PATROL SOUNDERS 100/105 dB(A)
PA 1 / PA 5

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

IP 66 – protection system
IK08 – impact-proof housing
+55 °C / –40 °C – operating temperature
acoustic penetration
external tone selection
EN 54-3 – 24–48 V DC
VdS – 24–48 V DC
UL
10 Years – warranty
EAC

PRODUCT	PA 1				PA 5			
DATA								
Operating range	195–253 V	95–127 V	18–30 V	10–57 V	195–253 V	95–127 V	18–30 V	10–57 V
	AC 50 I 60 Hz			DC	AC 50 I 60 Hz			DC
Nominal current consumption [1]	9–15 mA	8–30 mA	59–120 mA	6–80 mA	9–15 mA	8–30 mA	59–120 mA	6–80 mA
Sound pressure level	100 dB(A)				105 dB(A)			
Sound level reduction	max. –12 dB via potentiometer							
Alarm tones	80 / 4 tones are externally selectable							
Operating temperature	–40 °C ... +55 °C							
Storage temperature	–40 °C ... +70 °C							
Relative humidity	90 %							
Protection system according to EN 6052	IP 66							
Protection class	II							
Duty cycle	100 %							
Material	PC / ABS blend similar to RAL 3000 (flame red) I RAL 7035 (light grey) I RAL 9003 (signal white)							
Cable entry	3x M20 M20 knock-outs on side, 1 knock-out on back				5x 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	405 g			270 g	778 g			643 g

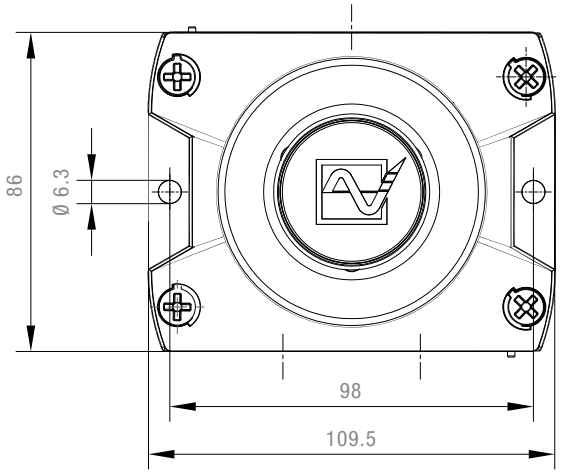
[1] Power consumption dependent on operating voltage.

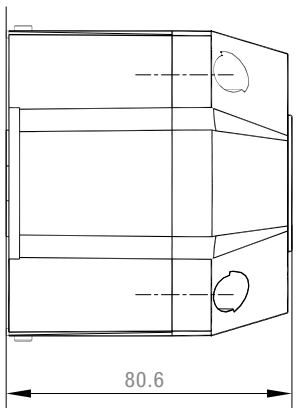
OPTIONS/ACCESSORIES

Enclo-sure fitting
Surface gasket
Tamper-proof sealing
Panel mounting kit

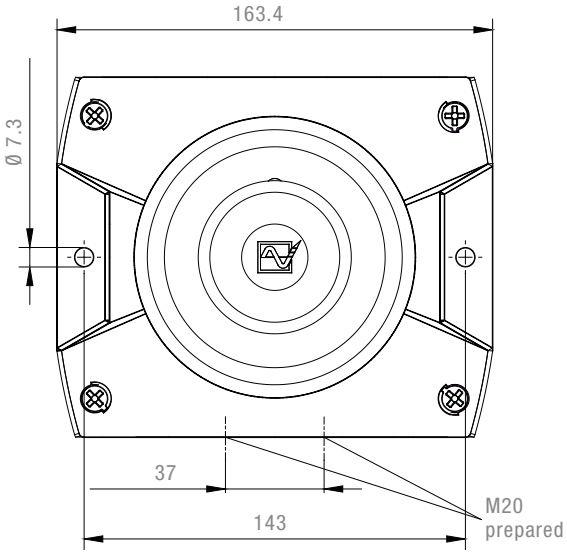
DIMENSIONS

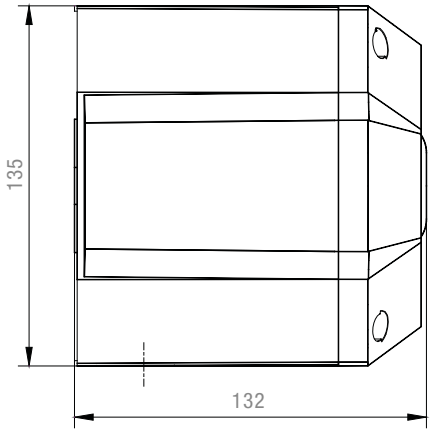
PA 1





PA 5



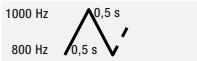
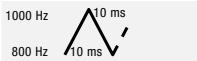
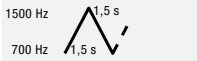
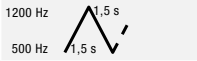


ARTICLE NO.		PA 1			PA 5		
VERSION	RATED VOLTAGE	230 V AC	115 V AC	10–57 V DC	230 V AC	115 V AC	10–57 V DC
Standard	housing red	23310100000	23310150000	23310630000	23350100000	23350150000	23350630000
GL/MED	housing red	23310100001	23310150001	23310630001	23350100001	23350150001	23350630001
Standard	housing grey	23310100055	23310150055	23310630055	23350100055	23350150055	23350630055
GL/MED	housing grey	23310100056	23310150056	23310630056	23350100056	23350150056	23350630056

Article numbers for other voltages and versions on request.

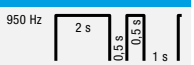
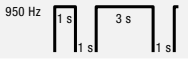
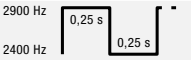
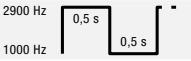
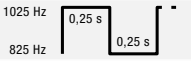
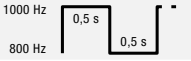
ARTICLE NO.		PA 1	PA 5
Enclosure fitting	For connection (daisy-chaining) of several sounders of the PATROL series.	28300000003	28300000002
Surface gasket	Sealing of the sounder installation surface when, e. g. cable entry is executed from the back.	28300000004	28300000005
Tamper-proof sealing (pack of 4)	Anti-tamper sealing for fasteners of the PATROL devices after installation in order to prevent manipulation of the devices.	28300000002	28300000002
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.	28300000007	28300000008

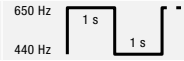
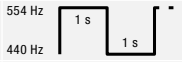
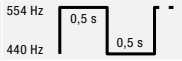
TONE TABLE

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	

NO.	DESCRIPTION	
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)	

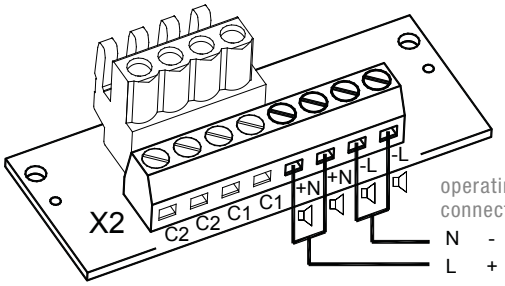
CONTROL OF THE TONES

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		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

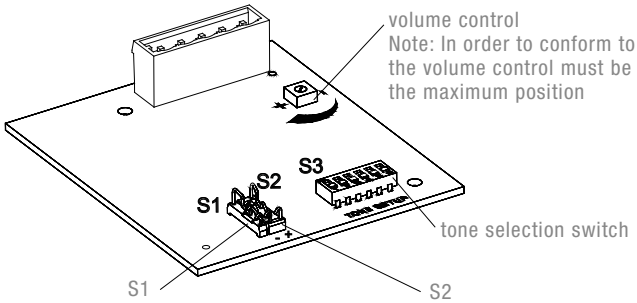
DIP-SWITCH (SETTING OF BASIC TONE)							EXTERNAL TONE SELECTION		
							C1	C2	C1+C2
1	2	3	4	5	6	BASIC TONE	TONE NO.		
					ON	71	131	52	93
ON					ON	77	61	52	122
	ON				ON	82	131	52	83
ON	ON				ON	83	56	2	82
		ON			ON	88	2	57	128
ON		ON			ON	90	131	52	125
	ON	ON			ON	91	30	52	110
ON	ON	ON			ON	92	33	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

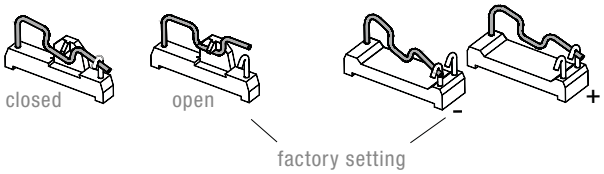
CONNECTION DIAGRAM



electrical connection and tone selection through external control of C1 and C2



Caution:
Position of changeover switch S2 only at „–“ or „+“. „Open“ position is not permitted and leads to malfunction.



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