

All-Round Flashing Light

PMF 2030 / PMF 2020 / PMF 2015 / PMF 2015-M



IP 55	EN 842	+55°C	+70°C	90%
Protective system	European standard	Operational temperature	Storage temperature	Relative humidity

Optical data:

Globe colours:	Light intensity (DIN 5037) PMF 2030:
clear	approx. 680 candela
amber	approx. 514 cd
red	approx. 137 cd
green	approx. 80 cd
blue	approx. 217 cd

Fresnel lens:

The fresnel lens focuses the light into an approx. 16° beam

Globe with fresnel lens

Vertical beam: approx. 16°

Horizontal beam: 360°

All-round safety – no mechanical parts!

PMF 2030

The strongest Pfannenbergl flashing light, 30 joules per flash

- secure 360° alarm over great distances (for in- and outdoor use / installations)
- extremely reliable, excellent durability, only high quality electronic components used - no replacement or maintenance of mechanical wear and tear parts necessary
- reliable performance even within rough production and working conditions, e.g. possible power supply fluctuations, ambient temperature up to +55°C, relative humidity up to 90%
- impact resistant PC (Polycarbonate) globe
- installation friendly, variety of installation methods possible, direct or bracket mounting
- bracket mounting by high-grade steel bracket
- direct mounting by enclosed gasket

PMF 2020 / PMF 2015

A fully electronic all-round flashing light without mechanical parts, designed for all stationary applications.

- extremely bright, with up to 14 joules total flashing power in the pulse group, light beaming with fresnel lens and low power consumption (to save energy)
- choice between three different flash patterns with a high rate of flash repetition. (PMF 2015 two different flash patterns)
- highly reliable with a long service life – without having to replace mechanical or electrical wear and tear parts
- variety of installation methods – direct or with bracket
- widely used drilling template facilitates interchangeability
- extremely safe and reliable: Install it and forget it!
- especially suitable for cranes and fork-lifts
- shock resistant according to DIN EN 60069-2-29 (PMF 2020)
- optical definition for devices in moving equipments such as cranes or fork-lift trucks (PMF 2020)

PMF 2015-M

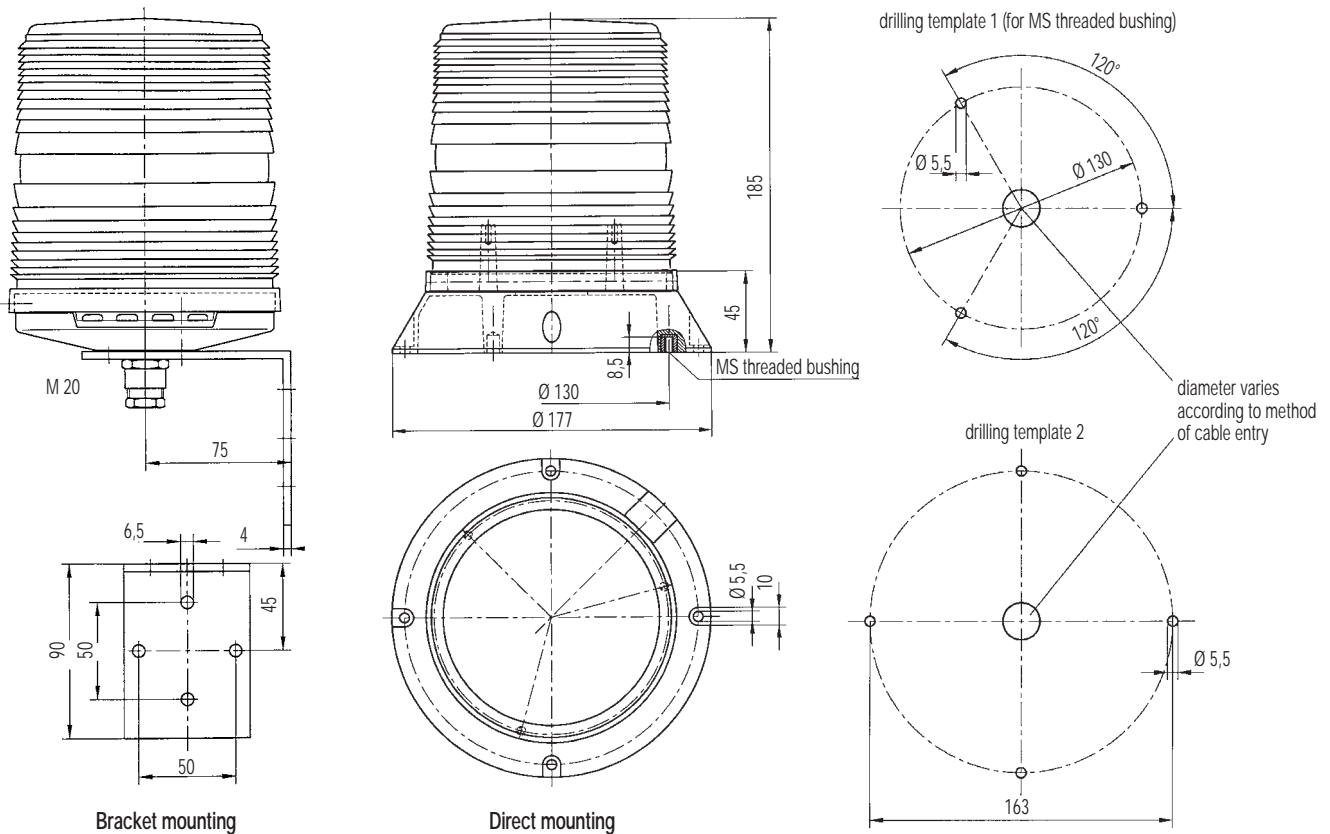
Self monitoring with certificate, complies to EN 12352:2000 and EN 50129:2003

The functions of the flashlight are monitored by an internal optical sensor and an evaluator. Both parts of the system (flashlight and monitoring unit) have their own operating voltage. When both operating voltages are applied, a slave relay is activated. The contacts of the relay act as an interface to other monitoring units. If the voltage drops the relay is immediately deactivated. If the regular flashing sequence does not operate after switching on the unit then the relay will be deactivated after 2.5 to 4.5 seconds. If the flashing reoccures an integrator reactivates the relay again.

Variant:

- also available as "Rotating" LED Light PMF-LED Flex (see page 30)

Dimensions (PMF 2030 / PMF 2020 / PMF 2015 / PMF 2015-M):



Mechanical data:	PMF 2030	PMF 2020	PMF 2015	PMF 2015-M
Globe colour	clear, amber, red, green, blue			
Flashing sequence	1 Hz = 60 flashes/min	quadruple-, double-, single-flash	quadruple-, double-flash	double flash
Flashing frequency of main flash				1 Hz
Flashing power of main flash	30 joules	7 joules (12V: 5 joules)	7 joules	7 joules
Service life	after 8.000.000 flashes still min. 70% light emission	light emission reduced to > 70% after approx. 12.000.000 flashes		
Duty cycle	100%			
Operating temperature	-30 °C ... +55 °C			
Storage temperature	-40 °C ... +70 °C			
Relative humidity	90%			
Protective system	IP 55 (EN 60529)			
Cable gland for bracket mounting	M 20 x 1,5	M 20x1,5 for wire 6 ... 9 mm	M 20x1,5 for wire 6,5 ... 13,5 mm	M 20x1,5 for wire 6,5 ... 13,5 mm
Uninsulated connecting length	single wire 0,5 - 1,5 mm ² with cable end sleeves DIN 46228/1	single wire 0,14 - 4 mm ² fine wire 0,14 - 2,5 mm ²	single wire 0,5 - 2,5 mm ² fine wire 0,5 - 1,5 mm ²	0,08 - 2,5 mm ²
Material globe	Polycarbonate (PC)			
Material housing	Acrylnitril-Butadien-Styrol (ABS)			
	PCB made of fibre-glass reinforced epoxy resin for thermic and mechanical protection. PCB dip-varnished to protect against moisture.			
Operating position	vertical			
Operating conditions	suitable for outdoor applications			
Flashing light monitor frequency				0,8 Hz (flashing light frequencies less than this will lead to fault message)

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

Electrical data: PMF 2030

AC

Rated voltage:	230 V AC	115 V AC
Mains frequency:	50 Hz / 60 Hz	50 Hz / 60 Hz
Operating range:	195 V - 253 V	90 V - 135 V
Arithmetical mean current consumption:	0,51 A	0,94 A

Electrical data: PMF 2020

AC

Rated voltage:	230 V AC	110 V AC
Mains frequency:	50 Hz / 60 Hz	50 Hz / 60 Hz
Operating range:	195 V - 253 V	90 V - 135 V
Arithmetical mean current consumption:		
Quadruple flash	0,08 A	0,14 A
Double flash	0,09 A	0,15 A
Single flash	0,14 A	0,23 A
Selectable flashing sequence:	asynchronous, 120 flashes/min, in pulse groups of 4 flashes asynchronous, 120 flashes/min, in pulse groups of 2 flashes single flash 240 flashes/min	

DC

Rated voltage:	24 V DC	12 V DC
Operating range:	18 V - 30 V	11 V - 15 V
Arithmetical mean current consumption:		
Quadruple flash	0,75 A	1,1 A
Double flash	0,8 A	1,15 A
Single flash	1,0 A	1,35 A
Selectable flashing sequence:	asynchronous, 120 flashes/min, in pulse groups of 4 flashes (12 Volt = 90 flashes/min) asynchronous, 120 flashes/min, in pulse groups of 2 flashes (12 Volt = 90 flashes/min) single flash 240 flashes/min (12 Volt = 180 flashes)	

Electrical data: PMF 2015

AC

Rated voltage:	230 V AC	110 V AC
Mains frequency:	50 Hz / 60 Hz	50 Hz / 60 Hz
Operating range:	195 V - 253 V	90 V - 135 V
Arithmetical mean current consumption:		
Quadruple flash	0,07 A	0,14 A
Double flash	0,08 A	0,16 A
Selectable flashing sequence:	asynchronous, 120 flashes/min, in pulse groups of 4 flashes asynchronous, 120 flashes/min, in pulse groups of 2 flashes	

DC

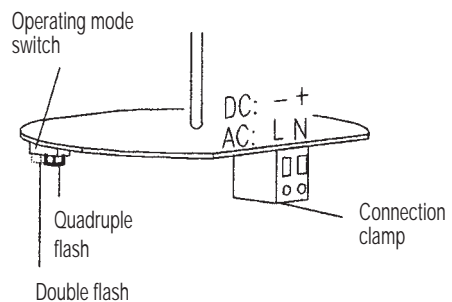
Rated voltage:	24 V DC	12 V DC
Operating range:	18 V - 30 V	11 V - 15 V
Arithmetical mean current consumption:		
Quadruple flash	0,6 A	1,1 A
Double flash	0,65 A	1,2 A
Selectable flashing sequence:	asynchronous, 120 flashes/min, in pulse groups of 4 flashes (12 Volt = 90 flashes/min) asynchronous, 120 flashes/min, in pulse groups of 2 flashes (12 Volt = 90 flashes/min)	

Electrical data: PMF 2015-M

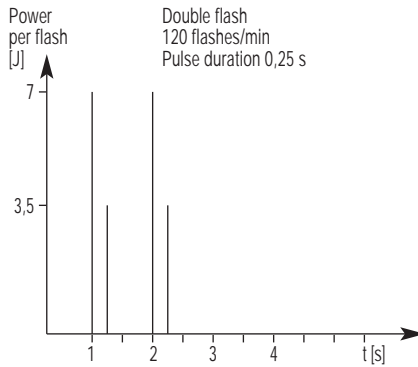
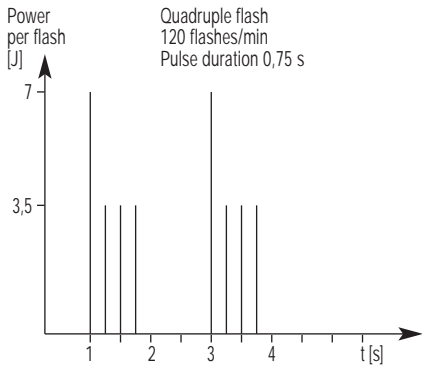
DC

Operating voltage for flashing light and monitoring unit	24 V DC
Tolerance	18 V ... 30 V
Rated current flashing light	0,65 A
Rated current monitoring unit	0,05 A
Alarm contact:	
Contact model	slave
Nominal current	5 A
Nominal voltage	250 V AC
Max. switching power AC	1000 VA
Recommended minimal load	> 50 mW

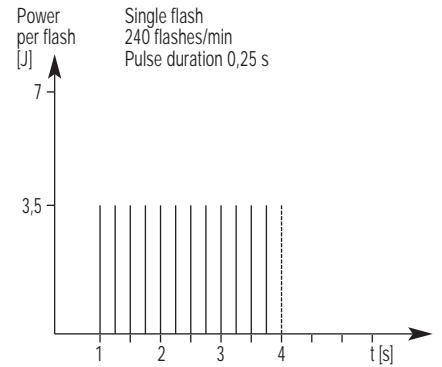
PMF 2015



Flashing sequence (PMF 2020 / PMF 2015 / PMF 2015-M):



Flashing sequence (PMF 2020):



Accessories:



Approvals on request:



(only PMF 2020)



Sample order:	Model: PMF 2015	Voltage: 24 V DC	Globe colour: RED
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Conformity to standard:

The optical properties of flashing lights comply with the European standard DIN EN 842, which is published under the title: „Machine safety – visual alarm signals“.

Requirements of the standard DIN EN 981, published under the title:

„Machine safety – system of acoustic / visual alarm signals and information signals“, can be met.

The colour „red“ as emergency signal and „yellow“ as a warning signal comply with the requirements of IEC 73 / DIN EN 60073 / VDE 0199, published under the title: „Coding for display devices and control components 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 defined by IEC 825 and DIN-VDE 0837
- DIN EN 54 Fire alarm systems
- DIN 54113-2 Regulations for radiation protection applicable to technical operation of X-ray equipment up to 500kV