

# PATROL FLASHING SOUNDERS 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



reddot design award  
winner 2013

<b>PA X 10</b> 56m	<b>PA X 20</b> 178m	<b>IP 66</b> Protection system	<b>IK 08</b> Impact-proof housing	<b>+ 55 °C</b> <b>- 40 °C</b> Operating temperature	Acoustic penetration	UL	<b>10 Years</b> Warranty
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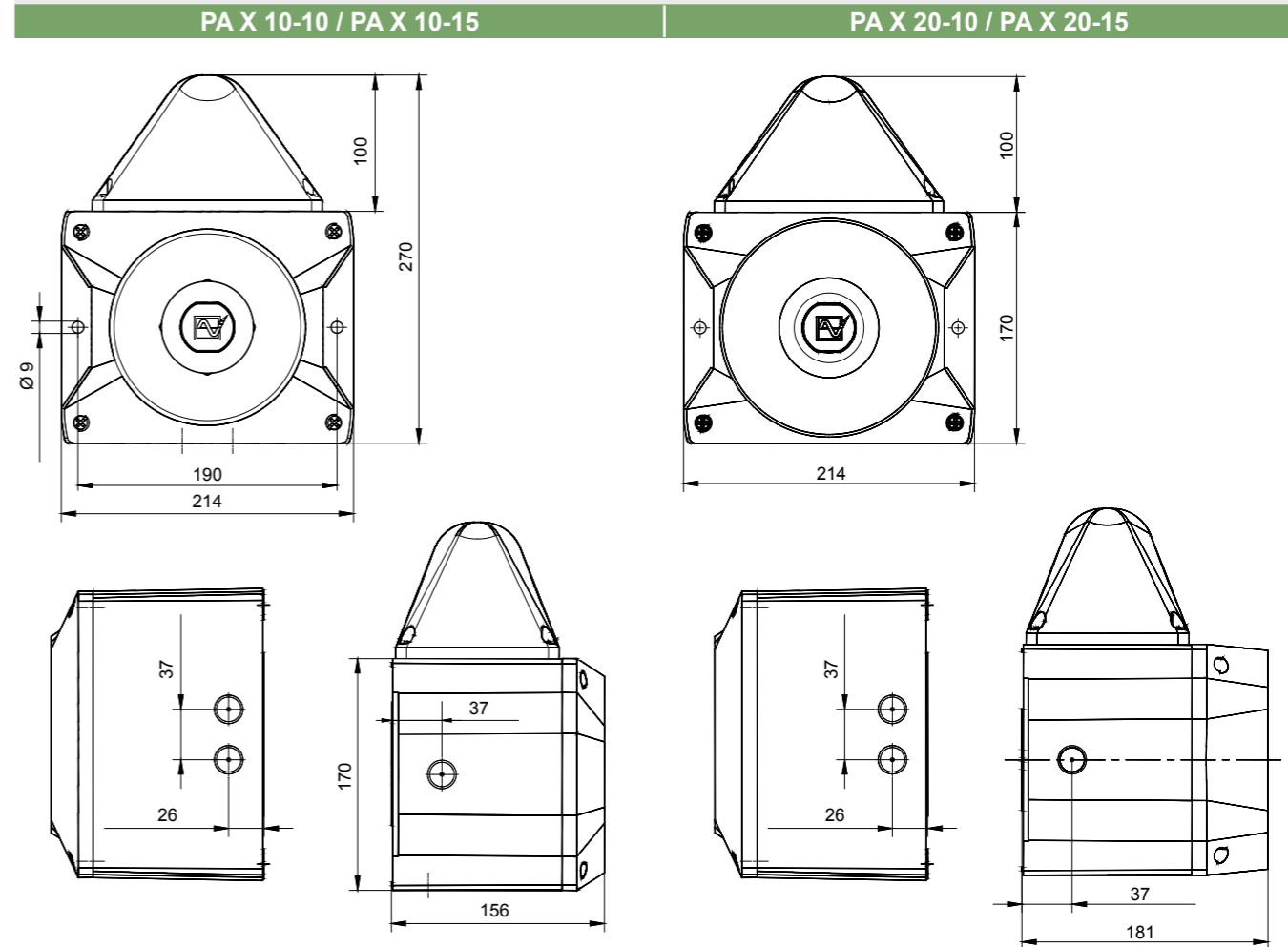
Electrical data		PA X 10					
Rated voltage		230 V AC	115 V AC	24 V AC	48 V DC	24 V DC	12 V DC
Rated frequency		50 / 60 Hz	50 / 60 Hz	50 / 60 Hz			
Operating range		187 – 255 V	90 – 135 V	18 – 30 V	40 – 60 V	18 – 30 V	12 – 15 V
Nominal current consumption <sup>1</sup>	10 J	160 – 215 mA	260 – 345 mA	1,650 – 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 <sup>1</sup>	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

<sup>1</sup> 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 164/165)			
Flash energy	10 J	15 J	10 J	15 J
Flash rate	1 Hz = 60 flashes/min.			
Light intensity (DIN 5037) <sup>1</sup>	129 cd	190 cd	129 cd	190 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	PC / ABS blend		
	lens flashing light	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	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 <sup>2</sup> fine wire with cable end sleeve, AWG 16			
Weight	AC	2,133 g	2,163 g	2,268 g
	DC	2,056 g	2,086 g	2,221 g

<sup>1</sup> with a clear lens

## Dimensions



## 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
clear lens	housing red	233 61 10 1 000	233 61 15 1 000	233 61 80 1 000	233 72 10 1 000	233 72 15 1 000	233 72 80 1 000
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

GL	MED	Enclosure fitting	Surface gasket	Tamper-proof sealing	SSM (only for 24 V DC)
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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		Tone	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	Tone	C1	C2	C1+C2	1	2	3	4	5	6	Tone	C1	C2	C1+C2
						Tone no.	Tone no.									Tone no.			
						1			2						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			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	93	2	128	57
ON			ON			23	131	52	112	ON			ON		ON	97	2	63	93
	ON					24	131	52	131		ON		ON		ON	100	131	52	125
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
						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	117	93	116	125
ON		ON	ON			43	131	52	91	ON		ON		ON	ON	123	27	52	77
						45	2	57	93		ON	ON		ON	ON	124	53	83	2
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					56	82	35	33		ON		ON	ON	ON	142	2	54	88
ON	ON			ON	ON	59	143	59	101	ON	ON		ON	ON	ON	143	59	93	33
			ON	ON		60	131	52	125			ON	ON	ON	ON	144	110	61	2
ON		ON	ON	ON		65	131	52	93	ON		ON	ON	ON	ON	146	31	67	57
	ON	ON	ON	ON		66	110	52	107		ON	ON	ON	ON	ON	148	131	52	92
ON	ON	ON	ON	ON		69	131	52	110	ON	ON	ON	ON	ON	ON	152	110	61	13

\* factory setting

**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
<b>Enclosure fitting</b>	For connection (daisy-chaining) of several sounders of the PATROL series			283 00 00 0 003
<b>Surface gasket</b>	Sealing of the sounder installation surface when, e.g. cable entry is executed from the back.			283 00 00 0 004
<b>Tamper-proof sealing (pack of 4)</b>	Anti-tamper sealing for fasteners of the PATROL or PYRA devices after installation in order to prevent manipulation of the devices.			283 00 00 0 006
				281 11 50 0 000