The BR385 is a third generation intrinsically safe field mounting sounder which supersedes the BA385-IIC and BA385-IIB. The new sounder, which produces a loud audible warning signal in a hazardous area has forty nine different first stage alarm sounds selectable by internal switches. Each first stage tone can be changed to a second or a third stage alarm sound by an external contact which may be in the safe or hazardous area. Selectable outputs include DIN, NFS, PFEER, Australian and Singaporean defined warning, alert and evacuation tones.

Main application of the BR385 sounder is the generation of unique audible warnings within a hazardous area. The sounder may be powered from a wide range of Zener barriers or galvanic isolators and may be controlled by any contact or dc supply in the safe area. The BR385 may also be switched in the hazardous area by an intrinsically safe, simple apparatus switch output, such as a BEKA Intrinsically safe loop powered indicator or a serial text display.

The selected first stage tone can be changed to a different second or third stage tone by inter-connecting sounder terminals using a switch contact, which may be in the safe or hazardous area. This enables one sounder to announce up to three different conditions, for example, alarms warning, alarm and automatic shut-down.

A crystal controlled oscillator accurately defines the frequency and repetition rate of each alarm signal. This ensures that when multiple BR385 sounders are activated at the same time the output tones from all the sounders remain synchronised.

ATEX, IECEx and FM intrinsic safety certification permits installation in all gas hazardous zones and all gas groups. Input safety parameters allow use with a wide range of Zener barriers and galvanic isolators, and zero output parameters simplify intrinsic safety system design.

A BA386 LED flashing beacon may be powered from the same Zener barrier or galvanic isolator as the sounder. This significantly reduces installation costs of a combined sounder and beacon system and includes an alarm accept function, while only marginally reducing the sound output, but may only be used for ATEX systems. See the BA386 datasheet for full information.

The robust ABS enclosure which is flame-retardant provides IP66 protection and is suitable for external mounting. Cable entry is via a single un tapped hole which will accept a 20mm gland or conduit fitting. A 20mm knock-out is also provided in the rear of the enclosure.

The BR385 contains overvoltage protection to prevent damage during commissioning and to allow the sounder to be tested in a safe area without the need for a Zener barrier or galvanic isolator.
SPECIFICATION

Power supply
Voltage 16V min via 28V 93mA Zener barrier 8 to 28V between – and + terminals. Not damaged by direct connection to the supply without a Zener barrier or galvanic isolator in circuit.
Current 25mA typical when powered from 24Vdc via a 28V, 93mA Zener barrier.

Second and third stage alarms
Second stage Connect terminal S2 to ‘–’ terminal*
Third stage Connect terminal S3 to ‘–’ terminal*
* If diode return barrier is used voltage drop must be less than 0.9V.

Output
Sound level at 1m Up to 105dB(A)
Volume control Max 105, Min 96dB

Intrinsic safety
Europe ATEX
Code Group II Category 1G
Ex ia IIC T4 Ga
Code CLI, Div. 1, Gp A, B, C, and D
Standard 3610 Entity
USA FM Location Zone 0, 1 or 2

Location Zone 0, 1 or 2

Installation
The BR385 may be powered from any:

Ta  -40 to 60C
Ex ia IIC T4 Ga
Code Group II Category 1G

Environmental
Operating temp -40 to 60°C
Storage temp -40 to 70°C
Humidity To 95% @ 40°C
Enclosure IP66
EMC In accordance with EU Directive 89/336/EEC

Mechanical
Terminals Screw clamp for 0.5 to 2.5 mm² cable.
Weight 0.75 kg

Accessories
Tag number Thermally printed tag strip

HOW TO ORDER
Model number Please specify
Accessories Please specify if required
Tag number Legend