

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 + 1000Ω

12V Version

U_i = 15.7V
I_i = 37mA
P_i = 0.56W
C_i = 0
L_i = 20mH + 325Ω
(L_i/R_i = 61.5μH/Ω)

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 2.5mm²

Installation Details

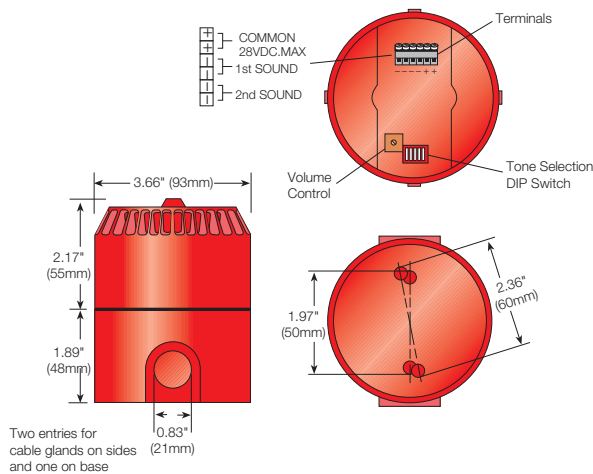
Having a deep base and two terminals per input makes these units convenient for looping to other circuits or for siting 'end-of-line' resistors. The base has three knock-outs, two on the side and one on the base, to accommodate PG13.5/20mm conduit or cable glands. The units are polarised and a chain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



RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@rtkinstruments.com

A member of the MTL Instruments Group plc