

Flashing Sounders PATROL series 110/120 dB(A) / 10/15 J PA X 10-10 / PA X 10-15 / PA X 20-10 / PA X 20-15



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

PA X 10



Acoustic range

PA X 20



Acoustic range



Protection system



Operating temperature



Acoustic penetration



UL

Electrical data		PA X 10					
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	10 J	160 – 215 mA	260 – 345 mA	1 650 – 2 300 mA	360 – 490 mA	665 – 935 mA	1 335 – 1 685 mA
	15 J	210 – 265 mA	360 – 445 mA	1 650 – 2 300 mA	420 – 540 mA	765 – 1 035 mA	1 535 – 1 885 mA
Electrical data		PA X 20					
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	10 J	215 – 335 mA	340 – 560 mA	1 900 – 3 200 mA	495 – 800 mA	845 – 1 430 mA	1 220 – 1 690 mA
	15 J	165 – 385 mA	440 – 660 mA	1 900 – 3 200 mA	545 – 850 mA	945 – 1 540 mA	1 520 – 1 890 mA

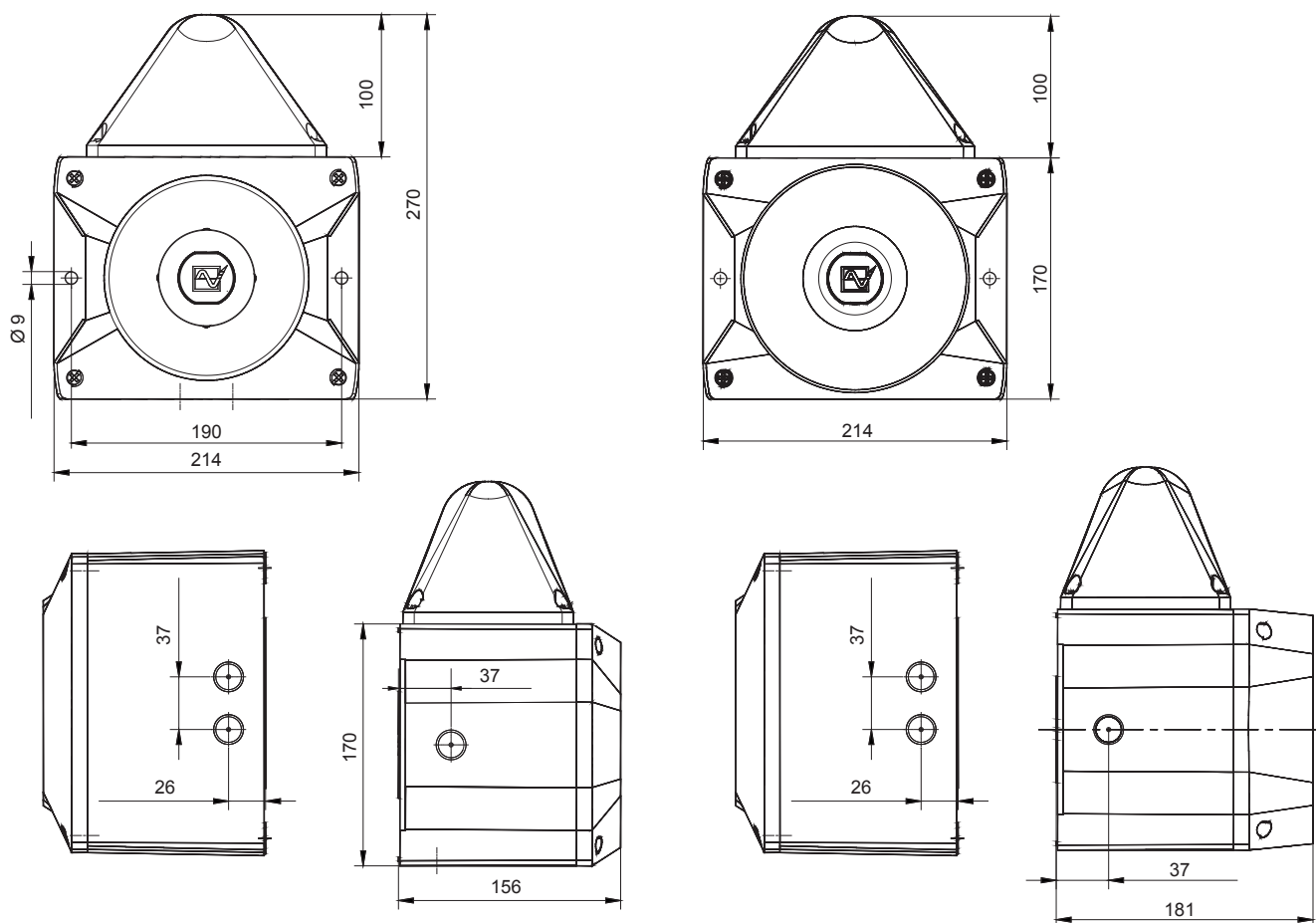
¹ power consumption dependent on operating voltage

Mechanical data		PA X 10-10	PA X 10-15	PA X 20-10	PA X 20-15
Sound pressure level		110 dB (A)		120 dB (A)	
Sound level reduction		max. - 12 dB via potentiometer			
Alarm tones		80 (see tone table page 172/173)			
Flash energy		10 J	15 J	10 J	15 J
Flash rate		1 Hz = 60 flashes/min.			
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	PC / ABS blend			
	lens flashing light	polycarbonate (PC)			
Colour	housing	similar to RAL 3000 (flame red) / RAL 7035 (light grey) / RAL 9003 (signal white)			
	lens flashing light	clear, white, yellow, amber, red, green, blue			
Cable entry		4 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	2 133 g	2 163 g	2 268 g	2 298 g
	DC	2 056 g	2 086 g	2 191 g	2 221 g

Dimensions

PA X 10-10 / PA X 10-15

PA X 20-10 / PA X 20-15



Ordering details

Article numbers		PA X 10-10			PA X 20-15		
Version	Rated voltage	230 V AC	115 V AC	24 V DC	230 V AC	115 V AC	24 V DC
yellow lens	housing red	233 61 10 3 000	233 61 15 3 000	233 61 80 3 000	233 72 10 3 000	233 72 15 3 000	233 72 80 3 000
amber lens	housing red	233 61 10 4 000	233 61 15 4 000	233 61 80 4 000	233 72 10 4 000	233 72 15 4 000	233 72 80 4 000
red lens	housing red	233 61 10 5 000	233 61 15 5 000	233 61 80 5 000	233 72 10 5 000	233 72 15 5 000	233 72 80 5 000
yellow lens	housing grey	233 61 10 3 055	233 61 15 3 055	233 61 80 3 055	233 72 10 3 055	233 72 15 3 055	233 72 80 3 055
amber lens	housing grey	233 61 10 4 055	233 61 15 4 055	233 61 80 4 055	233 72 10 4 055	233 72 15 4 055	233 72 80 4 055
red lens	housing grey	233 61 10 5 055	233 61 15 5 055	233 61 80 5 055	233 72 10 5 055	233 72 15 5 055	233 72 80 5 055

Article numbers for other voltages and versions on request

Options / Accessories



Enclo-
sure
fitting

Surface
gasket

Tamper-
proof
sealing



SSM
(only for 24 V DC)

See page 173 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			
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	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	
69	Continuous tone	440 Hz	
71	Continuous tone	340 Hz	
77	Interrupted tone	2400 Hz	
82	Interrupted tone, PFEER (general alarm), UK BS5839-1 (back-up alarm)	1000 Hz	
83	Interrupted tone, PFEER (general alarm)	1000 Hz	
88	Interrupted tone	950 Hz	
90	Interrupted tone	825 Hz	
91	Interrupted tone	800 Hz	
92	Interrupted tone	800 Hz	
93	Interrupted tone (fast), horn	800 Hz	
97	Interrupted tone	725 Hz	
98	Interrupted tone, Sweden SS031711 (emergency signal)	700 Hz	
100	Interrupted tone, industrial alarm (Germany)	680 Hz	
101	Interrupted tone, Sweden SS031711 (important message (pres-mess))	660 Hz	
102	Interrupted tone, Sweden SS031711 (local warning)	660 Hz	
103	Interrupted tone, Sweden SS031711 (air raid warning)	660 Hz	
104	Interrupted tone, Sweden SS031711 (emergency signal)	660 Hz	
107	Interrupted tone, Germany KTA3901 (evacuation alarm)	500 Hz	
109	Interrupted tone, Australia AS2220, AS1610, AS1670	420 Hz	
110	Interrupted tone, (fast variable), bell	1450 Hz	
111	Interrupted tone, ISO8201 (emergency evacuation signal), USA (evacuation alarm)	470 Hz	
112	Interrupted tone, ISO8201 (emergency evacuation signal)	950 Hz	
113	Interrupted tone, ISO8201 (emergency evacuation signal), Sweeping	2850 Hz	
115	Interrupted tone, IMO (telephone call)	950 Hz	
116	Interrupted tone, IMO (leave ship)	950 Hz	
117	Interrupted tone, IMO SOLAS III/50 + SOLAS III/6.4 (general alarm)	825 Hz	
122	Alternating tone	2900 Hz, 2400 Hz	
123	Alternating tone	2900 Hz, 2400 Hz	
124	Alternating tone, Singapore	2000 Hz, 1000 Hz	
125	Alternating tone	1400 Hz, 1200 Hz	
128	Alternating tone	1025 Hz, 825 Hz	
130	Alternating tone, UK BS5839-1 (fire alarm)	1000 Hz, 800 Hz	
131	Alternating tone, UK BS5839-1 (fire alarm, railway crossing)	1000 Hz, 800 Hz	
135	Alternating tone, UK BS5839-1 (fire alarm, increased urgency - railway crossing)	1000 Hz, 800 Hz	
142	Alternating tone	900 Hz, 500 Hz	

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

Basic tone no.	Description	Basic tone no.	Description
143	Alternating tone, industrial alarm (Germany)	147	Alternating tone, Sweden SS031711
144	Alternating tone	148	Alternating tone, Sweden SS031711
146	Alternating tone, France NFS 32-001 (fire alarm)	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
ON						2 *	128	112	57		ON				ON	77	61	52	122
	ON					2	26	100	93			ON			ON	82	131	52	83
ON	ON					2	61	131	112		ON	ON			ON	83	56	2	82
		ON				9	57	11	82				ON		ON	88	2	57	128
ON		ON				15	131	52	112		ON	ON			ON	90	131	52	125
	ON	ON				16	109	52	56			ON	ON		ON	91	30	52	110
ON	ON	ON				18	111	57	68		ON	ON	ON		ON	92	33	52	57
			ON			22	16	109	68				ON	ON	ON	93	2	128	57
ON			ON			23	131	52	112		ON		ON		ON	97	2	63	93
	ON		ON			24	131	52	131			ON		ON	100	131	52	125	
ON	ON		ON			25	131	52	92		ON	ON		ON	101	98	102	65	
		ON	ON			26	2	100	93				ON	ON	ON	103	131	65	147
ON		ON	ON			27	123	52	92		ON		ON	ON	ON	104	103	65	101
	ON	ON				29	35	52	61			ON	ON	ON	ON	109	16	52	22
ON	ON	ON				30	27	52	77		ON	ON	ON	ON	ON	110	131	61	91
				ON		31	131	52	57					ON	ON	112	2	57	128
ON				ON		33	30	52	35		ON			ON	ON	113	52	123	104
	ON			ON		34	35	52	93			ON		ON	ON	115	117	116	44
ON	ON			ON		35	27	52	110		ON	ON		ON	ON	116	117	93	125
		ON		ON		36	146	67	57				ON		ON	ON	93	116	125
ON		ON		ON		43	131	52	91		ON		ON	ON	ON	123	27	52	77
	ON	ON		ON		45	2	57	93			ON	ON	ON	ON	124	53	83	2
ON	ON	ON		ON		52	15	65	82		ON	ON	ON		ON	130	2	107	67
			ON	ON		54	46	54	131				ON	ON	ON	131	2	112	57
ON			ON	ON		55	131	52	128		ON		ON	ON	ON	135	16	56	109
	ON		ON	ON		56	82	35	33			ON		ON	ON	142	2	54	88
ON	ON		ON	ON		59	143	59	101		ON	ON		ON	ON	143	59	93	33
			ON	ON		60	131	52	125				ON	ON	ON	144	110	61	2
ON		ON	ON	ON		65	131	52	93		ON		ON	ON	ON	146	31	67	57
	ON	ON	ON	ON		66	110	52	107				ON	ON	ON	148	131	52	92
ON	ON	ON	ON	ON		69	131	52	110		ON	ON	ON	ON	ON	152	110	61	13

* factory setting

Accessories

Ordering details

Article numbers	PA X 1-05	PA X 5-05	PA 10 X / PA 20 X
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		