

ATEX Audible Visual Sounder LED

Model WAVS-L

The flameproof Model WAVS-L combination alarm sounders and high output LED beacons are suitable for Zone 1 & Zone 2 applications.

The WAVS-L features sound level outputs of up to 117dB(A) at 1 meter with a choice of 32 alarm tones and 3 remotely selectable stages.

The beacon contains an array of 32 high output, multi function LEDs with a total of 9 modes of operation - 4 rotating effect modes, 4 flashing modes and a steady mode for use in indicator/ status applications. Based on the mode selected the user can also select two alternative LED modes remotely.

FEATURES:

- *Glass dome with optically enhanced Fresnel Polycarbonate lens*
- *Stainless Steel guard*
- *Very large termination area.*
- *Ratchet adjustable stainless steel 'U' bracket.*
- *The sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.*

APPROVALS:

- ATEX certificate: KEMA 01ATEX2223
EN 60079-0 : 2006 EN 60079-1 : 2007
EN 61241-0 : 2006 EN 61241-1 : 2004

IECEx certificate: IECEx KEM 10.0025
IEC 60079-0 : 2004 (Ed4) IEC 60079-1 : 2007 (Ed6)
IEC 61241-0 : 2004 (Ed1) IEC 61241-1 : 2004 (Ed1)

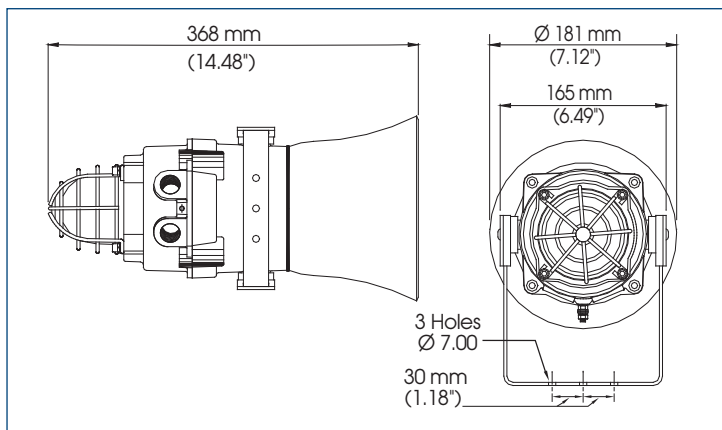
- GOST-R certificate: POCC GB.JB05.B02205
- Safety-integrity suitability: SIL1

- Certificate approvals pending.
Visit www.federal-signal-indust.com
for the latest information.

Model	Voltage	Alarm Sounder		LED Beacon	
		Voltage Range	Current	Voltage Range	Current
WAVS-L-024	24VDC	+/-25%	265mA	10-50V	400mA
WAVS-L-048	48VDC	+/-25%	130mA	10-50V	210mA
WAVS-L-115	115VAC	+/-10%	110mA	+/-10%	135mA
	50/60Hz				
WAVS-L-230	230VAC	+/-10%	56mA	+/-10%	65mA
	50/60Hz				



ATEX AUDIBLE VISUAL SOUNDER (WAVS-L)



HOW TO ORDER

WAVS-L - 024 - A		
TYPE	VOLTAGE	LENS COLOR
WAVS-L ATEX Visual Sounder LED	024 - 24VDC 048 - 48VDC 115 - 115VAC 230 - 230VAC	A - Amber B - Blue G - Green R - Red Y - Yellow

SPECIFICATIONS

ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C
GOST-R: 1ExdIIBT4 Ta. -50° to +55°C

SOUNDER/HORN:

Maximum output: 117dB(A) @ 1 meter
Nominal output: 110dB(A) @ 1m +/- 3dB - Tone 2
No. of tones: 32 (UK00A / PFEER compliant)
No. of stages: 3
Volume control: Max. 110dB(A); Min. 72dB(A) - Tone 2
Voltages DC: 24VDC; 48VDC
Voltages AC: 115VAC; 230VAC
Stage switching: Negative or positive

LED BEACON:

Light source: Array of 32 high output LEDs
Lens colors: Amber, Blue, Green, Red & Yellow
Voltages DC: 10-50VDC
Voltages AC: 115VAC; 230VAC (50Hz/60Hz ±10%)

GENERAL:

Ingress protection: IP66/67
Housing material: Marine grade copper free LM6 Aluminium
Housing finish: Phosphated & powder coated
WAVS-L flare: High impact UL94 V0 & 5VA FR ABS (Red)
Cable entries: Dual M20 ISO (one stopping plug included)
Terminals: 0.5 to 4.0mm² cables
Line monitoring : Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions)
Product Weight : DC: 4.00 Kg
AC: 4.20 Kg
Shipping Weight : DC: 4.70 Kg
AC: 4.90 Kg

#259363A Rev A

TONES

Stage 1	Frequency Description	dB @ 1m*	Stage 2	Stage 3
Tone 1	1000 Hz Continuous - PFEER Toxic Gas	110.0dB(A) @ 1m	Tone 31	Tone 11
Tone 2	800/1000Hz @ 0.25 sec Alternating	110.0dB(A) @ 1m	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	110.5dB(A) @ 1m	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	110.0dB(A) @ 1m	Tone 6	Tone 5
Tone 5	2400Hz Continuous	109.0dB(A) @ 1m	Tone 3	Tone 27
Tone 6	2400/2900Hz @ 7Hz Sweeping	109.0dB(A) @ 1m	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	110.0dB(A) @ 1m	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	110.5dB(A) @ 1m	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	110.5dB(A) @ 1m	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	109.0dB(A) @ 1m	Tone 7	Tone 5
Tone 11	1000Hz @ 0.5Hz Intermittent	110.0dB(A) @ 1m	Tone 31	Tone 1
Tone 12	800/1000Hz @ 0.875Hz Alternating	110.0dB(A) @ 1m	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	109.0dB(A) @ 1m	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	103.0dB(A) @ 1m	Tone 4	Tone 5
Tone 15	800Hz Continuous	103.0dB(A) @ 1m	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	104.0dB(A) @ 1m	Tone 18	Tone 5
Tone 17	544Hz (100mS)/ 440Hz (400mS) - NF S 32-001	107.0dB(A) @ 1m	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	105.0dB(A) @ 1m	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	117.0dB(A) @ 1m	Tone 2	Tone 5
Tone 20	660Hz Continuous	104.0dB(A) @ 1m	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	107.0dB(A) @ 1m	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	107.0dB(A) @ 1m	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	103.0dB(A) @ 1m	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	107.0dB(A) @ 1m	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	109.0dB(A) @ 1m	Tone 29	Tone 5
Tone 26	Bell	117.0dB(A) @ 1m	Tone 2	Tone 1
Tone 27	554Hz Continuous	107.0dB(A) @ 1m	Tone 26	Tone 5
Tone 28	440Hz Continuous	104.0dB(A) @ 1m	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping AS2220: 420Hz repeating 0.625 sec on, 0.625 sec off.	106.0dB(A) @ 1m	Tone 7	Tone 5
Tone 30	660/1200Hz @ 1Hz Sweeping	110.5dB(A) @ 1m	Tone 11	Tone 1
Tone 31	AS2220: 500-1200Hz 3.75s on 0.25s off (15 cycles/min)	110.5dB(A) @ 1m	Tone 26	Tone 1

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