

Signaling technology

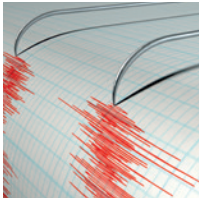
Vibration-resistant. Shockproof. Powerful.

DNV-GL-certified flashing lights and sounders for industrial applications with special requirements.

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Pfannenberg: Count on us where it matters.

Our DNV-GL-certified signaling devices ensure a safer environment in many branches of industry. This brochure will give you an overview of our products and some selected areas of application.



Our claim

Protecting man, machine and the environment.

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DNV-GL-certified signaling devices

Certified optimum performance.

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Areas of application

Automotive industry.
Packaging.
Logistics.

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Areas of application

Docks/shipyards/ships.
Bulk goods.
Construction industry.

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Areas of application

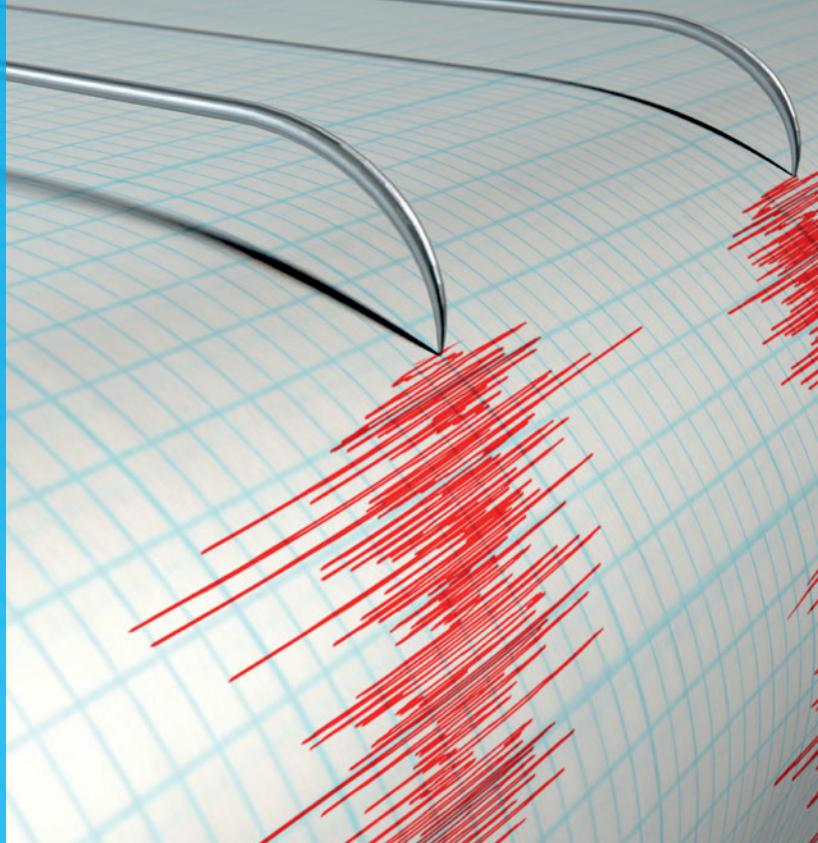
Special engineering.
Mechanical engineering.
Railways and goods transport.

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Our claim

Protecting man, machine
and the environment.
Even under the harshest
conditions.

We have been developing signaling devices to
meet stringent requirements for generations.



What are your requirements?

Our aim is to listen to our customers and fully understand their requirements to help us to develop better solutions. We know that the more complex the situation and the technical challenge, the more important are engineers with an ability to innovate. Otto Pfannenbergl was such an engineer. In 1962, he invented an electronic flashing light. And today, similarly, our global department for research and development is meeting our customers' specific requirements with one of the most innovative and effective ranges of signaling technology products available.

Safety - made by Pfannenbergl.

We owe our excellent reputation to our refusal to compromise on the choice of materials and technology we use and to the excellent workmanship of our products. They prove their quality through the most stringent testing and under the harsh conditions presented by everyday operations in industry. We have a wide range of DNV-GL-certified signaling devices to offer companies in every sector of industry greater protection for man, machine and the environment.

Successful testing of the hardest vibrations.

The signaling devices shown
in this brochure have passed
vibration tests conducted under
DNV-GL guidelines.

DNV-GL is a leading classification
company operating around the
world to develop, certify and verify
quality and safety standards
for many industrial sectors.
DNV-GL certification assures the
operators of our signaling devices
that they are of the highest quality
and reliability.



DNV-GL-certified signaling devices

Certified optimum performance.

Rely on signaling devices which meet the highest standards in terms of impact and vibration-resistance in a range of different protection classes.



Outstanding impact and vibration-resistance.

Our DNV-GL-certified signaling devices are impervious to vibration, jarring and impact. Their PCB components are attached very firmly to prevent damage from vibration. Furthermore, they are fitted with metal brackets which absorb or attenuate oscillation and vibration. However, this is not all.

Higher resistance to impact and shock.

In heavy industry or logistics, for example, signaling devices are exposed to particularly high levels of mechanical stress. For applications in these and other challenging areas, we offer DNV-GL-certified signaling devices which also have IK08 protection classification. Even without a protective cage, they resist high levels of mechanical stress and are guaranteed to function reliably at all times.

Impregnable to dust and water, UV-stable, heat-tolerant and frostproof.

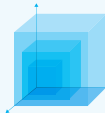
Many of our DNV-GL-certified signaling devices are equipped with other features such as aluminum housing and have high protection classifications such as IP 66 or IP 67 which means that they are impervious to strong jets of water and short periods of immersion in water and to aggressive media. All this qualifies them for use in particularly challenging conditions.

Easy and safe planning: Pfannenberg Sizing Software PSS.

Our Pfannenberg Sizing Software (PSS) is a cost-free and very user-friendly tool which delivers an immediate and informed recommendation on devices, avoiding expensive over-specification and risky under-specification at the planning stage or in a review of the configuration. Download PSS from www.pfannenberg.com/pss-de for immediate use.

Immediately see device performance for a given space: Pfannenberg 3D-Coverage.

Our signaling devices are outstandingly efficient. The 3D-Coverage planning method along with the Pfannenberg Sizing Software provides reliable values for the length, width and height of the area guaranteed to be covered by the signal in relation to different environmental conditions.



AUDIBLE	VISUAL
80 dB(A)	Indicate
85 dB(A)	Warn
90 dB(A)	Alarm

The following pages contain 3D-Coverage performance data for the area covered by an optical signal (clear cover) using the DIN tone and at the required sound levels of 80, 85, and 90 dB(A) and to be used for information, warnings and alerts.

TYPE		VIBRATION AND SHOCK RESISTANT	HIGHER RESISTANCE TO IMPACT	IP PROTECTION ≥ 66	IMPERVIOUS TO SEAWATER	UV-STABLE	-40 °C	+55 °C
PATROL		+	+	+	+	○	+	+
PATROL		+	+	+	+	○	+	+
DS		+	+	+	+	+	+	+
PYRA		+	+	+	+	○	+	+
PMF		+	-	-	○	○	+	+
WBL/WBS, ABL/ABS		+	○	-	○	+	+	+
WBLR/WBSR		+	○	○	+	○	+	+
CWB Ex-ATEX		+	+	+	+	+	+	+
+ Recommended ○ Applicable - Not recommended								

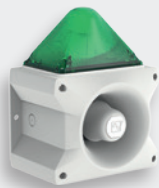
Areas of application

Solution



Automotive industry.

- Production conveyors
- Painting lines
- Engine test benches



Flashing sounders in the PATROL series

Visual-audible signaling devices for start-up warnings and malfunction indicators. Highly effective with optimized sound emission and Xenon technology. The light intensity adjusts to any sound level. 10 year guarantee.

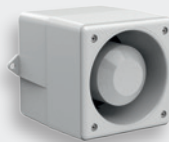


Flashing sounders in the PATROL series for fire alerts with red housing and clear cover.



Packaging.

- Conveyors
- Sorting and filling systems
- Packaging systems



Sounders in the DS series

Robust signaling devices with die-cast aluminum housing for start-up warnings and reliable indication of malfunctions with a particularly high level of ambient noise. 32 selectable basic tones, 10 year guarantee.



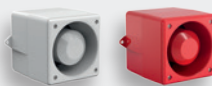
Flashing lights in the ABL/ABS series

Powerful signaling devices for large workshops and external set-ups. For indicating production progress and warning of malfunctions. Impact-resistant light cover and anodized aluminum housing.



Logistics.

- Access routes
- Traffic control
- Loading and unloading control systems, loading ramps
- Refrigerated units and distribution centers
- Moveable high-bay racks



Sounders in the DS series

Multipurpose hazard warning for use in tough indoor and outdoor environments. Cold-resistant, suitable for temperature alerts in cold stores. Very good penetration of acoustic barriers such as walls and doors. 10 year guarantee.



Flashing lights in the ABL/ABS series

Robust signaling devices with impact-resistant light covers and anodized aluminum housing. For warning personnel before and during movement of pallet racks.

3D-Coverage / Webcode

Products: PA X 1-05, PA X 5-05, PA X 10-10, PA X 20-10, PA X 20-15

Sound pressure level: 100 dB(A), 105 dB(A), 110 dB(A), 120 dB(A)

Flash energy: 5, 10, 15 Joule

Robustness: IP 66, IK08,

Operating temperature -40 °C to +55 °C

PA X 20-15

80 dB(A)	85,6 x 97,7 x 85,6 m	Indicate	84,6 x 74,4 x 144,5 m
85 dB(A)	48,1 x 55 x 48,1 m	Warn	37,6 x 33,2 x 64,2 m
90 dB(A)	27,1 x 30,9 x 27,1 m	Alarm	18,8 x 16,6 x 32,1 m

Webcode

By entering a web code in the search window at www.pfannenbergl.de you can obtain detailed technical information such as operating instructions, technical data, licenses, planning guides, 3D models and CAD data.

Webcode: PA X 1-05 / PA X 5-05 **#3558**

PA X 10-10 / PA X 20-10 / PA X 20-15 **#3135**

Products: DS 5, DS 10

Sound pressure level: 105 dB(A), 110 dB(A)

Robustness: IP 66, IP 67, IK08,

Operating temperature -40 °C to +55 °C

DS 10

80 dB(A)	33,4 x 43,7 x 33,4 m
85 dB(A)	18,8 x 24,5 x 18,8 m
90 dB(A)	10,6 x 13,8 x 10,6 m

Webcode: **#3127**

Products: ABL/ABS

Flash energy: 15 Joule

Robustness: IP 54, UV-stable

Operating temperature -40 °C to +55 °C

ABL/ABS

Indicate	127,8 x 160,2 x 160,2 m
Warn	56,8 x 71,2 x 71,2 m
Alarm	28,4 x 35,6 x 35,6 m

Webcode: **#3115**

Products: DS 5, DS 10

Sound pressure level: 105 dB(A), 110 dB(A)

Robustness: IP 66, IP 67, IK08,

Operating temperature -40 °C to +55 °C

DS 5

80 dB(A)	23,1 x 27,5 x 23,1 m
85 dB(A)	13,0 x 15,5 x 13,0 m
90 dB(A)	7,3 x 8,8 x 7,3 m

Webcode: **#3127**

Products: ABL/ABS

Flash energy: 15 Joule

Robustness: IP 54, UV-stable,

Operating temperature -40 °C to +55 °C

ABL/ABS

Indicate	127,8 x 160,2 x 160,2 m
Warn	56,8 x 71,2 x 71,2 m
Alarm	28,4 x 35,6 x 35,6 m

Webcode: **#3115**

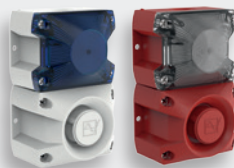
Areas of application

Solution



Docks. Shipyards. Ships.

- On board
- Shipyards
- On loading cranes in harbor facilities



Flashing sounders in the PATROL series

Visual-audible signaling devices for warning of gas or fire alerts on board ship. Extremely broad spectrum of frequencies for very good penetration of acoustic barriers such as walls and doors. Tones for every area of application in any country. 10 year guarantee.



Flashing lights in the ABL/ABS series

Robust visual signaling devices for alerting in tough outdoor environments. Reliable warning when loading gates open and close. Impact-resistant light cover, splash-protected anodized aluminum housing.



Bulk goods.

- Silos
- Belts and conveyors
- Bulk containers
- Sorting and cleaning systems



Sounders in the PATROL series

Powerful audible signaling devices with impact-resistant, dust-proof housing with protection from strong jets of water. Extremely broad spectrum of frequencies for excellent penetration of acoustic barriers such as walls and doors. 10 year guarantee.



Flashing lights in the WBLR/WBSR series

Robust flashing warning lights with dust-proof housing with protection from strong jets of water. For signaling excavator start-up movements and filling levels of silos and bulk goods containers.



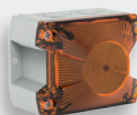
Construction industry.

- Large building sites
- Tunnel construction
- Cranes
- Building site safety



Flashing sounders in the PATROL series

Visual-audible signaling devices with impact-resistant housing. Highly effective and very good acoustic penetration, for example in monitoring air quality during tunnel construction. 10 year guarantee.



Flashing lights in the PYRA series

Powerful signaling devices with dust-proof, impact-resistant housing. Xenon technology for high light intensity and excellent perception, used to issue warnings before and during the movement of construction machinery. 10 year guarantee.

3D-Coverage / Webcode

Products: PA X 1-05, PA X 5-05, PA X 10-10, PA X 20-10, PA X 20-15

Sound pressure level: 100 dB(A), 105 dB(A), 110 dB(A), 120 dB(A)

Flash energy: 5, 10, 15 Joule

Robustheit: IP 66, IK08,

Operating temperature -40 °C to +55 °C

PA X 1-05

80 dB(A)	16 x 13,8 x 16 m	Indicate	18,5 x 31,5 x 49,5 m
85 dB(A)	9 x 7,8 x 9 m	Warn	8,2 x 14 x 22 m
90 dB(A)	5,1 x 4,4 x 5,1 m	Alarm	4,1 x 7 x 11 m

Webcode: PA X 1-05 / PA X 5-05 **#3558**
PA X 10-10 / PA X 20-10 / PA X 20-15 **#3135**

Products: ABL/ABS

Flash energy: 15 Joule

Robustness: IP 54, UV-stable,

Operating temperature -40 °C to +55 °C

ABL/ABS

Indicate	127,8 x 160,2 x 160,2 m
Warn	56,8 x 71,2 x 71,2 m
Alarm	28,4 x 35,6 x 35,6 m

Webcode: **#3115**

Products: PA 1, PA 5, PA 10, PA 20

Sound pressure level: 100 dB(A), 105 dB(A), 110 dB(A), 120 dB(A)

Robustness: IP 66, IK08,

Operating temperature -40 °C to +55 °C

PA 1

80 dB(A)	16 x 13,8 x 16 m
85 dB(A)	9 x 7,8 x 9 m
90 dB(A)	5,1 x 4,4 x 5,1 m

Webcode: **#3128**

Products: WBLR/WBSR

Flash energy: 5 Joule

Robustness: IP 65,

Operating temperature -40 °C to +55 °C

WBLR/WBSR

Indicate	16,2 x 15,3 x 15,3 m
Warn	7,2 x 6,8 x 6,8 m
Alarm	3,6 x 3,4 x 3,4 m

Products: PA X 1-05, PA X 5-05, PA X 10-10, PA X 20-10, PA X 20-15

Sound pressure level: 100 dB(A), 105 dB(A), 110 dB(A), 120 dB(A)

Flash energy: 5, 10, 15 Joule

Robustness: P 66, IK08,

Operating temperature -40 °C to +55 °C

PA X 20-15

80 dB(A)	85,6 x 97,7 x 85,6 m	Indicate	84,6 x 74,4 x 144,5 m
85 dB(A)	48,1 x 55 x 48,1 m	Warn	37,6 x 33,2 x 64,2 m
90 dB(A)	27,1 x 30,9 x 27,1 m	Alarm	18,8 x 16,6 x 32,1 m

Webcode: PA X 1-05 / PA X 5-05 **#3558**
PA X 10-10 / PA X 20-10 / PA X 20-15 **#3135**

Products: PY X-S-05

Flash energy: 5 Joule

Robustness: IP 66, IK08,

Operating temperature -40 °C to +55 °C

PY X-S-05

Indicate	45,9 x 39,2 x 50,9 m
Warn	20,4 x 17,4 x 22,6 m
Alarm	10,2 x 8,7 x 11,3 m

Webcode: **#3118**

Areas of application

Solution



Special engineering.

- Wood, metal and aluminum processing
- Flat belt conveyors in the construction industry
- Plastic production plants



Flashing lights in the PMF series

Extremely bright, omnidirectional flashing lights with energy-saving LED technology and Fresnel cover for wide light dispersion. Very high mechanical stability and many different fitting options.



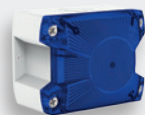
Sounders in the DS series

Multipurpose hazard warning devices with good penetration of acoustic barriers such as walls and doors. For signaling emergency shutdown and other machine states. 32 selectable basic tones, 10 year guarantee.



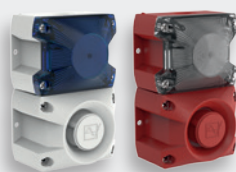
Mechanical engineering.

- Printing and paper processing machines
- Machine tools



Flashing lights in the PYRA series

Xenon technology for high light intensity and excellent perception even of blue light signals to indicate material supply status. Impact-resistant and dustproof housing. 10 year guarantee



Flashing sounders in the PATROL series

Visual-audible signaling devices for warning of imminent and ongoing critical machine states. Highly effective, the light intensity is adjusted to any sound level. 10 year guarantee.



Railways and goods transport.

- Warning for workers on the tracks
- (Fire) alerts in trains
- Warning of work on the tracks
- Gravel washing stations
- Loading ramps



Flashing lights in the ABL/ABS series

Fitted with anodized aluminum housing and impact-resistant light cover. Reliable in tough outdoor environments, such as warning before and during vehicle movements during track maintenance work.



Sounders in the PATROL series

Robust signaling devices with impact-resistant housing for fire alerts on trains. Extremely broad spectrum of frequencies for excellent penetration of acoustic barriers such as walls and doors. 10 year guarantee.



Flashing sounders in the PATROL series

Highly effective impact-resistant signaling devices for reliable warning and alerting at high levels of ambient noise, such as track maintenance work or gravel washing stations. 10 year guarantee.

3D-Coverage / Webcode

Products: PMF 2020
Flash energy: 14 Joule
Robustness: IP 55 (vertical mounting),
 Operating temperature -30 °C to +55 °C

PMF 2020

Indicate	34,2 x 150,3 x 150,3 m
Warn	15,2 x 66,8 x 66,8 m
Alarm	7,6 x 33,4 x 33,4 m

Products: DS 5, DS 10
Sound pressure level: 105 dB(A), 110 dB(A)
Robustness: IP 66, IP 67, IK08,
 Operating temperature -40 °C to +55 °C

DS 10

80 dB(A)	33,4 x 43,7 x 33,4 m
85 dB(A)	18,8 x 24,5 x 18,8 m
90 dB(A)	10,6 x 13,8 x 10,6 m

Webcode: #3127

Products: PY X-S-05
Flash energy: 5 Joule
Robustness: IP 66, IK08,
 Operating temperature -40 °C to +55 °C

PY X-S-05

Indicate	45,9 x 39,2 x 50,9 m
Warn	20,4 x 17,4 x 22,6 m
Alarm	10,2 x 8,7 x 11,3 m

Webcode: #3118

Products: PA X 1-05, PA X 5-05,
 PA X 10-10, PA X 20-10, PA X 20-15
Sound pressure level: 100 dB(A), 105 dB(A),
 110 dB(A), 120 dB(A)
Flash energy: 5, 10, 15 Joule
Robustness: IP 66, IK08,
 Operating temperature -40 °C to +55 °C

PA X 1-05

80 dB(A)	16 x 13,8 x 16 m	Indicate	18,5 x 31,5 x 49,5 m
85 dB(A)	9 x 7,8 x 9 m	Warn	8,2 x 14 x 22 m
90 dB(A)	5,1 x 4,4 x 5,1 m	Alarm	4,1 x 7 x 11 m

Webcode: PA X 1-05 / PA X 5-05 #3558
 PA X 10-10 / PA X 20-10 / PA X 20-15 #3135

Products: ABL/ABS
Flash energy: 15 Joule
Robustness: IP 54, UV-stable,
 Operating temperature -40 °C to +55 °C

ABL/ABS

Indicate	127,8 x 160,2 x 160,2 m
Warn	56,8 x 71,2 x 71,2 m
Alarm	28,4 x 35,6 x 35,6 m

Webcode: #3115

Products: PA 1, PA 5, PA 10, PA 20
Sound pressure level: 100 dB(A), 105 dB(A),
 110 dB(A), 120 dB(A)
Robustness: IP 66, IK08,
 Operating temperature -40 °C to +55 °C

PA 1

80 dB(A)	16 x 13,8 x 16 m
85 dB(A)	9 x 7,8 x 9 m
90 dB(A)	5,1 x 4,4 x 5,1 m

Webcode: #3128

Products: PA X 1-05, PA X 5-05, PA X 10-10,
 PA X 20-10, PA X 20-15
Sound pressure level: 100 dB(A), 105 dB(A),
 110 dB(A), 120 dB(A)
Flash energy: 5, 10, 15 Joule
Robustness: IP 66, IK08,
 Operating temperature -40 °C to +55 °C

PA X 5-05

80 dB(A)	14,1 x 18,1 x 14,1 m	Indicate	44,1 x 37,4 x 67,5 m
85 dB(A)	7,9 x 10,2 x 7,9 m	Warn	19,6 x 16,6 x 30 m
90 dB(A)	4,4 x 5,7 x 4,4 m	Alarm	9,8 x 8,3 x 15 m

Webcode: PA X 1-05 / PA X 5-05 #3558
 PA X 10-10 / PA X 20-10 / PA X 20-15 #3135

The Pfannenberg group worldwide.

Pfannenberg Europe GmbH

Werner-Witt-Straße 1
21035 Hamburg
Germany
Phone: +49 40 73412 156
Telefax: +49 40 73412 101
E-Mail: customercare@pfannenberg.com
Web: www.pfannenberg.de

Pfannenberg Austria

Phone: +43 7676 50219
Email: info.austria@pfannenberg.com

Pfannenberg Brazil, Indaiatuba

Phone: +55 19 3935 7187
E-Mail: info@pfannenberg.com.br

Pfannenberg China, Suzhou

Phone: +86 512 6287 1078
E-Mail: info@pfannenberg.cn

Pfannenberg France, Rueil-Malmaison

Phone: +33 1 4708 4747
E-Mail: info@pfannenberg.fr

Pfannenberg India, Chennai

Phone: +91 44 69000697
Email: info@pfannenberg.in

Pfannenberg Italia, Fidenza (PR)

Phone: +39 0524 516 711
E-Mail: info@pfannenberg.it

Pfannenberg Poland, Warsaw

Phone: +48 228907246
Email: info@pfannenberg.pl

Pfannenberg Russia, St. Petersburg

Phone: +7 812 612 8106
E-Mail: info@pfannenberg.ru

Pfannenberg Singapore, Singapore

Phone: +65 6293 9040
E-Mail: info@pfannenberg.com.sg

Pfannenberg United Kingdom, Rotherham

Phone: +44 1709 36 4844
E-Mail: info@pfannenberg.co.uk

Pfannenberg USA, N.Y.

Phone: +1 716 685 6866
E-Mail: info@pfannenbergusa.com

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