

1-12-010 / Intrinsically safe signals

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.

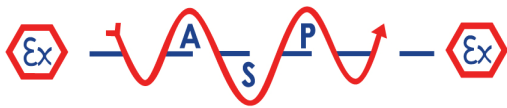
Features

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

Approvals

- ATEX certificate: SIR A 05ATEX2084X,
EN 60079-0 : 2012, EN 60079-11 : 2012,
IEC 60079-26 : 2014
- IECEx certificate: IECEx SIR 06.0045X,
IEC 60079-0 : 2011, IEC 60079-11 : 2011,
IEC 60079-26 : 2014
- FM approved:
Class 3600 1998, Class 3610 2010,
Class 3810 2005
- VdS approved:
EN54-3 (CPD 89/106/EEC)
- GOST-R certificate:
POCC GB.JB05.B03365



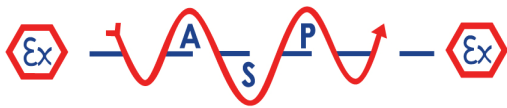


Specification

Nominal output:	100dB(A) @ 1m +/- 3dB - Tone 2 * [91dB(A) @ 10ft/3m]
No. of tones:	49 (UKOOA/PFEER compliant)
No. of stages:	3
Volume control:	Max. 100dB(A); Min. 90dB(A) - Tone 2
Effective range:	40m/131ft @ 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 2.5mm ²
Operating temp:	-40° to +60°C [-40 to +140°F]
Storage temp:	-40° to +70°C [-40 to +158°F]
Relative humidity:	90% at 20°C [68°F]

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	
0ExiaIIC T4 IP65 -40° to +60°C	
IS-mA1M-R	
ATEX [Group I	
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



Tone table

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