

IS-Mini Alarms



IS-mB1, IS-mA1, IS-mC1

- economic visual and audible alarm systems
- certified for Ex zones 0,1 and 2 applications!
- compact design with a mere 88mm in cross-section
- installation; may be powered from any certified Zener barrier or galvanic isolator
- 49 alarm tone configurations in 100 dB(A); very bright LED's in red, green, blue and yellow/amber for all applications
- very low power consumption; suitable for fire alarm systems and direct use
- auto synchronised sounder for clear perception
- 3 different tones direct selectable

Compatible Zener barriers see pages 30 and 31

IP 65	+60 °C	+70 °C	90%
Protective system	Operating temperature	Storage temperature	Relative humidity
	-40 °C	-40 °C	

Explosion protection:

Explosion protection	⊕ II 1G EEx ia IIC T4
Type of protection	EN50020 "ia" intrinsically safe
Certificate	SIRA 05 ATEX2084X
Category (areas of application)	1G (zone 0) 2G (zone 1) 3G (zone 2)
Temperature class	T4 at -40 °C to +60 °C ambient temperature

Optical / acoustic data:

	IS-mA1	IS-mB1	IS-mC1
Sound level (adjustable)	100 dB(A)		100 dB(A)
Flashing frequency		2 Hz or 1 Hz adjustable	
Lens colours		clear with red, yellow/amber, blue or green LED's	

Mechanical data:

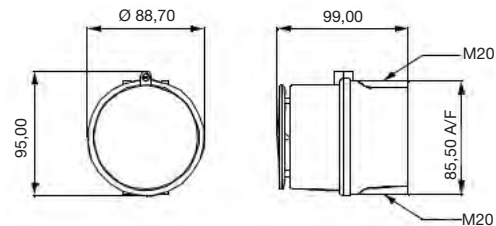
	IS-mA1	IS-mB1	IS-mC1
Protective system	IP 65		
Cable gland	2 x M20		
Weight	230 g	210 g	280 g
Globe material	polycarbonate (PC)		
Housing material	ABS, flame retardent UL94V0 & 5VA		
Colour	RAL 3000 (red)		
Operating temperature	-40°C (-40 °F) ... +60°C (+140 °F)		
Storage temperature	-40°C (-40 °F) ... +70°C (+158 °F)		
Relative humidity	90%		

Electrical data:

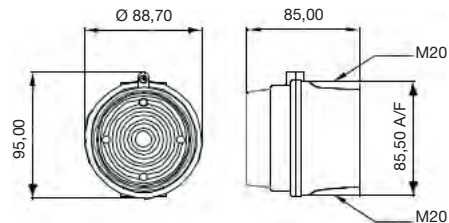
	IS-mA1	IS-mB1	IS-mC1
Rated voltage	24V DC		
Voltage range	16V - 28V		
Rated current	25 mA*	25 mA*	48 mA*
Power consumption	0,6 W	0,6 W	1,15 W

Mechanical data and dimensions:

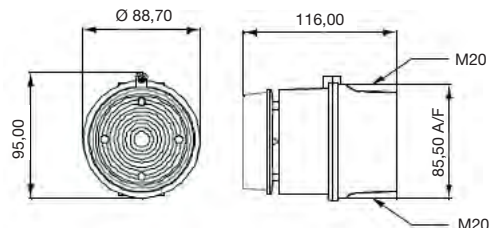
IS-mA1: Alarm Sounder



IS-mB1: LED Beacon



IS-mC1: Alarm Sounder & LED Beacon



* typically with connection at 24V DC by 28V/300Ω Zener barrier.
The device may be powered from any Zener barrier whose output parameters do not exceed: max. 28 V DC, 93 mA DC, 0,66 W or from any galvanic isolator specified by the system certificates (see pages 30 and 31)



IS-mA1 and IS-mC1 tone frequency table

Stage 1	Beschreibung		Stage 2	Stage 3
Tone 1	Continuous tone 340 Hz		Tone 2	Tone 5
Tone 2	Alternating tone 800 Hz / 1000 Hz, change every 0,25 s		Tone 17	Tone 5
Tone 3	Slow whoop 500 Hz / 1200 Hz, duration 3 s, 0,5 s gap		Tone 2	Tone 5
Tone 4	Sweeping 800 Hz / 1000 Hz, at 1 Hz		Tone 6	Tone 5
Tone 5	Continuous tone 2400 Hz		Tone 3	Tone 20
Tone 6	Sweeping 2400 Hz / 2900 Hz, at 7 Hz		Tone 7	Tone 5
Tone 7	Sweeping 2400 Hz / 2900 Hz, at 1 Hz		Tone 10	Tone 5
Tone 8	Siren 500 Hz / 1200 Hz / 500 Hz, duration 3 s		Tone 2	Tone 5
Tone 9	Sawtooth 1200 Hz / 500 Hz within 1 s		Tone 15	Tone 2
Tone 10	Alternating tone 2400 Hz / 2900 Hz, at 2 Hz		Tone 7	Tone 5
Tone 11	Intermittent 1000 Hz, at 1 Hz		Tone 2	Tone 5
Tone 12	Alternating tone 800 Hz / 1000 Hz, at 0,875 Hz		Tone 4	Tone 5
Tone 13	Intermittent 2400 Hz, at 1 Hz		Tone 15	Tone 5
Tone 14	Intermittent 800 Hz, 0,5 s on, 1 s off		Tone 4	Tone 5
Tone 15	Continuous tone 800 Hz		Tone 2	Tone 5
Tone 16	Intermittent 660 Hz, 150 ms on, 150 ms off		Tone 18	Tone 5
Tone 17	Alternating tone 544 Hz for 100 ms, 440Hz for 400 ms - NF S 32-001		Tone 2	Tone 27
Tone 18	Intermittent 660 Hz, 1,8 s on, 1,8 s off		Tone 2	Tone 5
Tone 19	Sweeping 1400 Hz - 1600 Hz sweep up 1s, sweep down 0,5 s (NF C 48-265)		Tone 2	Tone 5
Tone 20	Continuous tone 660 Hz		Tone 2	Tone 5
Tone 21	Alternating tone 544 Hz / 440 Hz, at 1 Hz		Tone 2	Tone 5
Tone 22	Intermittent 544 Hz, 0,875 s on, 0,875 s off		Tone 2	Tone 5
Tone 23	Intermittent 800 Hz, at 2 Hz		Tone 6	Tone 5
Tone 24	Sweeping 800 Hz / 1000 Hz, at 50 Hz		Tone 29	Tone 5
Tone 25	Sweeping 2400 Hz / 2900 Hz, at 50 Hz		Tone 29	Tone 5
Tone 26	Bell		Tone 2	Tone 15
Tone 27	Continuous tone 554 Hz		Tone 26	Tone 5
Tone 28	Continuous tone 440 Hz		Tone 2	Tone 5
Tone 29	Sweeping 800 Hz / 1000 Hz, at 7 Hz		Tone 7	Tone 5
Tone 30	Continuous tone 300 Hz		Tone 2	Tone 5
Tone 31	Sirene 660 Hz / 1200 Hz, at 1 Hz		Tone 26	Tone 5
Tone 32	Two tone chime		Tone 26	Tone 15
Tone 33	Intermittent 745 Hz, at 1 Hz		Tone 2	Tone 5
Tone 34	Alternating tone 100 Hz / 2000 Hz, change every 0,5 s		Tone 38	Tone 45
Tone 35	Australian alert 420 Hz with 0,625 s gap		Tone 36	Tone 5
Tone 36	Australian Evacuate, 500 Hz / 1200 Hz within 1 s		Tone 35	Tone 5
Tone 37	Continuous tone 1000 Hz		Tone 9	Tone 45
Tone 38	Continuous tone 2000 Hz		Tone 34	Tone 45
Tone 39	Intermittent 800 Hz, 0,25 s on, 1 s off		Tone 23	Tone 17
Tone 40	Alternating tone 544 Hz for 100 ms, 440Hz for 400 ms - 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	Continuous tone 1200 Hz		Tone 2	Tone 5
Tone 44	Motor Siren, slow rise to 2400 Hz		Tone 2	Tone 5
Tone 45	Intermittent 1000 Hz, 1 s on, 1 s off General Alarm		Tone 38	Tone 34
Tone 46	Sawtooth 1200 Hz / 500 Hz within 1 s		Tone 47	Tone 37
Tone 47	Intermittent 1000 Hz, 1 s on, 1 s off General Alarm		Tone 46	Tone 37
Tone 48	Australian alert 420 Hz with 0,625 s gap		Tone 49	Tone 5
Tone 49	Australian Evacuate, 500 Hz / 1200 Hz within 1 s		Tone 26	Tone 37