

# PATROL LED SOUNDER MAX. 105 dB(A) / 76 cd PA L 1



Compact multifunction sounder/light combination with most flexible, ultra bright LED technology.

- Selectable signaling modes - No matter which signaling mode is required – you are able to choose the one that fits to your needs.
- Selectable blink & flash frequencies - Adaptable to all your applications – select the frequency your gadget requires and boost the perceptibility.
- Selectable Colour (RGB version only) - Not sure about the colour yet? One light for all your needs! PYRA® LED RGB permits to choose the colour you require. Stay flexible and keep your stock to a minimum!
- Safe and easy to install.
- Rapid mounting.
- Economic efficiency.

<b>RGB</b> multi colour LED (option)	<b>IP 66</b> protection system	<b>IK08</b> impact-proof housing	<b>+55 °C</b> <b>-40 °C</b> operating temperature	<b>10 Years</b> warranty	<b>EAC</b> EurAsien Conformity	<b>NEMA 4/4X</b> protection system	 brightness adjustable	<b>M12</b> connector (option)	<b>UL</b> UL approval
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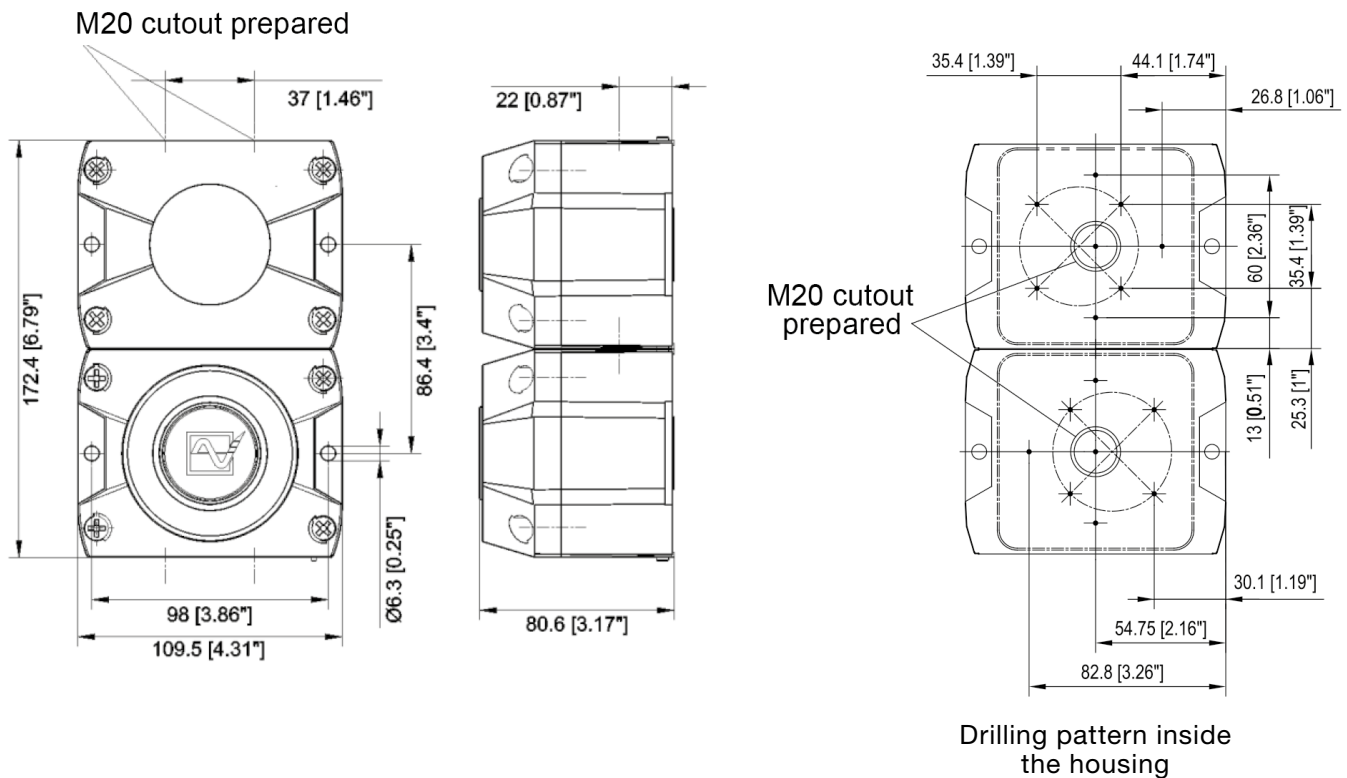
3D-COVERAGE PERFORMANCE DATA		PA L 1				
	<b>VISUAL</b>	Indicate	35.1 x 14.9 x 14.2 m	<b>AUDIBLE</b>	80 dB (A)	16 x 13.8 x 16 m
	Warn	15.6 x 6.6 x 6.4 m	85 dB (A)		9 x 7.8 x 9 m	
	Alarm	7.8 x 3.3 x 3.2 m	90 dB (A)		5.1 x 4.4 x 5.1 m	

To determine the exact signalling area for your needs, please use the online available Pfannenberg Sizing Software PSS.

PRODUCT DATA		PA L 1			
Rated voltage		230 V AC	115 V AC	24 V AC	12–48 V DC
Rated frequency		50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	–
Operating range		195–253 V	95–127 V AC	21.6–26.4 V	10–57 V
Current consumption light (max)		36 mA @ 230 V AC	51 mA @ 115 V AC	167 mA @ 24 V AC	120 mA @ 24 V DC
Current consumption sounder (max)		16 mA @ 230 V AC	30 mA @ 115 V AC	150 mA @ 24 V AC	70 mA @ 24 V DC
Max sound level		105 dB (A) @ 1m			
Volume control		max. -12 dB			
Tones		80			
Operating mode internally selectable		continuous light / blinking light / flashing light			
Light source		one high output LED per single unit			
Light intensity (DIN 5037) <sup>1</sup>		76 cd (reducible) per single unit			
Max. viewing distance		202 m			
Operating temperature		-40 °C ... +55 °C			
Storage temperature		-40 °C ... +70 °C			
Installation position		any			
Degree of protection		IP 66 (EN 60529), NEMA TYPE 4/4x, IK 08 (EN 62262)			
Service life of the light source		≥50,000 hrs			
Material	lens	( - RGB). Polycarbonate (PC)			
	housing	PC / ABS blend			
Cable entry		6x M20 pre-embossed			
Connecting terminal		0.14 - 2.5 mm <sup>2</sup> fine stranded			
Weight		max. 670 g			

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

**DIMENSIONS**



ORDERING DETAILS		PA L 1	
HOUSING COLOUR	LIGHT / LENS COLOUR	230 V AC	12-48 V DC
●	● ●	23313108055	23313638055
●	●	23313105000	23313635000
●	●	23313103055	23313633055
●	●	23313104055	23313634055
●	●	23313105055	23313635055

Article numbers for other colours and voltages on request.

**OPTIONS/ACCESSORIES**

Tamper-proof sealing for PYRA® / PATROL (4-Pack)	2830000002
Looking elements for PYRA® / PATROL (4-Pack)	2891200000
Surface seal	2830000004

Variant with M12 connection on request

TONE TABLE			
NO.	DESCRIPTION		
1	no tone		
2	Sawtooth, DIN tone 33404-3 Germany (emergency signal), PFEER PTAP	1200 Hz 500 Hz	
9	Slow whoop, fire alarm, UK BS5839-1	970 Hz 800 Hz	
11	Interrupted tone (fast)	970 Hz 800 Hz	
13	Interrupted tone	900 Hz 700 Hz	
15	Slow whoop, evacuation alarm Netherlands NEN 2575	1200 Hz 500 Hz	
16	Slow whoop, evacuation alarm Australia AS2220	1200 Hz 500 Hz	
18	Slow whoop, NFPA	775 Hz 422 Hz	
22	Pulsating tone, Australien alert AS1670, ISO8201	1200 Hz 500 Hz	
23	Siren	2400 Hz 500 Hz	
24	Siren	1200 Hz 300 Hz	
25	Siren	800 Hz 300 Hz	
26	Siren, industrial alarm Germany	1000 Hz 150 Hz	
27	Sweeping	2900 Hz 2400 Hz	
29	Sweeping (fast)	2900 Hz 2400 Hz	
30	Sweeping	2900 Hz 2400 Hz	
31	Sweeping, France NFC48-265	1600 Hz 1400 Hz	
33	Sweeping (medium), UK BS5839-1	1000 Hz 800 Hz	
34	Sweeping (fast)	1000 Hz 800 Hz	
35	Sweeping (fast), UK BS5839-1	1000 Hz 800 Hz	
36	Sweeping	1500 Hz 700 Hz	
43	Sweeping	1200 Hz 500 Hz	
44	Sweeping, IMO 3d, Germany KTA3901 evacuation alarm	1200 Hz 500 Hz	
45	Sweeping	1200 Hz 500 Hz	
46	Sweeping, general alarm Finland	1500 Hz 500 Hz	
52	Continuous tone	2400 Hz	
53	Continuous tone	2000 Hz	
54	Continuous tone, Finland (all-clear signal)	1500 Hz	
55	Continuous tone, PFEER gas alarm	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	2200 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 (pre-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	

TONE TABLE			
NO.	DESCRIPTION		
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 	
123	Alternating tone	2900 Hz 	
124	Alternating tone, Singapore	2900 Hz 	
125	Alternating tone	1400 Hz 	
128	Alternating tone	1025 Hz 	
130	Alternating tone, UK BS5839-1 (fire alarm)	1000 Hz 	
131	Alternating tone, UK BS5839-1 (fire alarm, railway crossing)	1000 Hz 	
135	Alternating tone, UK BS5839-1 (fire alarm, increased urgency – railway crossing)	1000 Hz 	
142	Alternating tone	900 Hz 	
143	Alternating tone, industrial alarm Germany	660 Hz 	
144	Alternating tone	650 Hz 	
146	Alternating tone, France NFS 32-001 (fire alarm)	554 Hz 	EN 54-3
147	Alternating tone, Sweden SS031711	554 Hz 	
148	Alternating tone, Sweden SS031711	554 Hz 	
152	Alternating tone (two tone chime)	800 Hz 	

## 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

The visual characteristics of flashing lights conform to the European standard DIN EN 842; "Machine safety – visual alarm signals". Requirements contained in the DIN EN 981 standard; "Machine safety – system of acoustic and visual alarm and information signals", can be fulfilled.

The colours "red" for the emergency signal and "yellow" for the warning signal conform to the requirements of IEC 73 / DIN EN 60073 / VDE 0199; "Coding of display devices and control elements using colours and supplementary means".

References to visual alarm devices can be found in the following standards:  
EN 60825-1 Radiation safety of laser devices, identical to IEC 825 and DIN-VDE 0837  
DIN EN 54 Fire alarm systems  
DIN 54113-2 Radiation protection regulations for the technical operation of X-ray equipment up to 500 kV