

PATROL FLASHING SOUNDERS 100/105 dB(A) / 5/10 J

PA X 1-05 / PA X 5-05 / PA X 5-10



PATROL - the new generation of sounder/flashing light combinations.
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
- pre-wired sounder and light ex works
- corresponding light intensity available for every sound pressure level



reddot design award
winner 2013

PA X 1	PA X 5	IP 66	IK 08	+ 55 °C - 40 °C	Acoustic penetration	EN 54-3	EN 54-23	VdS	UL	10 Years Warranty
Covering distance		Protection system	Impact-proof housing	Operating temperature		24 V DC, 48 V DC	24 V DC, 48 V DC	24 V DC, 48 V DC		

Electrical data	PA X 1-05					
Rated voltage	230 V AC	115 V AC	24 V AC	48 V DC	24 V DC	12 V DC
Rated frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz			
Operating range	187 – 255 V	90 – 135 V	18 – 30 V	40 – 60 V	18 – 30 V	12 – 15 V
Nominal current consumption ¹	65 – 70 mA	110 – 130 mA	860 – 920 mA	190 – 150 mA	315 – 365 mA	610 – 625 mA
Electrical data	PA X 5					
Rated voltage	230 V AC	115 V AC	24 V AC	48 V DC	24 V DC	12 V DC
Rated frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz			
Operating range	187 – 255 V	90 – 135 V	18 – 30 V	40 – 60 V	18 – 30 V	12 – 15 V
Nominal current consumption ¹	5 J 10 J	65 – 70 mA 150 – 155 mA	110 – 130 mA 250 – 260 mA	860 – 920 mA 1,460 – 1,520 mA	190 – 150 mA 320 – 380 mA	315 – 365 mA 565 – 620 mA 610 – 625 mA 1,200 – 1,220 mA

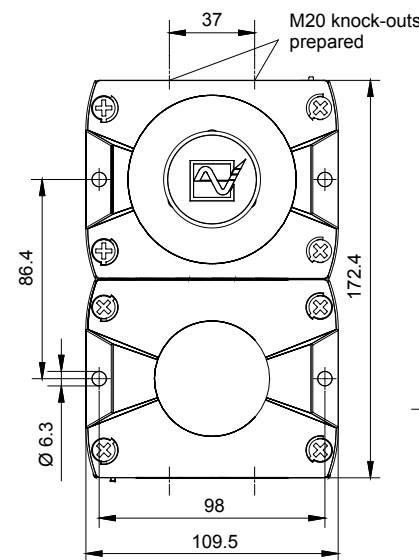
¹ power consumption dependent on operating voltage

Mechanical data	PA X 1-05	PA X 5-05	PA X 5-10
Sound pressure level	100 dB (A)	105 dB (A)	105 dB (A)
Sound level reduction	max. - 16 dB via potentiometer		
Alarm tones	80 (see tone table page 164/165)		
Flash energy	5 J	5 J	10 J
Flash rate	1 Hz = 60 flashes/min.		
Light intensity (DIN 5037) ¹	44 cd	47 cd	92 cd
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%		
Service life of the flash tube	light emission still 70% after 8,000,000 flashes		
Material	sounder lens flashing light	PC / ABS blend polycarbonate (PC)	
Housing colour	similar to RAL 3000 (flame red) / RAL 7035 (light grey) / RAL 9003 (signal white)		
Lens colour	clear, white, yellow, amber, red, green, blue		
Cable entry	3 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 ² fine wire with cable end sleeve, AWG 16		
Weight	AC DC	725 g 560 g	983 g 800 g

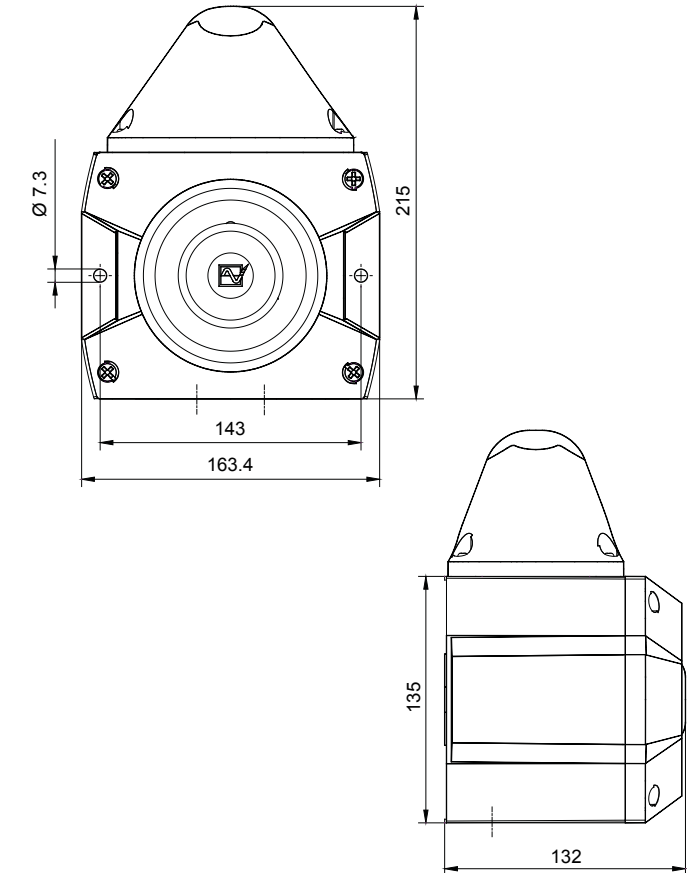
¹ with a clear lens

Dimensions

PA X 1-05



PA X 5-05



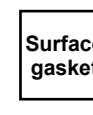
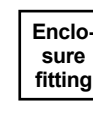
Ordering details

Article numbers		PA X 1-05 – housing red			PA X 1-05 – housing grey		
Version	Rated voltage	230 V AC	115 V AC	24 V DC	230 V AC	115 V AC	24 V DC
clear lens		233 11 10 1 000	233 11 15 1 000	233 11 80 1 000 ¹	233 11 10 1 055	233 11 15 1 055	233 11 80 1 055 ¹
yellow lens		233 11 10 3 000	233 11 15 3 000	233 11 80 3 000	233 11 10 3 055	233 11 15 3 055	233 11 80 3 055
amber lens		233 11 10 4 000	233 11 15 4 000	233 11 80 4 000	233 11 10 4 055	233 11 15 4 055	233 11 80 4 055
red lens		233 11 10 5 000	233 11 15 5 000	233 11 80 5 000 ¹	233 11 10 5 055	233 11 15 5 055	233 11 80 5 055 ¹
Article numbers		PA X 5-05 – housing red			PA X 5-05 – housing grey		
Version	Rated voltage	230 V AC	115 V AC	24 V DC	230 V AC	115 V AC	24 V DC
clear lens		233 51 10 1 000	233 51 15 1 000	233 51 80 1 000	233 51 10 1 055	233 51 15 1 055	233 51 80 1 055
yellow lens		233 51 10 3 000	233 51 15 3 000	233 51 80 3 000	233 51 10 3 055	233 51 15 3 055	233 51 80 3 055
amber lens		233 51 10 4 000	233 51 15 4 000	233 51 80 4 000	233 51 10 4 055	233 51 15 4 055	233 51 80 4 055
red lens		233 51 10 5 000	233 51 15 5 000	233 51 80 5 000	233 51 10 5 055	233 51 15 5 055	233 51 80 5 055

Article numbers for other voltages and versions on request

¹ version with EN 54-23 approval

Options / Accessories



See page 165 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 X 1 / PA X 5 / PA X 10 / PA X 20

Tone	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	

Tone	Description	
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), horn	
97	Interrupted tone	
98	Interrupted tone, Sweden SS031711 (emergency signal)	
100	Interrupted tone, industrial alarm Germany	
101	Interrupted tone, Sweden SS031711 (important message (pre-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 X 1 / PA X 5 / PA X 10 / PA X 20

Tone	Description	
143	Alternating tone, industrial alarm Germany	
144	Alternating tone	
146	Alternating tone, France NFS 32-001 (fire alarm)	

Tone	Description	
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		
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

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.		
						71	131	52	93
ON						77	61	52	122
	ON					82	131	52	83
ON	ON					83	56	2	82
		ON				88	2	57	128
ON		ON				90	131	52	125
	ON	ON				91	30	52	110
ON	ON	ON				92	33	52	57
			ON			93	2	128	57
ON			ON			97	2	63	93
	ON		ON			100	131	52	125
ON	ON		ON			101	98	102	65
		ON	ON			103	131	65	147
ON		ON	ON			104	103	65	101
	ON	ON	ON			109	16	52	22
ON	ON	ON	ON			110	131	61	91
				ON	ON	112	2	57	128
ON				ON	ON	113	52	123	104
	ON			ON	ON	115	117	116	44
ON	ON			ON	ON	116	117	93	125
		ON		ON	ON	117	93	116	125
ON		ON		ON	ON	123	27	52	77
	ON	ON		ON	ON	124	53	83	2
ON	ON	ON		ON	ON	130	2	107	67
			ON	ON	ON	131	2	112	57
ON			ON	ON	ON	135	16	56	109
	ON		ON	ON	ON	142	2	54	88
ON	ON		ON	ON	ON	143	59	93	33
		ON	ON	ON	ON	144	110	61	2
ON		ON	ON	ON	ON	146	31	67	57
	ON	ON	ON	ON	ON	148	131	52	92
ON	ON	ON	ON	ON	ON	152	110	61	13

ACCESSORIES PATROL AND PYRA

Ordering details

Article numbers		PA X 1-05	PA X 5-05	PA 10 X / PA 20 X	PY X-MA
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	281 11 50 0 000
Tamper-proof sealing (pack of 4)	Anti-tamper sealing for fasteners of the PATROL or PYRA devices after installation in order to prevent manipulation of the devices.	283 00 00 0 002			