polyester**

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The DB-7 is a ruggedised, intrinsically safe multitone Sounder which gives up to 110dBA output. This level of output is suitable for industrial environments with the highest of ambient noise levels. Additionally, they can be linked with the DA135 Intrinsically Safe Beacons to combine audible and visual warnings. They are designed with a re-entrant configuration to combine compactness with maximum efficiency.

Units are available for gas groups IIB and IIC and both feature selectable dual tones. Both of the tones are user selectable using 5 way DIL switches, the second tone being activated by reversing the polarity of the supply.

The IP66 enclosure enables the DB-7 Sounder to cope with the harsh environmental conditions found offshore as well as those of the onshore oil, gas and chemical industries.



# Technical Specification

## Sound

26 user selectable tones, see table below for tone types and related volumes. Two different tones can be selected using the separate DIL switches, reversing the polarity of the supply will select the second tone.

## Certification

ATEX certified to EN50014:1997, EN50020:1994 and EN50284:1999 Group II, Category 1G, EEx ia IIC or IIB T4 (Ta -55°C to +70°C)

## Location

Zones 0, 1 or 2. Gas Group, IIC (or IIB depending on model) or IIA, Temp Class up to T4

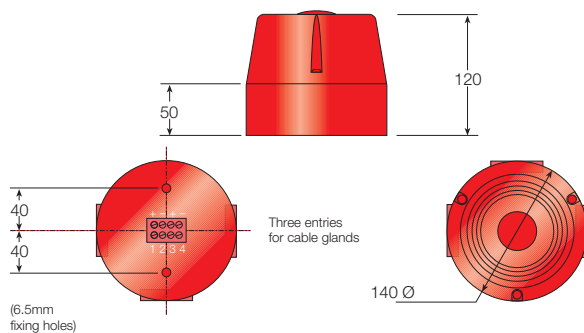
## Certificate No.

BAS00ATEX1260

## Safety Parameters

24V Version: 12V Version:  
 Ui = 28V Ui = 15.7V  
 Ii = 123mA (IIB vers.) Ii = 123mA (IIB)  
 Ii = 61.3mA (IIC vers.) Ii = 61.3mA (IIC)  
 Pi = 0.653W Pi = 0.563W  
 Ci = 0 Ci = 0  
 Li = 10mH + 171.5Ω Li = 10mH + 148.5Ω  
 (IIC)/46.1 Ω(IIB) (IIC)/25.5 Ω(IIB)

Please refer to EC Type Examination Certificate and related System Certificate for full details on suitable interface devices.



## Supply

12 or 24VDC ±20%, depending on model, current 34-68mA @ 24V, 25-55mA @ 12V

## Recommended Interfaces

Zener Barriers: MTL7715+

## Recommended Cable

0.5 to 2.5mm<sup>2</sup> with earthed screen and insulating sheath. Cable parameters are determined by the output parameters of the interface selected

## Environment

Operating temperature: -55 to 70°C  
 Storage temperature: -55 to 80°C  
 Humidity: 0-95% RH, non-condensing

## Protection

IP66

## Construction

UV stable glass reinforced polyester with stainless steel retaining screws.  
 Colour – red

## Connections

Eight terminals suitable for cable up to 2.5mm<sup>2</sup>

## Installation Details

Having a deep base and extra terminals makes these units convenient for looping to other circuits or for siting “end-of-line” resistors. The base has three knock-outs to accommodate PG13.5/20mm conduit or cable glands. The units are polarised and a chain may be fitted with an “end-of-line” resistor for reverse polarity testing and to permit line monitoring.

## EMC Compliance

Immunity to EN61000-6-2:2001  
 Emissions to EN61000-6-4:2001

## Weight

1.0kg

## Tone and Sound Levels with IS Interface

No	Tones	Switch Code	Sound Type	Level dBA
1	Alternating 800/970Hz at 0.25s	11111		99
2	Sweeping 800-970Hz at 7Hz	11110		97
3	Sweeping 800-970Hz at 1Hz	11101		98
4	Continuous at 2850Hz	11100	HF 2nd tone	107
5	Sweeping 2400-2850Hz at 7Hz	11011		107
6	Sweeping 2400-2850Hz at 1Hz	11010		107
7	Slow Whoop	11001		98
8	Sweeping 1200-500Hz at 1Hz	11000		98
9	Alternating 2400/2850Hz at 2Hz	10111		107
10	Intermittent 970Hz at 1Hz	10110		98
11	Alternating 800/970Hz at 7/8Hz	10101		98
12	Intermittent 2850Hz at 1Hz	10100		107
13	970Hz at 0.25s on, 1s off	10011		98
14	Continuous 970Hz	10010	LF 2nd tone	98
15	554Hz for 100ms, 440Hz for 400ms	10001	French fire	93
16	Intermittent 660Hz: 150ms on, 150ms off	10000	Swedish fire	89
17	Intermittent 660Hz: 1.8s on, 1.8s off	01111	Swedish fire	89
18	Intermittent 660Hz: 6.5s on, 13s off	01110	Swedish fire	89
19	Continuous 660Hz	01101	Swedish fire	89
20	Alternating 554/440Hz at 1Hz	01100	Swedish fire	92
21	Intermittent 660Hz at 7/8Hz	01011	Swedish fire	89
22	Intermittent 2850Hz: 150ms on, 100ms off	01010	Pelican Crossing	107
23	Sweeping 800-970Hz at 50Hz	01001	Low buzz	95
24	Sweeping 2400-2850Hz at 50Hz	01000	High buzz	104
25	3 970Hz pulses, 0.5s on/0.5s off, 1.5s off	00111		98
26	3 2850Hz pulses, 0.5s on/0.5s off, 1.5s off	00110		107

## Approvals

Country & Authority	Standard	Certificate	Approved for
Europe Baseefa	EN50014, EN50020 and EN50284	BAS00ATEX1260	EX II 1G EEx ia IIC and IIB T4
Russia Gost	'R' Certification	A-0758	OEx ia IIC and IIB T4

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