

PATROL SOUNDERS 110/120 dB(A) PA 10 / PA 20



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

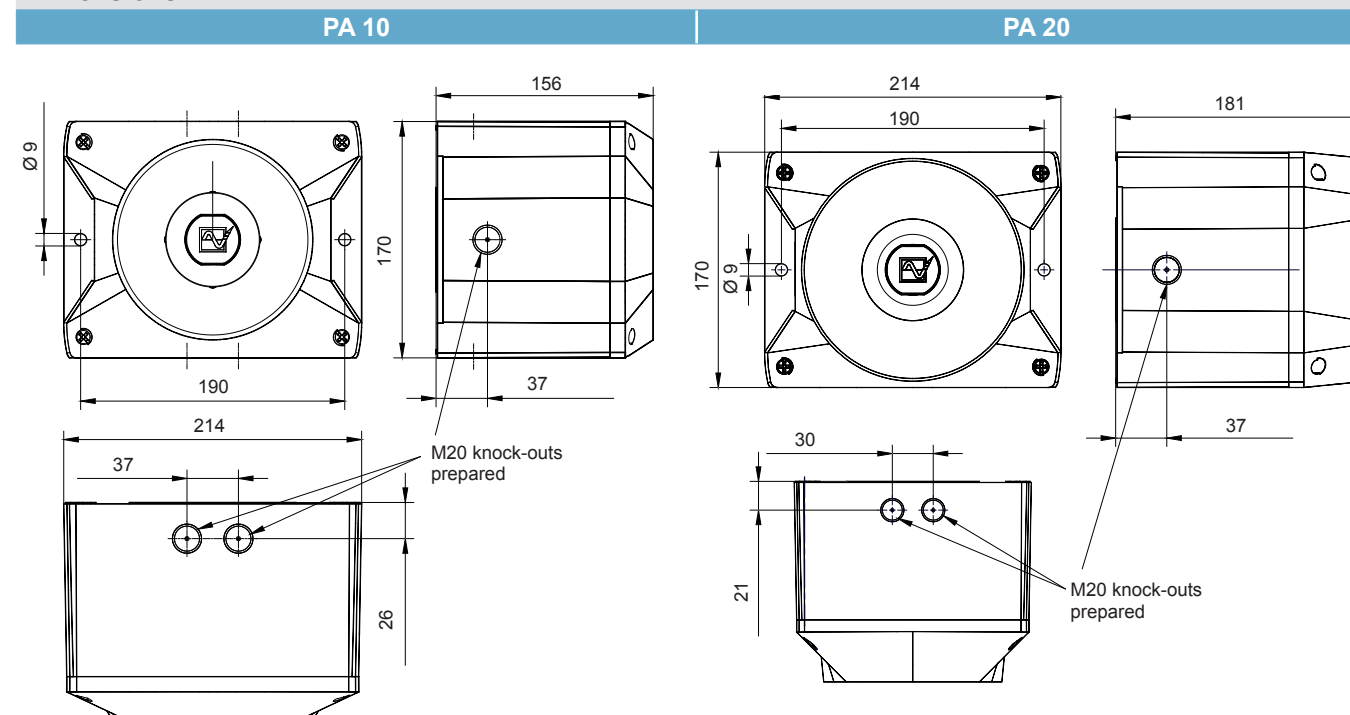
PA 10	PA 20								
max. covering distance	max. covering distance	Protection system	Impact-proof housing	Operating temperature	Acoustic penetration	EN 54-3	VdS	UL	10 Years Warranty
						24-48 V DC 115-230 V AC	24-48 V DC 115-230 V AC		

Electrical data	PA 10		
Rated voltage	95 – 265 V AC	24 V AC	10 – 60 V DC
Rated frequency	50 / 60 Hz	50 / 60 Hz	
Operating range	95 – 265 V	20 – 30 V	10 – 60 V
Nominal current consumption	20 – 115 mA	250 – 900 mA	60 – 485 mA
Electrical data	PA 20		
Rated voltage	95 – 265 V AC	24 V AC	10 – 60 V DC
Rated frequency	50 / 60 Hz	50 / 60 Hz	
Operating range	95 – 265 V	20 – 30 V	10 – 60 V
Nominal current consumption ¹	75 – 330 mA	500 – 1,800 mA	120 – 880 mA

¹ power consumption dependent on operating voltage

Mechanical data	PA 10	PA 20
Sound pressure level	110 dB (A)	120 dB (A)
Sound level reduction	max. - 12 dB via potentiometer	
Alarm tones	80 (see tone table page 140/141)	
Duty cycle	100%	
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	
Material	PC / ABS blend	
Colour	similar to RAL 3000 (flame red) / RAL 7035 (light grey) / RAL 9003 (signal white)	
Cable entry	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 mm² fine wire with cable end sleeve, AWG 16	
Weight	AC	1,060 g
	DC	1,050 g

Dimensions

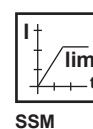
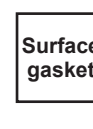
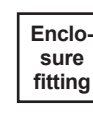


Ordering details

Article numbers	PA 10			PA 20		
Version	Rated voltage	95-265 V AC	24 V AC	10-60 V DC	95-265 V AC	24 V AC
Standard	housing red	233 60 64 0 000	233 60 30 0 000	233 60 63 0 000	233 70 64 0 000	233 70 30 0 000
GL/MED	housing red	233 60 64 0 001	233 60 30 0 001	233 60 63 0 001	233 70 64 0 001	233 70 30 0 001
Standard	housing grey	233 60 64 0 055	233 60 30 0 055	233 60 63 0 055	233 70 64 0 055	233 70 30 0 055
GL/MED	housing grey	233 60 64 0 056	233 60 30 0 056	233 60 63 0 056	233 70 64 0 056	233 70 30 0 056

Article numbers for other voltages and versions on request

Options / Accessories



SSM
(only for 24 V DC)

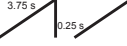
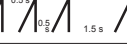
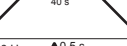
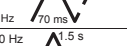
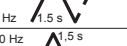
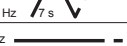
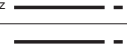
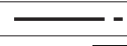
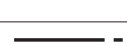
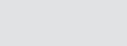
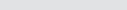
See page 141 for further information

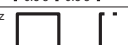
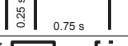
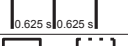
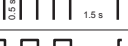
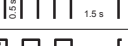
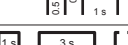
Conformity to standards

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

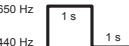
The requirement for an acoustic alarm signal can be found in the harmonised standards:
EN 60204-1 Electrical equipment of machines
EN 60825-1 Radiation safety of laser devices, identical to IEC 825 and DIN-VDE 0837

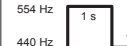
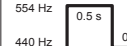
Tone table PA 1 / PA 5 / PA 10 / PA 20

Tone	Description	
1	no tone	
2	Sawtooth, DIN tone 33404-3 Germany (emergency signal), PFEER PTAP	1200 Hz 1 s 
9	Slow whoop, fire alarm, UK BS5839-1	970 Hz 1 s 
11	Interrupted tone (fast)	970 Hz 20 ms 
13	Interrupted tone	900 Hz 0.3 s 
15	Slow whoop, evacuation alarm Netherlands NEN 2575	1200 Hz 3.5 s 
16	Slow whoop, Australian evacuation alarm AS2220	1200 Hz 3.75 s 
18	Slow whoop, NFPA	775 Hz 0.85 s 
22	Pulsating tone, Australien alert AS1670, ISO8201	1200 Hz 0.5 s 
23	Siren	2400 Hz 3 s 
24	Siren	1200 Hz 3 s 
25	Siren	800 Hz 3 s 
26	Pulsating tone, industrial alarm Germany	1000 Hz 10 s 
27	Sweeping	2900 Hz 0.5 s 
29	Sweeping (fast)	2900 Hz 10 ms 
30	Sweeping	2400 Hz 70 ms 
31	Sweeping, France NFC48-265	1600 Hz 1 s 
33	Sweeping (medium), UK BS5839-1	1000 Hz 0.5 s 
34	Sweeping (fast)	1000 Hz 10 ms 
35	Sweeping (fast), UK BS5839-1	800 Hz 70 ms 
36	Sweeping	1500 Hz 1.5 s 
43	Sweeping	1200 Hz 1.5 s 
44	Sweeping, IMO 3d, Germany KTA3901 evacuation alarm	500 Hz 1 s 
45	Sweeping	1200 Hz 3 s 
46	Sweeping, general alarm Finland	1500 Hz 7 s 
52	Continuous tone	2400 Hz 
53	Continuous tone	2000 Hz 
54	Continuous tone, Finland (all-clear signal)	1500 Hz 
55	Continuous tone, PFEER gasalarm	1200 Hz 
56	Continuous tone	1000 Hz 
57	Continuous tone, UK BS5839-1	950 Hz 
59	Continuous tone	880 Hz 
60	Continuous tone	825 Hz 
61	Continuous tone	800 Hz 
63	Continuous tone	725 Hz 
65	Continuous tone, Sweden SS031711 (all-clear signal)	660 Hz 
66	Continuous tone	554 Hz 
67	Continuous tone, Germany KTA3901 (all-clear signal)	500 Hz
68	Continuous tone	470 Hz

Tone	Description	
69	Continuous tone	440 Hz 
71	Continuous tone	340 Hz 
77	Interrupted tone	2400 Hz 0.5 s 
82	Interrupted tone, PFEER (general alarm), UK BS5839-1 (back-up alarm)	1000 Hz 0.5 s 
83	Interrupted tone, PFEER (general alarm)	1000 Hz 1 s 
88	Interrupted tone	950 Hz 1 s 
90	Interrupted tone	825 Hz 0.5 s 
91	Interrupted tone	800 Hz 0.25 s 
92	Interrupted tone	800 Hz 1 s 
93	Interrupted tone (fast), horn	800 Hz 4 ms 
97	Interrupted tone	725 Hz 0.7 s 
98	Interrupted tone, Sweden SS031711 (emergency signal)	700 Hz 0.125 s 
100	Interrupted tone, industrial alarm Germany	680 Hz 0.875 s 
101	Interrupted tone, Sweden SS031711 (important message (pre-mess))	660 Hz 6.5 s 
102	Interrupted tone, Sweden SS031711 (local warning)	660 Hz 0.5 s 
103	Interrupted tone, Sweden SS031711 (air raid warning)	660 Hz 1.8 s 
104	Interrupted tone, Sweden SS031711 (emergency signal)	660 Hz 150 ms 
107	Interrupted tone, Germany KTA3901 (evacuation alarm)	500 Hz 0.25 s 
109	Interrupted tone, Australia AS2220, AS1610, AS1670	420 Hz 0.625 s 
110	Interrupted tone, (fast variable), bell	1450 Hz 0.69 ms 
111	Interrupted tone, ISO8201 (emergency evacuation signal), USA (evacuation alarm)	470 Hz 0.5 s 
112	Interrupted tone, ISO8201 (emergency evacuation signal)	950 Hz 0.5 s 
113	Interrupted tone, ISO8201 (emergency evacuation signal), Sweeping	2850 Hz 0.5 s 
115	Interrupted tone, IMO (telephone call)	950 Hz 2 s 
116	Interrupted tone, IMO (leave ship)	950 Hz 1 s 
117	Interrupted tone, IMO SOLAS III/50 + SOLAS III/6.4 (general alarm)	825 Hz 2.5 s 
122	Alternating tone	2900 Hz 0.5 s 
123	Alternating tone	2900 Hz 0.25 s 
124	Alternating tone, Singapore	2000 Hz 0.5 s 
125	Alternating tone	1400 Hz 20 ms 
128	Alternating tone	1025 Hz 0.25 s 
130	Alternating tone, UK BS5839-1 (fire alarm)	1000 Hz 0.5 s 
131	Alternating tone, UK BS5839-1 (fire alarm, railway crossing)	1000 Hz 0.25 s 
135	Alternating tone, UK BS5839-1 (fire alarm, increased urgency - railway crossing)	800 Hz 0.125 s 
142	Alternating tone	900 Hz 0.25 s 

Tone table PA 1 / PA 5 / PA 10 / PA 20

Tone	Description	
143	Alternating tone, industrial alarm Germany	660 Hz 0.125 s 
144	Alternating tone	650 Hz 1 s 
146	Alternating tone, France NFS 32-001 (fire alarm)	554 Hz 0.4 s 

Tone	Description	
147	Alternating tone, Sweden SS031711	554 Hz 1 s 
148	Alternating tone, Sweden SS031711	554 Hz 0.5 s 
152	Alternating tone (two tone chime)	800 Hz 0.25 s 

Control of the tones

Tone selection switch/DIP-Switch (setting of basic tone)							External tone selection		
1	2	3	4	5	6	Tone	C1	C2	C1+C2
							Tone no.		
						1	2	88	57
ON						2 *	128	112	57
	ON					2	26	100	93
ON	ON					2	61	131	112
		ON				9	57	11	82
ON		ON				15	131	52	112
	ON	ON				16	109	52	56
ON	ON	ON				18	111	57	68
			ON			22	16	109	68
ON			ON			23	131	52	112
	ON		ON			24	131	52	131
ON	ON		ON			25	131	52	92
		ON	ON			26	2	100	93
ON		ON	ON			27	123	52	92
	ON	ON				29	35	52	61
ON	ON	ON				30	27	52	77
				ON		31	131	52	57
ON				ON		33	30	52	35
	ON			ON		34	35	52	93
ON	ON			ON		35	27	52	110
		ON		ON		36	146	67	57
ON		ON		ON		43	131	52	91
	ON	ON		ON		45	2	57	93
ON	ON	ON		ON		52	15	65	82
			ON	ON		54	46	54	131
ON			ON	ON		55	131	52	128
	ON		ON	ON		56	82	35	33
ON	ON		ON	ON		59	143	59	101
		ON	ON	ON		60	131	52	125
ON		ON	ON	ON		65	131	52	93
	ON	ON	ON	ON		66	110	52	107
ON	ON	ON	ON	ON		69	131	52	110

* 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