

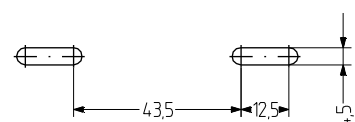
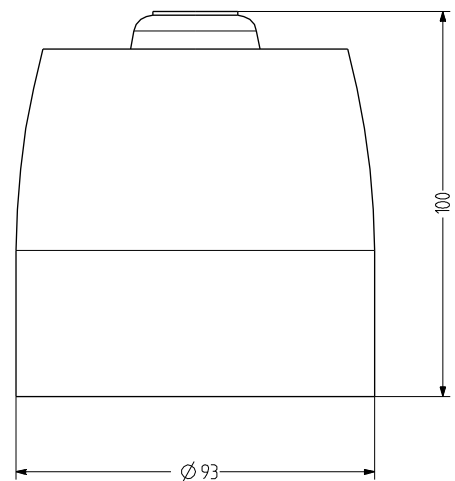
## ES1 Multi-tone alarm sounder

- Cost-effective multi-tone alarm sounder
- 32 tones can be selected via DIP switch
- Sound pressure can be preselected in 3 steps via DIP switch
- For universal applications at 24 V DC
- Second tone can be switched externally
- Degree of protection IP 65 can be achieved if installed correctly



### TECHNICAL DATA

Housing	ABS red (RAL 3000) or white (RAL 9003)
Type of mounting	any, Sound outlet opening at bottom or horizontal
Cable entry	Back or side
Tone	32 Tones, 2 Tones can be switched externally, see tone table
Volume	86-106 dB (can be adjusted with DIP switch)
Tone frequency	440-2.900 Hz
Duty cycle	100 %
Operating temperature	-20 °C / +70 °C
Degree of protection	IP65
Weight	250 g



# ES1

## ORDER DATA

Nominal voltage	Voltage range (V)	Nominal current (A)	Housing colour	
			red	white
24 V DC	15-35	0,036	C110 620 005	C110 220 005

## TONE TABLE

No.	Sound	Denomination	DIP	2nd stage alarm Hz
1	LF sweep	800-1.000 Hz @ 0.5 s	11111	800 cont
2	alternative warble	800/960 Hz @ 2 Hz	11110	800 cont
3	warble tone	800/1.000 Hz @ 0.5 s	11101	800 cont
4	alternative warble	500/600 Hz @ 2 Hz	11100	500 cont
5	HF back up interrupted tone	2.800 Hz @ 1.0 s on/off	11011	2.800 cont
6	LF back up alarm	800 Hz @ 150 ms on/off	11010	800 cont
7	HF back up interrupted tone, fast	2.800 Hz @ 150 ms on/off	11001	800 cont
8	LF continuous tone BS5839	800 Hz cont	11000	same tone
9	sweep tone	800/900 Hz @ 1 Hz	10111	800 cont
10	Australian slow whoop	interrupted tone 970 Hz @ 0.625 ms on/off	10110	500-1.200
				3.75 s on 0.25 s off
11	Dutch sweep tone	970 Hz cont	10101	500-1.200
				3.5 s on 0.5 s off
12	analogue sweep tone	500/600 Hz @ 2 Hz	10100	500 cont
13	sweep tone	800/970 Hz @ 3 Hz	10011	800 cont
14	alternate HF slow sweep	2.350/2.900 Hz @ 3 Hz	10010	2.400 cont
15	fast HF sweep	2.400-2.800 Hz @ 7Hz	10001	2.400 cont
16	US temporal pattern LF	950 Hz 0.5 s on/0.5 s off x 3; off for 1.5 s; repeat	10000	800 cont
17	interrupted tone BS Standard	800 Hz @ 0.5 s on/off	01111	800 cont
18	ISO8201 LF BS5839 Pt 11988	intermittent 970 Hz @ 0.5 s on/off	01110	same tone
19	interrupted tone, medium	1.000 Hz @ 0.25 s on/off	01101	800 cont
20	ISO8201 HF	970 Hz @ 0.5 s on/off	01100	same tone
21	continuous tone	1000 Hz	01011	same tone
22	LF buzz	800-950 Hz swept @ 110 Hz	01010	800 cont
23	HF continuous	2.800 Hz	01001	2.800 cont
24	sweep tone	800-970 Hz @ 9 Hz	01000	800 cont
25	German DIN tone	sweep 1.200-500 Hz @ 1 Hz	00111	800 cont
26	Swedish fire signal	intermittent 660 Hz @ 150 ms on/off	00110	same tone
27	French tone AFNOR	554 Hz @ 100 ms and 440 Hz @ 400 ms	00101	800 cont
28	Swedish all clear signal	continuous 660 Hz	00100	same tone
29	US temporal pattern HF	2.900 Hz @ 0.5 s on/off x 3; then off for 1.5 s; repeat	00011	2.900 cont
30	Siren 2-way ramp, short	500/1.200 Hz rising then falling 0.25 s	00010	800 cont
31	FP 1063.1 Telecom	alternating tone 800/970 Hz @ 2 Hz	00001	800 cont
32	Siren 2-way ramp, long	500/1.200 Hz @ 3 s rising/3 s falling	00000	800 cont



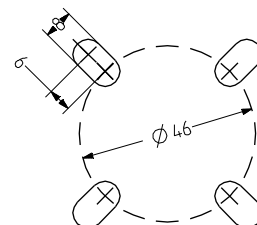
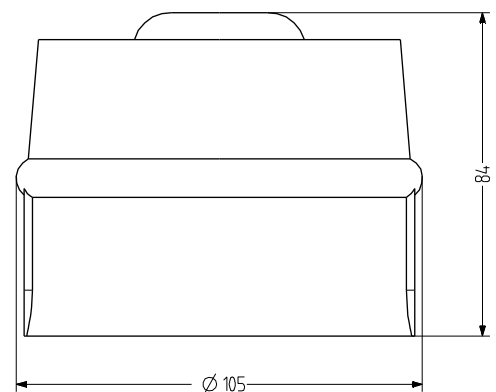
## ES2 Multi-tone alarm sounder

- Simple multi-tone alarm sounder
- 32 tones can be selected via DIP switch
- Degree of protection IP 65 can be achieved if installed correctly
- For universal applications at 120 or 230 V AC
- Second tone can be switched externally



### TECHNICAL DATA

Housing	ABS red (RAL 3000) or white (RAL 9003)
Type of mounting	Wall mounting, Sound outlet opening at bottom or horizontal
Cable entry	Back or side
Tone	32 Tones, 2 Tones can be switched externally, see tone table
Volume	77-107 dB (can be adjusted with DIP switch)
Tone frequency	440-2.850 Hz
Duty cycle	100 %
Operating temperature	-20 °C / +70 °C
Degree of protection	IP65
Weight	295 g



# ES2

## ORDER DATA

Nominal voltage	Voltage range (V)	Nominal current (A)	Mains frequency	Housing colour	
				red	white
230 V AC	+/- 10 %	0,012	50-60 Hz	C115 600 113	C115 200 113

## tone table

No.	Tone	DIP switch	2nd stage alarm (Hz)
1	Warble tone 800/1000 Hz @ 0.5 sec	11111	800
2	Warble tone 800/1000 Hz @ 0.25 sec	01111	1.000
3	Interrupted tone 800 Hz @ 0.5 sec on/off	10111	800
4	Interrupted tone 1000 Hz @ 0.25 sec on/off	00111	1.000
5	Slow Whoop 500-1200 Hz in 3 sec then 0.5 sec off	11011	500
6	Slow Whoop 1200-500 Hz in 3 sec then 0.5 sec off	01011	1.200
7	Australian Slow Whoop 500-1200 Hz in 3.5 sec; 0.25 sec off	10011	500
8	L.F. Sweep frequency 800-1000 Hz in 0.5 sec	00011	800
9	L.F. Sweep frequency 800-1000 Hz in 0.25 sec	11101	800
10	L.F. Sweep frequency 800-1000 Hz in 0.1 sec	01101	800
11	Sweep frequency 1200-500 Hz in 1 sec	10101	1.200
12	Warble tone 554/440 Hz @ 0.5 sec	00101	554
13	Warble tone 554 Hz for 0.1 sec / 440 Hz for 0.4 sec	11001	554
14	Interrupted tone 660 Hz for 150 msec on/off	01001	660
15	Interrupted tone 660 Hz for 1.8 sec on/off	10001	660
16	Interrupted tone 660 Hz for 570 msec on/off	00001	660
17	Group of 3 interrupted tone 1000 Hz @ 0.5 sec on/off then 1.5 sec off	11110	1.000
18	Group of 3 warble tone 1000/800 Hz @ 0.5 sec then 1.5 sec off	01110	1.000
19	Group of 3 Sweep 500-1200 Hz in 0.5 sec on/off then 1.5 sec off	10110	500
20	Group of 3 sweep 1200-500 Hz in 0.5 sec then 1.5 sec off	00110	1.200
21	Linear frequency sweep 2000-2500 Hz in 0.5 sec	11010	2.000
22	Linear frequency sweep 2000-2500 Hz in 0.25 sec	01010	2.000
23	H.F. warble tone 2000/2500 Hz @ 0.5 sec	10010	2.000
24	H.F. warble tone 2000/2500 Hz @ 0.25 sec	00010	2.000
25	H.F. interrupted tone 2850 Hz @ 150 msec on/off	11100	2.000
26	H.F. interrupted tone 800 Hz @ 0.5 sec on/off	01100	2.850
27	Very fast H.F. sweep 2400-2800 Hz in 20msec (50 Hz)	10100	2.400
28	Fast H.F. sweep 2400-2800 Hz in 0.143 sec (7 Hz)	00100	2.400
29	H.F. Sweep 2400-2800 Hz in 0.5 sec (2 Hz)	11000	2.400
30	2 way ramp, 500-1200, rising then falling in 0.25 sec	01000	500
31	Siren 2 way ramp 3 sec rising then 3 sec falling, 500-1200 Hz	10000	500
32	Ding Dong group 2700-0 Hz, then 570-80 Hz off for 4 sec	00000	700



Electronic