

IS-mA1 IS-minialarm

The IS-mA1 is a compact, 100dB(A) alarm sounder. Approvals include ATEX, IECEx and GOST-R for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

The IS-mA1 is suitable for all intrinsically safe signalling applications including fire, security and process control.

The IS-mA1M version is also available for Group I mining environments.

Tone table:

| Stage 1 | Frequency Description.                             | Stage 2 | Stage 3 |
|---------|----------------------------------------------------|---------|---------|
| Tone 1  | 340 Hz Continuous                                  | Tone 2  | Tone 5  |
| Tone 2  | 800/1000Hz @ 0.25 sec Alternating                  | Tone 17 | Tone 5  |
| Tone 3  | 500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop              | Tone 2  | Tone 5  |
| Tone 4  | 800/1000Hz @ 1Hz Sweeping                          | Tone 6  | Tone 5  |
| Tone 5  | 2400Hz Continuous                                  | Tone 3  | Tone 20 |
| Tone 6  | 2400/2900Hz @ 7Hz Sweeping                         | Tone 7  | Tone 5  |
| Tone 7  | 2400/2900Hz @ 1Hz Sweeping                         | Tone 10 | Tone 5  |
| Tone 8  | 500/1200/500Hz @ 0.3Hz Sweeping                    | Tone 2  | Tone 5  |
| Tone 9  | 1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.            | Tone 15 | Tone 2  |
| Tone 10 | 2400/2900Hz @ 2Hz Alternating                      | Tone 7  | Tone 5  |
| Tone 11 | 1000Hz @ 1Hz Intermittent                          | Tone 2  | Tone 5  |
| Tone 12 | 800/1000Hz @ 0.875Hz Alternating                   | Tone 4  | Tone 5  |
| Tone 13 | 2400Hz @ 1Hz Intermittent                          | Tone 15 | Tone 5  |
| Tone 14 | 800Hz 0.25sec on, 1 sec off Intermittent           | Tone 4  | Tone 5  |
| Tone 15 | 800Hz Continuous                                   | Tone 2  | Tone 5  |
| Tone 16 | 660Hz 150mS on, 150mS off Intermittent             | Tone 18 | Tone 5  |
| Tone 17 | 544Hz (100mS)/440Hz (400mS) - NF S 32-001          | Tone 2  | Tone 27 |
| Tone 18 | 660Hz 1.8sec on, 1.8sec off Intermittent           | Tone 2  | Tone 5  |
| Tone 19 | 1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265    | Tone 2  | Tone 5  |
| Tone 20 | 660Hz Continuous                                   | Tone 2  | Tone 5  |
| Tone 21 | 554Hz/440Hz @ 1Hz Alternating                      | Tone 2  | Tone 5  |
| Tone 22 | 544Hz @ 0.875 sec. Intermittent                    | Tone 2  | Tone 5  |
| Tone 23 | 800Hz @ 2Hz Intermittent                           | Tone 6  | Tone 5  |
| Tone 24 | 800/1000Hz @ 50Hz Sweeping                         | Tone 29 | Tone 5  |
| Tone 25 | 2400/2900Hz @ 50Hz Sweeping                        | Tone 29 | Tone 5  |
| Tone 26 | Bell                                               | Tone 2  | Tone 15 |
| Tone 27 | 554Hz Continuous                                   | Tone 26 | Tone 5  |
| Tone 28 | 440Hz Continuous                                   | Tone 2  | Tone 5  |
| Tone 29 | 800/1000Hz @ 7Hz Sweeping                          | Tone 7  | Tone 5  |
| Tone 30 | 300Hz Continuous                                   | Tone 2  | Tone 5  |
| Tone 31 | 660/1200Hz @ 1Hz Sweeping                          | Tone 26 | Tone 5  |
| Tone 32 | Two tone chime.                                    | Tone 26 | Tone 15 |
| Tone 33 | 745Hz @ 1Hz Intermittent                           | Tone 2  | Tone 5  |
| Tone 34 | 1000 & 2000Hz @ 0.5 sec Alternating - Singapore    | Tone 38 | Tone 45 |
| Tone 35 | 420Hz @ 0.625 sec Australian Alert                 | Tone 36 | Tone 5  |
| Tone 36 | 500-1200Hz 3.75sec / 0.25sec. Australian Evac.     | Tone 35 | Tone 5  |
| Tone 37 | 1000Hz Continuous - PFEER Toxic Gas                | Tone 9  | Tone 45 |
| Tone 38 | 2000Hz Continuous                                  | Tone 34 | Tone 45 |
| Tone 39 | 800Hz 0.25sec on, 1 sec off Intermittent           | Tone 23 | Tone 17 |
| Tone 40 | 544Hz (100mS)/440Hz (400mS) - NF S 32-001          | Tone 31 | Tone 27 |
| Tone 41 | Motor Siren - slow rise to 1200 Hz                 | Tone 2  | Tone 5  |
| Tone 42 | Motor Siren - slow rise to 800 Hz                  | Tone 2  | Tone 5  |
| Tone 43 | 1200 Hz Continuous                                 | Tone 2  | Tone 5  |
| Tone 44 | Motor Siren - slow rise to 2400 Hz                 | Tone 2  | Tone 5  |
| Tone 45 | 1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm | Tone 38 | Tone 34 |
| Tone 46 | 1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.            | Tone 47 | Tone 37 |
| Tone 47 | 1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm | Tone 46 | Tone 37 |
| Tone 48 | 420Hz @ 0.625 sec Australian Alert                 | Tone 49 | Tone 5  |
| Tone 49 | 500-1200Hz 3.75sec / 0.25sec. Australian Evac.     | Tone 26 | Tone 37 |

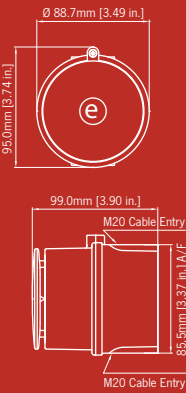
Country specific or custom tone configurations and alarm frequencies are available upon request.

Part codes:

|                                            |
|--------------------------------------------|
| IS-mA1-R                                   |
| ATEX / IECEx / FM                          |
| II 1G Ex ia IIC T4 Ga (-40°C <=Ta<= +60°C) |
| IS Class I, Zone 0, AEx ia IIC T4          |
| IS Class I, Division 1, Groups A, B, C, D  |
| GOST-R                                     |
| 0ExiaIICT4 IP65 -40° to +60°C              |
| ATEX [Group I]                             |
| IS-mA1M-R                                  |
| I M1 Ex ia I Ma (-40°C <=Ta<= +60°C)       |

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed:

|           |          |           |
|-----------|----------|-----------|
| Uo: 28VDC | Io: 93mA | Po: 660mW |
|-----------|----------|-----------|



Specification:

|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| Nominal output:     | 100dB(A) @ 1m +/- 3dB - Tone 2*                                          |
| No. of tones:       | 49 (UK00A/PFEER compliant)                                               |
| No. of stages:      | 3                                                                        |
| Volume control:     | Max. 100dB(A); Min. 90dB(A) - Tone 2                                     |
| Effective range:    | 40m @ 1KHz                                                               |
| Voltage:            | 16-28vdc via Zener barrier or galvanic isolator                          |
| Current:            | 25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier  |
| Ingress protection: | IP65                                                                     |
| Rating:             | Continuous                                                               |
| Housing material:   | UL94V0 & 5VA FR ABS                                                      |
| Housing colour:     | RAL3000 Red                                                              |
| Fixings:            | Stainless Steel                                                          |
| Cable entries:      | 2 x M20 clearance gland knockouts. Custom configurations also available. |
| Terminals:          | 0.5 to 2.5mm²                                                            |
| Operating temp:     | -40° to +60°C                                                            |
| Storage temp:       | -40° to +70°C                                                            |
| Relative humidity:  | 90% at 20°C                                                              |

Features:

- Input overload and reverse current protection
- End of line resistor certified
- Auto synchronised sound output
- Available with custom tone configurations and frequencies.

Approvals:

- ATEX certificate: SIRAO5ATEX2084X, EN 60079-0 : 2006, EN 60079-11 : 2007, EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 06.0045X, IEC 60079-0 : 2007, IEC 60079-11 : 2006, IEC 60079-26 : 2006
- FM approved: Class 3600 1998, Class 3610 1999, Class 3810 2005
- VdS approved to EN54-3 (CPD 89/106/EEC)
- GOST-R certificate: POCC GB.JB05.B03365

