

PATROL SOUNDER/LED COMBINATION MAX. 107 dB(A) / 23 cd PA L 5



Compact multifunction sounder/light combination with wide signaling area.

- Numerous tones selectable – A numerous selection of different tones for all kind of applications always ensure the best coverage.
- External tone selection – A maximum of four different tones can be switched by an external controller in just one device for different situations.
- Selectable signaling modes – Continuous steady on, blinking light or flashing light.
- Selectable blink & flash frequencies – Adaptable to all your applications - select the frequency your gadget requires and boost the perceptibility.
- Selectable colour (RGB version only) – Choose the colour you require. Stay flexible and keep your stock to a minimum!
- Safe, easy and rapid mounting.
- Economic efficiency – Due to an extremely high efficiency and good penetration of acoustical obstacles you can significantly reduce the number of devices.



multi colour LED (option)



protection system



protection system



impact-proof housing



operating temperature



brightness adjustable



warranty



EurAsian Conformity

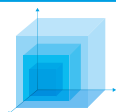


UL approval



connector (option)

3D-COVERAGE PERFORMANCE DATA



| | | PA L 5 | |
|--------|----------|----------------------|----------------------|
| VISUAL | Indicate | 38.7 x 43.2 x 44.1 m | AUDIBLE |
| | Warn | 17.2 x 19.2 x 19.6 m | |
| | Alarm | 8.6 x 9.6 x 9.8 m | |
| | | 80 dB (A) | 14.1 x 18.1 x 14.1 m |
| | | 85 dB (A) | 7.9 x 10.2 x 7.9 m |
| | | 90 dB (A) | 4.4 x 5.7 x 4.4 m |

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

PRODUCT

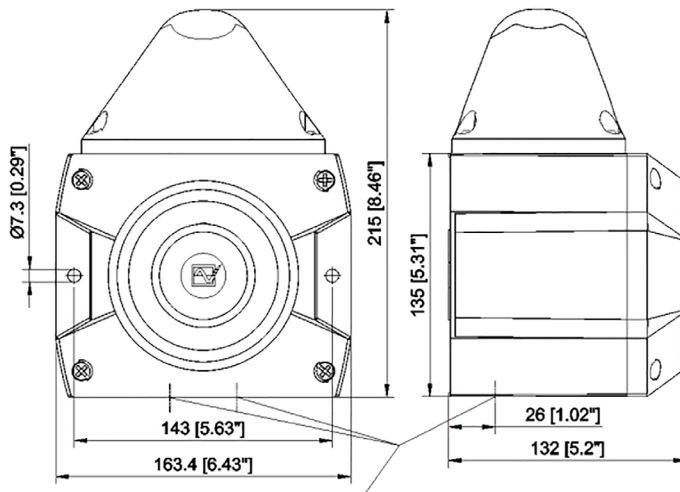
PA L 5

DATA

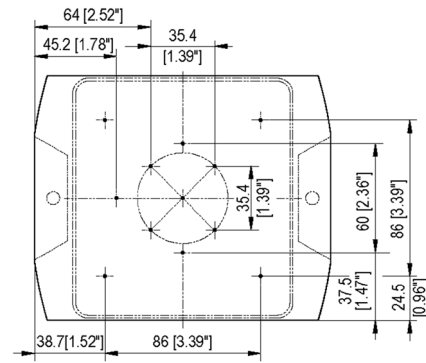
| | | | | |
|---|---|------------------------|-----------------------|------------------|
| Rated voltage | 230 V AC 50 / 60 Hz | 115 V AC 50 / 60 Hz | 24 V AC 50 / 60 Hz | 12-48 V DC - |
| Operating range | 195 – 253 V | 95 – 127 V | 21.6 – 26.4 V | 10 – 57 V |
| Current consumption light (max) | 36mA | 51 mA | 167 mA | 120 mA @ 24 V DC |
| Current consumption sound (max) | 16 mA | 30 mA | 150 mA | 70 mA @ 24 V DC |
| Sound pressure level | max. 107 dB (A) | | | |
| Sound level reduction | max. -12 dB | | | |
| Alarm tones | 80 | | | |
| Light alternation frequency | blinking light 1 Hz / 2 Hz flashing light 0.1 Hz / 0.5 Hz / 0.75 Hz / 1 Hz / 2 Hz | | | |
| Light source | single colour: two high output LED / RGB: one high output LED | | | |
| Light intensity (DIN 5037) ¹ | 23 cd (reducible) | | | |
| Colour of RGB LED | | | | |
| Max. viewing distance | 111 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 | | | |
| | housing | PC / ABS blend | | |
| Cable entry | 4 x M20 pre-embossed | | | |
| Connecting terminal | 0.14 - 2.5 mm ² fine stranded | | | |
| Weight | DC: 800 g / AC: 980 g | | | |

¹ with a clear lens

DIMENSIONS



M20 cutout prepared



Drilling pattern inside the housing

| ARTICLE NO. | | PA L 5 | |
|----------------|---------------------|-------------|-------------|
| HOUSING COLOUR | LIGHT / LENS COLOUR | 230 V AC | 12-48 V DC |
| ● | ● / ○ | 23353108055 | 23353638055 |
| ● | ● | 23353103055 | 23353633055 |
| ● | ● | 23353104055 | 23353634055 |
| ● | ● | 23353105055 | 23353635055 |
| ● | ● | 23353106055 | 23353636055 |

Article numbers for other colours and voltages on request.

| OPTIONS / ACCESSORIES | |
|----------------------------|-------------|
| Sealing plug, 4-pack | 28300000002 |
| Spare locking bolt, 4-pack | 28912000000 |
| Surface seal | 28300000005 |

Version with M12 connection on request

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 LED 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

STONE TABLE

| NO. | DESCRIPTION | | NO. | DESCRIPTION | |
|-----|---|------------------------|-----|---|---------|
| 1 | no tone | | 57 | Continuous tone, UK BS5839-1 | 950 Hz |
| 2 | Sawtooth, DIN tone 33404-3 Germany (emergency signal), PFEER PTAP | 1200 Hz 500 Hz | 59 | Continuous tone | 880 Hz |
| 9 | Slow whoop, fire alarm, UK BS5839-1 | 970 Hz 800 Hz | 60 | Continuous tone | 825 Hz |
| 11 | Interrupted tone (fast) | 970 Hz 800 Hz | 61 | Continuous tone | 800 Hz |
| 13 | Interrupted tone | 900 Hz 700 Hz | 63 | Continuous tone | 725 Hz |
| 15 | Slow whoop, evacuation alarm Netherlands NEN 2575 | 1200 Hz 500 Hz | 65 | Continuous tone, Sweden SS031711 (all-clear signal) | 660 Hz |
| 16 | Slow whoop, evacuation alarm Australia AS2220 | 1200 Hz 500 Hz | 66 | Continuous tone | 554 Hz |
| 18 | Slow whoop, NFPA | 775 Hz 422 Hz | 67 | Continuous tone, Germany KTA3901 (all-clear signal) | 500 Hz |
| 22 | Pulsating tone, Australien alert AS1670, ISO8201 | 1200 Hz 500 Hz | 68 | Continuous tone | 470 Hz |
| 23 | Siren | 2400 Hz 500 Hz | 69 | Continuous tone | 440 Hz |
| 24 | Siren | 1200 Hz 300 Hz | 71 | Continuous tone | 340 Hz |
| 25 | Siren | 800 Hz 300 Hz | 77 | Interrupted tone | 2200 Hz |
| 26 | Siren, industrial alarm Germany | 1000 Hz 150 Hz | 82 | Interrupted tone, PFEER (general alarm), UK BS5839-1 (back-up alarm) | 1000 Hz |
| 27 | Sweeping | 2900 Hz 2400 Hz | 83 | Interrupted tone, PFEER (general alarm) | 1000 Hz |
| 29 | Sweeping (fast) | 2900 Hz 2400 Hz | 88 | Interrupted tone | 950 Hz |
| 30 | Sweeping | 2900 Hz 2400 Hz | 90 | Interrupted tone | 825 Hz |
| 31 | Sweeping, France NFC48-265 | 1600 Hz 1400 Hz | 91 | Interrupted tone | 800 Hz |
| 33 | Sweeping (medium), UK BS5839-1 | 1000 Hz 800 Hz | 92 | Interrupted tone | 800 Hz |
| 34 | Sweeping (fast) | 1000 Hz 800 Hz | 93 | Interrupted tone (fast), Horn | 800 Hz |
| 35 | Sweeping (fast), UK BS5839-1 | 1000 Hz 800 Hz | 97 | Interrupted tone | 725 Hz |
| 36 | Sweeping | 1500 Hz 700 Hz | 98 | Interrupted tone, Sweden SS031711 (emergency signal) | 700 Hz |
| 43 | Sweeping | 1200 Hz 500 Hz | 100 | Interrupted tone, industrial alarm Germany | 680 Hz |
| 44 | Sweeping, IMO 3d, Germany KTA3901 evacuation alarm | 1200 Hz 500 Hz | 101 | Interrupted tone, Sweden SS031711 (important message (pre-mess)) | 660 Hz |
| 45 | Sweeping | 1200 Hz 500 Hz | 102 | Interrupted tone, Sweden SS031711 (local warning) | 660 Hz |
| 46 | Sweeping, general alarm Finland | 1500 Hz 500 Hz | 103 | Interrupted tone, Sweden SS031711 (air raid warning) | 660 Hz |
| 52 | Continuous tone | 2400 Hz | 104 | Interrupted tone, Sweden SS031711 (emergency signal) | 660 Hz |
| 53 | Continuous tone | 2000 Hz | 107 | Interrupted tone, Germany KTA3901 (evacuation alarm) | 500 Hz |
| 54 | Continuous tone, Finland (all-clear signal) | 1500 Hz | 109 | Interrupted tone, Australia AS2220, AS1610, AS1670 | 420 Hz |
| 55 | Continuous tone, PFEER gas alarm | 1200 Hz | 110 | Interrupted tone, (fast variable), bell | 1450 Hz |
| 56 | Continuous tone | 1000 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 2400 Hz | |
| 123 | Alternating tone | 2900 Hz 2400 Hz | |
| 124 | Alternating tone, Singapore | 2900 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 | |
| 143 | Alternating tone, industrial alarm Germany | 660 Hz 440 Hz | |
| 144 | Alternating tone | 650 Hz 440 Hz | |
| 146 | Alternating tone, France NFS 32-001 (fire alarm) | 554 Hz 440 Hz | |
| 147 | Alternating tone, Sweden SS031711 | 554 Hz 440 Hz | |
| 148 | Alternating tone, Sweden SS031711 | 554 Hz 440 Hz | |
| 152 | Alternating tone (two tone chime) | 800 Hz 650 Hz | |