

Alarm sounders 120 dB(A) / 110 dB(A) / 105 dB(A) / 100 dB(A)

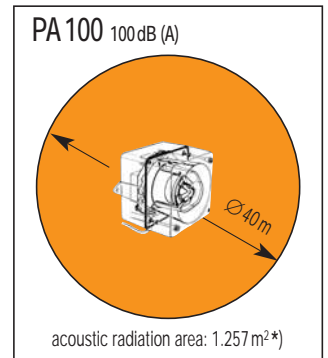
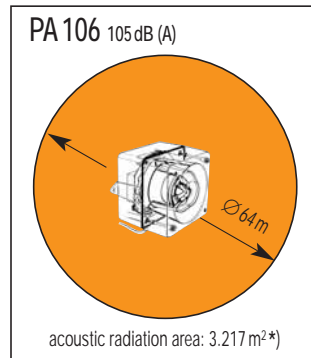
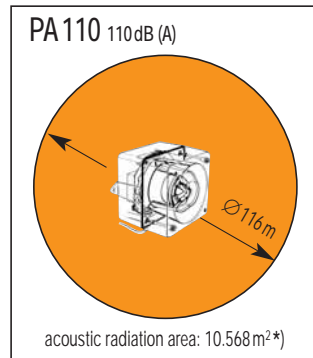
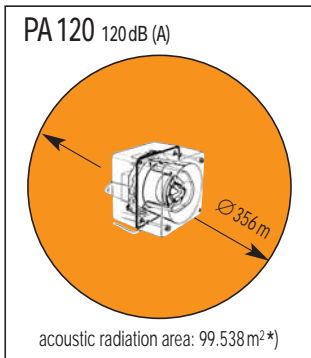
EN 54-3 certified
24 V versions !



PA 120 / PA 110 / PA 106 / PA 100

The PA series oscillating tone warning sounders are the result of further development by Pfannenberg. Constructed from high impact resistant plastic, these units are suitable for many industrial applications. Low current consumption at high sound levels and strident warning tones with optimum penetration, make them suitable for universal installation in hospital premises, administration buildings and technical facilities.

Acoustic data:



*) see sample calculation under "Technology of acoustic alarms"

Sound level reduction	up to 80 dB with trimmer
Duty cycle	100%

Sound patterns: PA 100 and PA 106 = 32 tones! PA 110 and PA 120 = 45 tones!

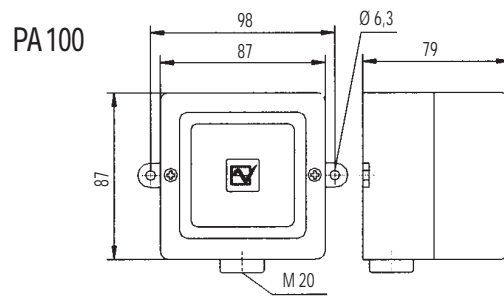
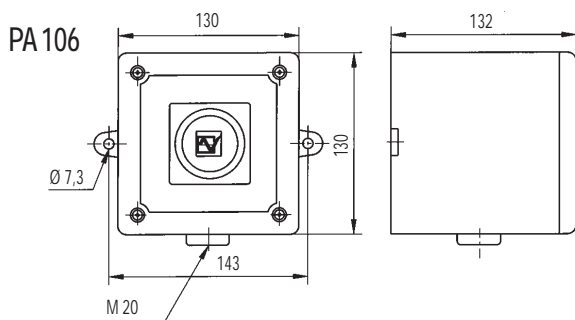
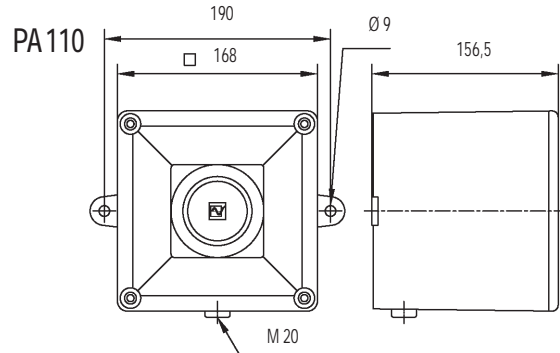
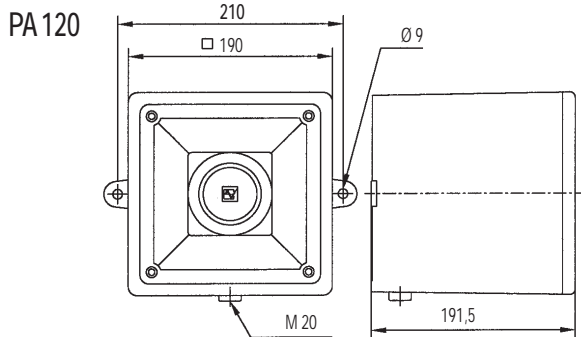
Basic tone No.	Tone description	Stage 2	Stage 3
1	Continuous tone 340 Hz	2	5
2	Alternating tone 800 Hz / 1000 Hz, at 0,25 s intervals	17	5
3	Slow whoop 500 Hz-1200 Hz, duration 3 s, 0,5 s gap	2	5
4	Sweeping 800 Hz / 1000 Hz, at 1 Hz sweep	6	5
5	Continuous tone 2400 Hz	3	20
6	Sweeping 2400 Hz / 2900 Hz, at 7 Hz	7	5
7	Sweeping 2400 Hz / 2900 Hz, at 1 Hz	10	5
8	Siren 500 Hz / 1200 Hz / 500 Hz, duration 3 s	2	5
9	Sawtooth 1200 Hz / 500 Hz within 1 s	15	2
10	Alternating tone 2400 Hz / 2900 Hz, change every 0,25 s	7	5
11	Interrupted tone 1000 Hz, 0,5 s signal, 0,5 s gap	2	5
12	Alternating tone 800 Hz / 1000 Hz, change every 1,14 s	4	5
13	Interrupted tone 2400 Hz, 0,5 s signal, 0,5 s gap	15	5
14	Interrupted tone 800 Hz, 0,25 s signal, 1 s gap	4	5
15	Continuous tone 800 Hz	2	5
16	Interrupted tone 660 Hz 150 ms signal, 150 ms gap	18	5
17	Alternating tone 544 Hz (100 ms) / 440 Hz (400 ms) NF S 32-001	2	27
18	Interrupted tone 660 Hz, 1,8 s signal, 1,8 s gap	2	5
19	Sweeping 1400 - 1600 Hz sweep up 1 s, sweep down 0,5 s (NF C 48-265)	2	5
20	Continuous tone 660 Hz	2	5
21	Alternating tone 554 Hz / 440 Hz, change every 0,5 s	2	5
22	Interrupted tone 660 Hz, 0,875 s signal, 0,875 s gap	2	5
23	Interrupted tone 800 Hz, 0,25 s signal, 0,25 s gap	6	5

Basic tone No.	Tone description	Stage 2	Stage 3
24	Sweeping 800 Hz / 1000 Hz, at 50 Hz	29	5
25	Sweeping 2400 Hz / 2900 Hz, at 50 Hz	29	5
26	Simulated bell sound	2	15
27	Continuous tone 554 Hz	26	5
28	Continuous tone 440 Hz	2	5
29	Sweeping 800 Hz / 1000 Hz, at 7 Hz	7	5
30	Continuous tone 300 Hz	2	5
31	Siren 660 Hz / 1200 Hz, at 1 Hz	26	5
32	Two tone chime	26	15
33	Interrupted tone 745 Hz, 0,5 s signal, 0,5 s gap	2	-
34	Alternating tone 1000 Hz / 2000 Hz, change every 0,5 s	38	45
35	Interrupted tone 420 Hz, change every 0,625 s	36	5
36	Slow whoop 500 Hz up to 1200 Hz within 0,375 s, 0,25 s gap	35	5
37	Continuous tone 1000 Hz	9	45
38	Continuous tone 2000 Hz	34	45
39	Interrupted tone 800 Hz, 0,25 s signal, 1 s gap	23	17
40	Alternating tone 544 Hz (100 ms) / 440 Hz (400 ms) (NF S 32-001)	31	27
41	Motor siren, slow sweep up to 1200 Hz	2	5
42	Motor siren, slow sweep down to 800 Hz	2	5
43	Continuous tone 1200 Hz	2	5
44	Motor siren, slow sweep up to 2400 Hz	2	5
45	1000 Hz, 1 s signal, 1 s gap	38	34

The tones are selected by operation of a DIP switch on the PCB. Through external connection there is the possibility for two additional tones (stage 2 & 3).

We reserve the right to technical alterations. Subject to correction. 075000044

Mechanical data and dimensions:



Electrical data: **AC** 50Hz/60Hz


Nominal voltage	Electrical data	PA 120	PA 110	PA 106	PA 100
230V ± 10%	Rated current:	120 mA	60 mA	15 mA	15 mA
115V ± 10%	Rated current:	240 mA	100 mA	20 mA	20 mA
24V ± 10%	Rated current:	1000 mA	500 mA	40 mA	40 mA

DC

Nominal voltage	Electrical data	PA 120	PA 110	PA 106	PA 100
24V (10-30)	Rated current:	950 mA	200 mA	25 mA	25 mA
48V (40-60)	Rated current:	600 mA	120 mA	50 mA	50 mA

Mechanical data:	
Installation	recessed front-panel installation possible
Cable gland	M 20 diaphragm nipple
Weight of AC version	PA 120: 2.265 g PA 110: 1.315 g PA 106: 645 g PA 100: 370 g
Weight of DC version	PA 120: 2.040 g PA 110: 1.135 g PA 106: 565 g PA 100: 255 g
Material	ABS, self-extinguishing, similar to UL 94 VO
Colour	similar to RAL 3000 (flame-red), optional white
Standard:	
Operational temperature	-25 °C ... +55 °C
Storage temperature	-40 °C ... +75 °C
Relative humidity	90%
Protective system	IP 55

Technical data:

Operational temperature +55 °C -25 °C	Storage temperature +75 °C -40 °C	Relative humidity 90%	Protective system IP 55	External sound pattern selection 	Protective systems on request IP 66 PA 106 PA 120	Protective systems on request IP 56 PA 110 PA 100
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Approvals on request:



Sample order:

Model: PA 106 Voltage: 24 VDC Colour: RED Approval: GL

Conformity to standard:

The acoustic parameters for the warning signals comply with the requirements of the European standard DIN EN 457 (formerly DIN 33404, Part 1) and the international standard ISO 7731: modified 1986, under the heading of: „Acoustic alarm signals – machine safety – General specification, design and testing“.

The requirement for an acoustic danger signal is found in following harmonized standards:
EN 60204-1 Electrical equipment for machinery
EN 60825-1 Radiation safety of laser equipment identical to IEC 825 and DIN-VDE 0837