PATROL FLASHING SOUNDERS 117/122 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.
- Various light intensities available to support best match of audible and visual coverage.

IP 66 protection system

IK08 impact-proof housing

+55 °C / –40 °C operating temperature

acoustic penetration

external tone selection

UL

10 Years warranty

EAC

PRODUCT		PA X 10					
DATA							
Operating range		187–255 V	90–135 V	18–30 V	40–60 V	18–30 V	12 –15 V
		AC 50 I 60 Hz			DC		
Nominal current consumption [1]	10 J	160–215 mA @ 230 V	300–450 mA	665–935 mA @ 24 V	300–530 mA	680–1040 mA	1400–1890 mA
	15 J	220–320 mA	330–480 mA	1400–2250 mA	440–670 mA	850–1210 mA	1550–2040 mA

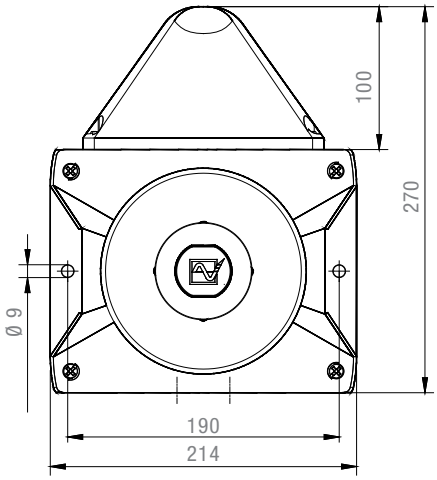
PRODUCT		PA X 20					
DATA							
Operating range		187–255 V	90–135 V	18–30 V	40–60 V	18–30 V	12 –15 V
		AC 50 I 60 Hz			DC		
Nominal current consumption [1]	10 J	160–360 mA	300–630 mA	1400–3000 mA	300–800 mA	680–1480 mA	1400–1860 mA
	15 J	165–385 mA @ 230 V	330–660 mA	945–1540 mA @ 24 V	440–940 mA	850–1650 mA	1550–2010 mA

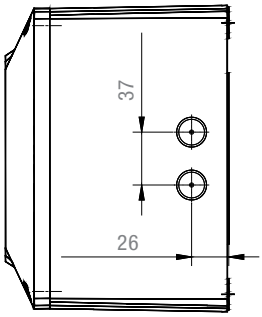
PRODUCT		PA X 10-10	PA X 10-15	PA X 20-10	PA X 20-15
Sound pressure level		117 dB(A)		122 dB(A)	
Sound pressure level @DIN-tone		115 dB(A)		120 dB(A)	
Sound level reduction		max. –12 dB via potentiometer			
Alarm tones		80 / 4 tones are externally selectable			
Flash energy		10 Joule	15 Joule	10 Joule	15 Joule
Flash rate		1 Hz = 60 flashes/min			
Light intensity (DIN 5037) [2]		149 cd	265 cd	149 cd	265 cd
Max. viewing distance		283 m	377 m	283 m	377 m
Operating temperature		–40 °C ... +55 °C			
Relative humidity		90 %			
Protection system (EN 60529)		IP 66			
Protection class		II			
Service life of the light source		light emission still 70 % after 8,000,000 flashes			
Material	sounder	PC / ABS blend similar to RAL 3000 (flame red) / RAL 7035 (light grey)			
	lens flashing light	polycarbonate (PC)			
Cable entry		4x M20 knock-outs prepared (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	2133 g	2163 g	2268 g	2298 g
	DC	2056 g	2086 g	2191 g	2221 g

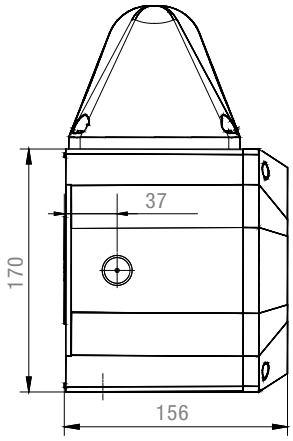
[1] power consumption dependent on operating voltage
[2] with a clear lens

DIMENSIONS

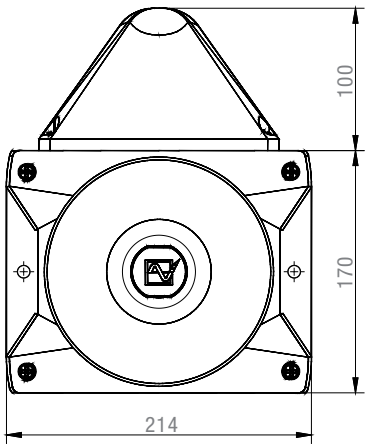
PA X 10-10 / PA X 10-15

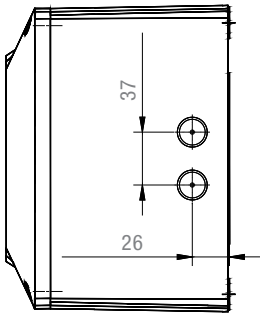


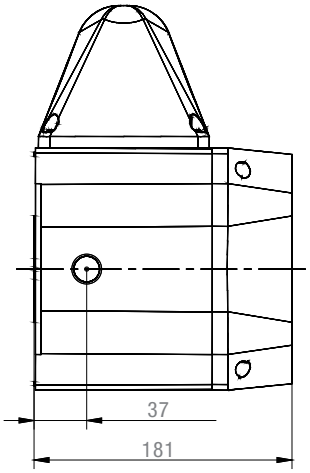




PA X 20-10 / PA X 20-15







OPTIONS/ACCESSORIES

DNV

SSM, 24 V DC

Surface gasket

Tamper-proof sealing

ARTICLE NO.		PA X 10-10			PA X 20-15		
HOUSING COLOUR	LENS COLOUR	230 V AC	115 V AC	24 V DC	230 V AC	115 V AC	24 V DC
red	white	23361101000	23361151000	23361801000	23372101000	23372151000	23372801000
red	yellow	23361103000	23361153000	23361803000	23372103000	23372153000	23372803000
red	orange	23361104000	23361154000	23361804000	23372104000	23372154000	23372804000
red	red	23361105000	23361155000	23361805000	23372105000	23372155000	23372805000
grey	yellow	23361103055	23361153055	23361803055	23372103055	23372153055	23372803055
grey	orange	23361104055	23361154055	23361804055	23372104055	23372154055	23372804055
grey	red	23361105055	23361155055	23361805055	23372105055	23372155055	23372805055

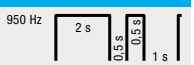
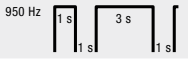
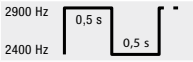
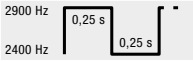
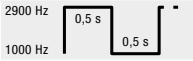
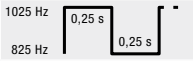
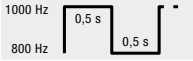
Article numbers for other voltages and versions on request.

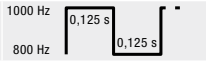
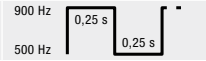
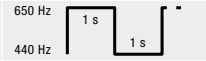
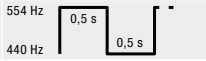
ARTICLE NO.		PA X 10 I PA X 20
Surface gasket	Sealing of the sounder installation surface when, e.g. cable entry is executed from the back.	28300000006
Tamper-proof sealing (pack of 4)	Anti-tamper sealing for fasteners of the PATROL devices after installation in order to prevent manipulation of the devices.	28300000002

TONE TABLE

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, evacuation alarm Australia AS2220
18	Slow whoop, NFPA
22	Pulsating tone, Australien alert AS1670, ISO8201
23	Siren
24	Siren
25	Siren
26	Siren, 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 gas alarm
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), 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

TONE TABLE

NO.	DESCRIPTION	
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)	

NO.	DESCRIPTION	
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	
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

DIP-SWITCH (SETTING OF BASIC TONE)							EXTERNAL TONE SELECTION		
							C1	C2	C1+C2
1	2	3	4	5	6	BASIC TONE	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

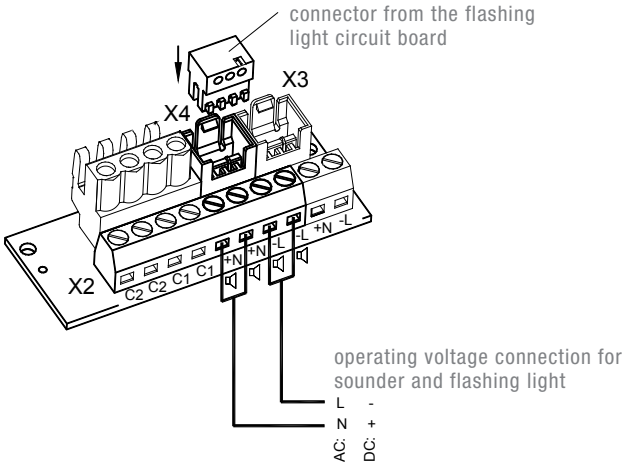
DIP-SWITCH (SETTING OF BASIC TONE)							EXTERNAL TONE SELECTION		
							C1	C2	C1+C2
1	2	3	4	5	6	BASIC TONE	TONE NO.		
					ON	71	131	52	93
ON					ON	77	61	52	122
	ON				ON	82	131	52	83
ON	ON				ON	83	56	2	82
		ON			ON	88	2	57	128
ON		ON			ON	90	131	52	125
	ON	ON			ON	91	30	52	110
ON	ON	ON			ON	92	33	52	57
			ON		ON	93	2	128	57
ON			ON		ON	97	2	63	93
	ON		ON		ON	100	131	52	125
ON	ON		ON		ON	101	98	102	65
		ON	ON		ON	103	131	65	147
ON		ON	ON		ON	104	103	65	101
	ON	ON	ON		ON	109	16	52	22
ON	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

* factory setting

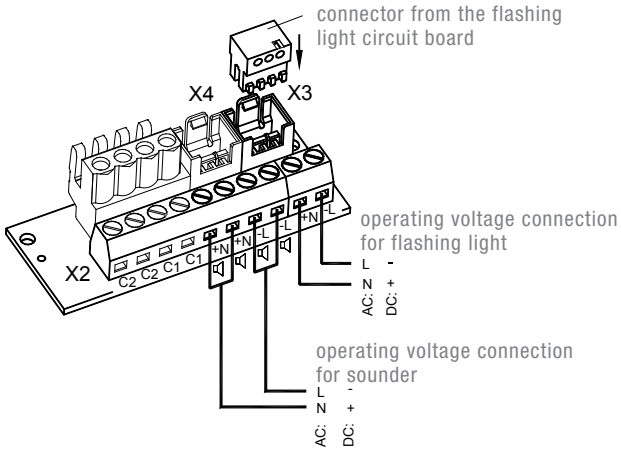
CONNECTION DIAGRAM

PA X 10-10 | PA X 10-15 | PA X 20-10 | PA X 20-15 light

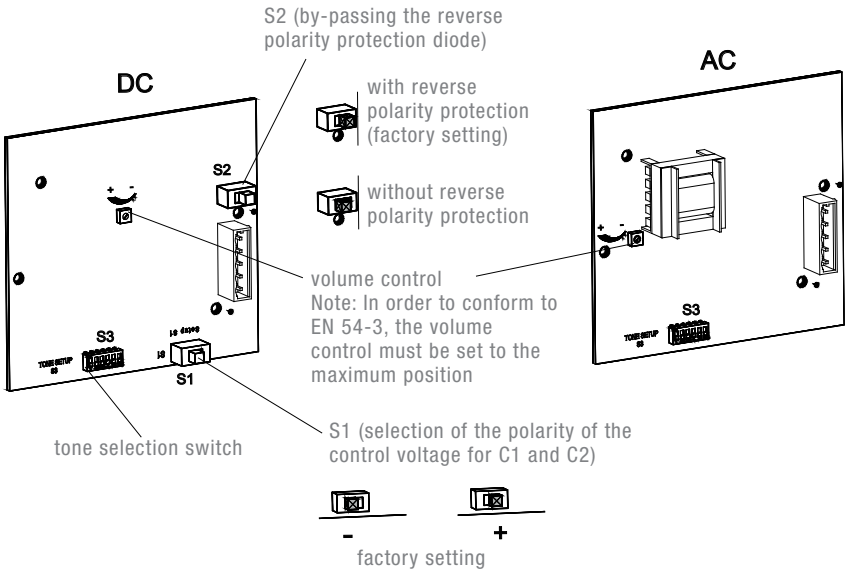
Common connection of flashing light and sounder
(delivery condition)



Separated connection of flashing light and sounder



PA X 10-10 | PA X 10-15 | PA X 20-10 | PA X 20-15 sounder



CONFORMITY TO STANDARDS

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

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