

# Sounders PATROL series 100 / 105 dB(A)

## PA 1 / PA 5





PATROL - the new generation of sounders.

Three dimensional innovation;

- safe; an incorrect installation is virtually impossible
- easy; significantly shorter assembly and installation times
- economical; extremely high efficiency and good penetration of acoustical obstacles significantly reduce the required number of sounders



reddot design award  
winner 2013

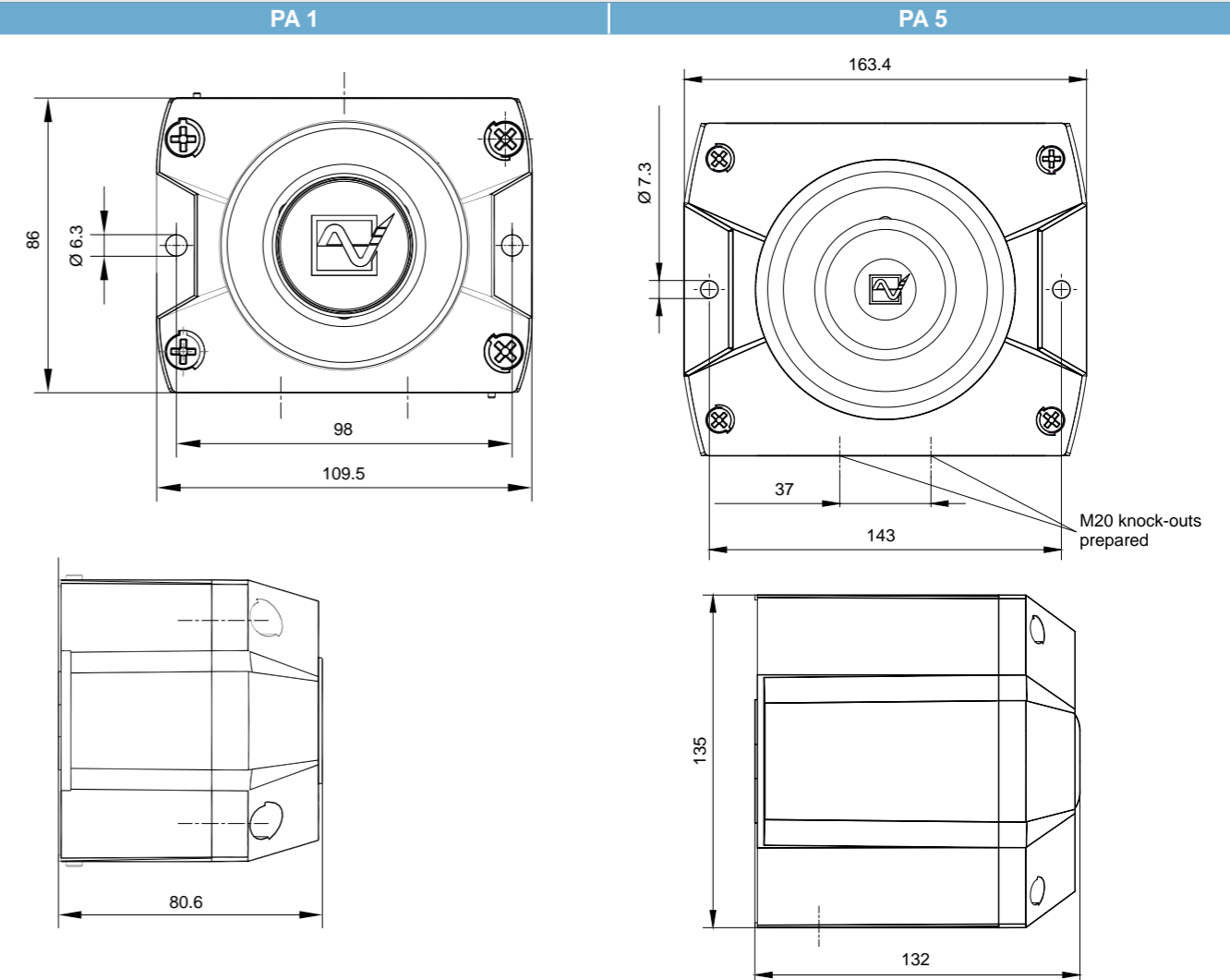
<b>PA 1</b>	<b>PA 5</b>	<b>IP 66</b>	<b>+ 55 °C</b> <b>- 40 °C</b>			<b>EN 54-3</b>	<b>VdS</b>	<b>UL</b>
max. covering distance 18 m	max. covering distance 32 m	Protection system	Operating temperature	Acoustic penetration		24-48 V DC	24-48 V DC	

Electrical data	PA 1			
Rated voltage	230 V AC	115 V AC	24 V AC	10 – 57 V DC
Rated frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	
Operating range	195 – 253 V	95 – 127 V	18 – 30 V	10 – 57 V
Nominal current consumption	9 – 15 mA	8 – 30 mA	59 – 120 mA	6 – 80 mA
Electrical data	PA 5			
Rated voltage	230 V AC	115 V AC	24 V AC	10 – 57 V DC
Rated frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	
Operating range	± 10%	± 10%	± 10%	10 – 57 V
Nominal current consumption <sup>1</sup>	9 – 15 mA	8 – 30 mA	59 – 120 mA	6 – 80 mA

<sup>1</sup> power consumption dependent on operating voltage

Mechanical data	PA 1	PA 5
Sound pressure level	100 dB (A)	105 dB (A)
Sound level reduction	max. - 16 dB via potentiometer	
Alarm tones	80 (see tone table page 148/149)	
Operating temperature	- 40 °C ... + 55 °C	
Storage temperature	- 40 °C ... + 70 °C	
Relative humidity	90%	
Protection system according to EN 60529	IP 66	
Protection class	II	
Duty cycle	100%	
Material	PC / ABS blend	
Colour	similar to RAL 3000 (flame red) / RAL 7035 (light grey) / RAL 9003 (signal white)	
Cable entry	3 x M20 knock-outs on side, 1 knock-out on back	5 x M20 knock-outs on side, 1 knock-out on back
Integrated seal with cable entry	6 – 13 mm (feed-through grommet)	
Connecting terminals	2.5 mm <sup>2</sup> fine wire with cable end sleeve, AWG 16	
Weight	AC	405 g
	DC	270 g

### Dimensions



### Ordering details

Article numbers		PA 1			PA 5		
Version	Rated voltage	230 V AC	115 V AC	10-57 V DC	230 V AC	115 V AC	10-57 V DC
Standard	housing red	233 10 10 0 000	233 10 15 0 000	233 10 63 0 000	233 50 10 0 000	233 50 15 0 000	233 50 63 0 000
GL	housing red	233 10 10 0 001	233 10 15 0 001	233 10 63 0 001	233 50 10 0 001	233 50 15 0 001	233 50 63 0 001
Standard	housing grey	233 10 10 0 055	233 10 15 0 055	233 10 63 0 055	233 50 10 0 055	233 50 15 0 055	233 50 63 0 055
GL	housing grey	233 10 10 0 056	233 10 15 0 056	233 10 63 0 056	233 50 10 0 056	233 50 15 0 056	233 50 63 0 056

Article numbers for other voltages and versions on request

### Options / Accessories



GL



MED



Enclosure fitting



Surface gasket



Tamper-proof sealing



Panel mounting kit



SSM  
(only for 24 V DC)

See page 149 for further information

### Conformity to standards

The acoustic parameters conform to the European standard DIN EN ISO 7731;  
"Ergonomic – alarm signals for public areas and workplaces – acoustic alarm signals".

The requirement for an acoustic alarm signal can be found in the harmonised standards:  
EN 60204-1 Electrical equipment of machines  
EN 60825-1 Radiation safety of laser devices, identical to IEC 825 and DIN-VDE 0837

Tone table PA 1 / PA 5 / PA 10 / PA 20		
Basic tone no.	Description	
1	no tone	
2	Sawtooth, DIN tone 33404-3 Germany (emergency signal), PFEER PTAP	
9	Slow whoop, fire alarm, UK BS5839-1	
11	Interrupted tone (fast)	
13	Interrupted tone	
15	Slow whoop, evacuation alarm Netherlands NEN 2575	
16	Slow whoop, Australian evacuation alarm AS2220	
18	Slow whoop, NFPA	
22	Pulsating tone, Australien alert AS1670, ISO8201	
23	Siren	
24	Siren	
25	Siren	
26	Pulsating tone, industrial alarm Germany	
27	Sweeping	
29	Sweeping (fast)	
30	Sweeping	
31	Sweeping, France NFC48-265	
33	Sweeping (medium), UK BS5839-1	
34	Sweeping (fast)	
35	Sweeping (fast), UK BS5839-1	
36	Sweeping	
43	Sweeping	
44	Sweeping, IMO 3d, Germany KTA3901 evacuation alarm	
45	Sweeping	
46	Sweeping, general alarm Finland	
52	Continuous tone	
53	Continuous tone	
54	Continuous tone, Finland (all-clear signal)	
55	Continuous tone, PFEER gasalarm	
56	Continuous tone	
57	Continuous tone, UK BS5839-1	
59	Continuous tone	
60	Continuous tone	
61	Continuous tone	
63	Continuous tone	
65	Continuous tone, Sweden SS031711 (all-clear signal)	
66	Continuous tone	
67	Continuous tone, Germany KTA3901 (all-clear signal)	
68	Continuous tone	
69	Continuous tone	
71	Continuous tone	
77	Interrupted tone	
82	Interrupted tone, PFEER (general alarm), UK BS5839-1 (back-up alarm)	
83	Interrupted tone, PFEER (general alarm)	
88	Interrupted tone	
90	Interrupted tone	
91	Interrupted tone	
92	Interrupted tone	
93	Interrupted tone (fast), electromechanical horn	
97	Interrupted tone	
98	Interrupted tone, Sweden SS031711 (emergency signal)	
100	Interrupted tone, industrial alarm (Germany)	
101	Interrupted tone, Sweden SS031711 (important message (pres-mess))	
102	Interrupted tone, Sweden SS031711 (local warning)	
103	Interrupted tone, Sweden SS031711 (air raid warning)	
104	Interrupted tone, Sweden SS031711 (emergency signal)	
107	Interrupted tone, Germany KTA3901 (evacuation alarm)	
109	Interrupted tone, Australia AS2220, AS1610, AS1670	
110	Interrupted tone, (fast variable), bell	
111	Interrupted tone, ISO8201 (emergency evacuation signal), USA (evacuation alarm)	
112	Interrupted tone, ISO8201 (emergency evacuation signal)	
113	Interrupted tone, ISO8201 (emergency evacuation signal), sweeping	
115	Interrupted tone, IMO (telephone call)	
116	Interrupted tone, IMO (leave ship)	
117	Interrupted tone, IMO SOLAS III/50 + SOLAS III/6.4 (general alarm)	
122	Alternating tone	
123	Alternating tone	
124	Alternating tone, Singapore	
125	Alternating tone	
128	Alternating tone	
130	Alternating tone, UK BS5839-1 (fire alarm)	
131	Alternating tone, UK BS5839-1 (fire alarm, railway crossing)	
135	Alternating tone, UK BS5839-1 (fire alarm, increased urgency - railway crossing)	
142	Alternating tone	

Tone table PA 1 / PA 5 / PA 10 / PA 20		
Basic tone no.	Description	
143	Alternating tone, industrial alarm (Germany)	
144	Alternating tone	
146	Alternating tone, France NFS 32-001 (fire alarm)	
147	Alternating tone, Sweden SS031711	
148	Alternating tone, Sweden SS031711	
152	Alternating tone (two tone chime)	

Control of the tones																			
Tone selection switch/DIP-Switch (setting of basic tone)						External tone selection			Tone selection switch/DIP-Switch (setting of basic tone)						External tone selection				
1	2	3	4	5	6	Basic tone no.	C1	C2	C1+C2	1	2	3	4	5	6	Basic tone no.	C1	C2	C1+C2
Tone no.									Tone no.										
						1	2	88	57						ON	71	131	52	93
						2*	128	112	57						ON	77	61	52	122
	ON					2	26	100	93						ON	82	131	52	83
ON	ON					2	61	131	112						ON	83	56	2	82
		ON				9	57	11	82						ON	88	2	57	128
ON		ON				15	131	52	112						ON	90	131	52	125
	ON	ON				16	109	52	56						ON	91	30	52	110
ON	ON	ON				18	111	57	68						ON	92	33	52	57
			ON			22	16	109	68						ON	93	2	128	57
ON		ON				23	131	52	112						ON	97	2	63	93
	ON	ON				24	131	52	131						ON	100	131	52	125
ON	ON		ON			25	131	52	92						ON	101	98	102	65
		ON	ON			26	2	100	93						ON	103	131	65	147
ON		ON	ON			27	123	52	92						ON	104	103	65	101
	ON	ON				29	35	52	61						ON	109	16	52	22
ON	ON	ON				30	27	52	77						ON	110	131	61	91
				ON		31	131	52	57						ON	112	2	57	128
ON				ON		33	30	52	35						ON	113	52	123	104
	ON			ON		34	35	52	93						ON	115	117	116	44
ON	ON		ON			35	27	52	110						ON	116	117	93	125
		ON	ON			36	146	67	57						ON	117	93	116	125
ON		ON	ON			43	131	52	91						ON	123	27	52	77
	ON	ON		ON		45	2	57	93						ON	124	53	83	2
ON	ON	ON		ON		52	15	65	82						ON	130	2	107	67
			ON	ON		54	46	54	131						ON	131	2	112	57
ON			ON	ON		55	131	52	128						ON	135	16	56	109
	ON		ON	ON		56	82	35	33						ON	142	2	54	88
ON	ON		ON	ON		59	143	59	101						ON	143	59	93	33
			ON	ON		60	131	52	125						ON	144	110	61	2
ON		ON	ON	ON		65	131	52	93						ON	146	31	67	57
	ON	ON	ON	ON		66	110	52	107						ON	148	131	52	92
ON	ON	ON	ON	ON		69	131	52	110						ON	152	110	61	13

\* factory setting

## Accessories

Ordering details				
Article numbers		PA 1	PA 5	PA 10 / PA 20
Enclosure fitting	For connection (daisy-chaining) of several sounders of the PATROL series	283 00 00 0 003		
Surface gasket	Sealing of the sounder installation surface when, e.g. cable entry is executed from the back.	283 00 00 0 004	283 00 00 0 005	283 00 00 0 006
Tamper-proof sealing (pack of 4)	Anti-tamper sealing for fasteners of the PATROL devices after installation in order to prevent manipulation of the devices.	283 00 00 0 002		
Panel mount installation kit PATROL	The PATROL devices are also suitable for panel mounting. This kit consists of a plug connector for the electrical contact, as well as all installation materials.	283 00 00 0 007	283 00 00 0 008	283 00 00 0 009