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Observe proprietary notice in accordance with DIN ISO 16016!

English translation

1. Intended use

LED lights of the PYRA series are designed for the optical signaling of e.g. hazardous conditions in industry, trade and construction areas.
The LEDs in the light section can be operated in different modes, all of which can be activated by an internal switch.
The multicolor (RGBW) versions also allow different colors to be assigned to the individual operating modes. These versions also feature the option of selecting alternative operating modes and colors via external control. There is also the possibility of acoustic signaling when the lights are used in combination with the integrated sounder (PY L-MA). The devices must only be operated when undamaged and within the specified parameters. The function of the device can only be guaranteed if the upper and lower parts are correctly joined together.
The devices are designed for indoor and outdoor use.

2. Scope of delivery

The scope of delivery consists of:
1x Signaling device
1x Diaphragm nipple M20
(Option: Cable gland/ M12 plug-in connector)
1x Quick guide

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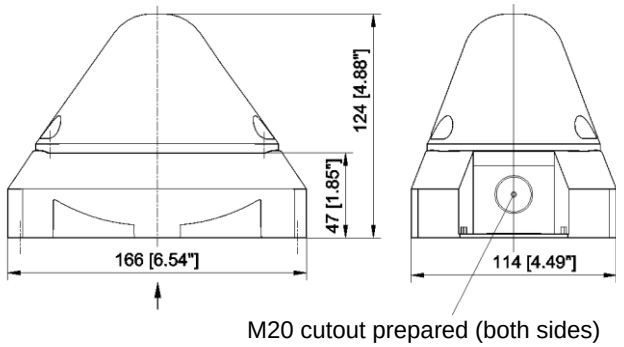
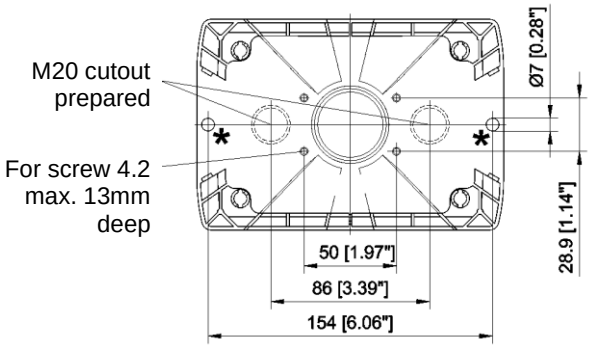
3. Dimensions

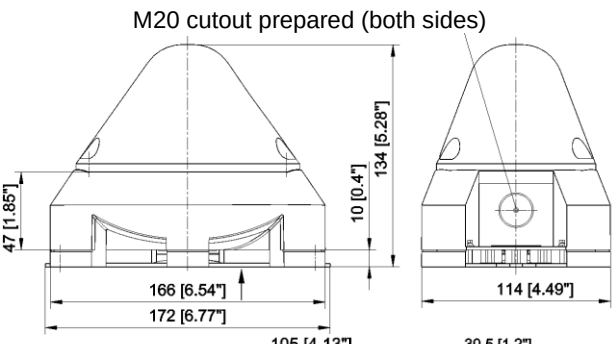
PY L-M

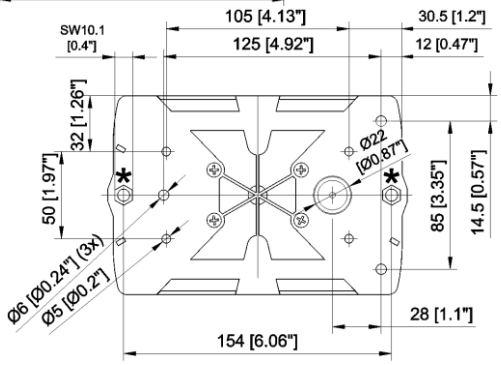




Bore pattern; view from below

PY L-MA





Bore pattern; view from below

*- max. screw M6, tightening torque 4Nm

4. Technical data

4.1 General

	PY L-M	PY L-MA
Light intensity	23 cd (clear)	
Illuminant	Single color: 2x high-performance LED Multicolor (RGBW): 1x high-performance LED	
Colors of RGBW LED	blue, red, green, yellow via external control: White	
Max. sound level	--	101 dB (A) @1m
Volume control	--	max. - 20 dB
Tones	--	8
Duty cycle	100%	
Connecting terminals	0.14 - 2.5mm² fine stranded / AWG24 - AWG 14	
Ingress protection	IP 66 (EN 60529), Type 4 & 4x	
Impact strength	IK08 (EN 50102)	
Protection class	II ⧈ double insulated equipment	
Operating temperature	-40 °C…+55 °C	
Storage temperature	-40 °C…+70 °C	
Max. rel. air humidity	90%	
Cable inlet	4x M20 pre-embossed	3x M20 pre-embossed
Sealing range of the feed-through grommet	7 – 13 mm A cable gland with a sufficient degree of protection must be provided when cable diameters of < 7 mm are used.	
Housing material	PC/ ABS Blend	
Lens material	PC	
Installation position	any	
Lens colors	transparent, white, yellow, amber, red, green, blue RGBW version: white	

4.2 Electrical data

Rated voltage range (See approvals for limit values)	12 – 48V DC			24 V AC 50/ 60 Hz	115 - 230 V AC 50/ 60 Hz 120V DC		
Operation voltage range	10 – 60 V DC			21,6 – 26,4 V AC	95 – 265 V AC 108 -132V DC		
Rated current for light (max)	12 V DC	24 V DC	48 V DC	167 mA	120V DC	115V AC	230V AC
	275 mA	120 mA	65 mA		25 mA	51 mA	36 mA
Power consumption Light (max)	3.5 W	3 W	3.1 W	4 VA	3 W	6 VA	8.5 VA
Sounder part:							
Rated current for sounder part (max)	10 mA	15 mA	20 mA	60 mA	40 mA	10 mA	10 mA
Power consumption sounder part (max)	0.1 W	0.35 W	1 W	17.3 VA	4.5 VA	1.1 VA	1.8 VA

5. Approvals

(Approvals are valid for marked devices)

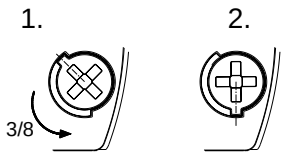
UL, cUL	**E189090:** PY L-M **S7256:** PY L-MA Visual Signal Appliance - General Signaling Equipment (UEES, UEES7) (PY L-M) Audible and Visual Appliance for General Signaling (Non Fire Alarm) Use (UCST, UCST7 and UEES, UEES7) (PY L-MA)

6. Commissioning

6.1 Safety information

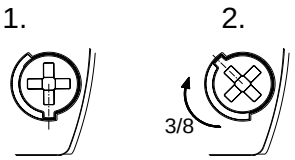
⚠	**DANGER - Danger to life due to electric shock** Voltage-carrying devices and exposed connection cables may cause electric shocks and serious accidents. ➢ Only trained and authorized electricians may work on electrical connections. ➢ Disconnect all supply lines from mains before installation and secure them against reconnection. Always ensure absence of voltage. ➢ Wait for the discharge phase of 5 minutes for the electrical components. The device should only be opened afterwards. ➢ The operating voltage must only be applied when the housing is firmly closed.
⚠	**WARNING - Danger due to unauthorized use of the devices** Improper use may lead to serious accidents. ➢ Ensure that the connection cable is protected against pulling and twisting during installation. The devices are only intended for fixed installation.
⚠	**DANGER - Danger due to damage to the devices** **Non-compliance with the information on the type plate can lead to serious accidents.** ➢ Always observe the information on the type plate when installing and maintaining the devices.
⚠	**CAUTION - Risk of injury due to sharp edges or heated components** ➢ Wear suitable personal protective equipment (PPE) for installation, assembly or service/maintenance work. ➢ Lay wires well away from sharp edges, corners and internal components; avoid collisions with parts.
⚠	**CAUTION - Impairment of vision** ➢ Avoid constant, direct glances into the activated lights to prevent impairment of vision. ➢ Unexpected triggering of the flash can lead to startled reactions. **CAUTION - High volume when using light sounder combination.** When using the light/sounder combination: ➢ Wear sound insulation equipment during work/testing to prevent hearing impairment. ➢ Unexpected triggering of the sound can lead to startled reactions.

Opening the housing



The upper part can be detached by loosening the four cover screws

Closing the housing



Close the housing by turning the cover screws to the end position until they lock in place.

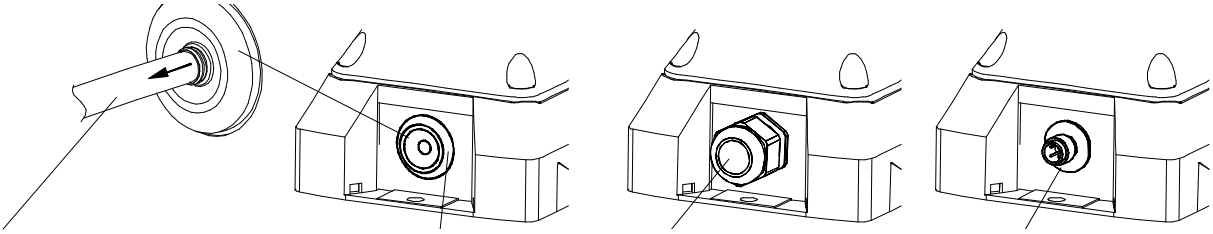
The device is delivered in an unsealed condition.
Sealing plugs for the housing screws are available as accessories.

Cable feed-throughs

The supplied diaphragm nipple can be replaced by a cable gland or by an M12 plug-in connector with a flange dimension of M20.

➢ Only cable glands with a degree of protection of at least IP66 should be fitted to the corresponding openings.

Cable diameters of <7 mm require a cable gland with a sufficient degree of protection.



IP 66 only with the diaphragm funnel pointing outwards.
Remove the remains of the diaphragm after the cable has been fitted.

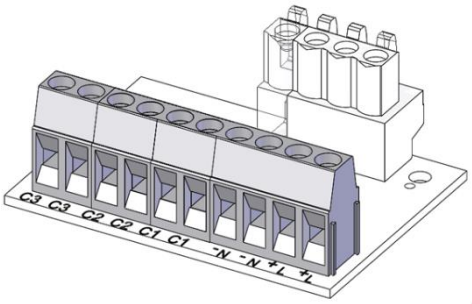
Diaphragm nipple IP 66 (supplied)

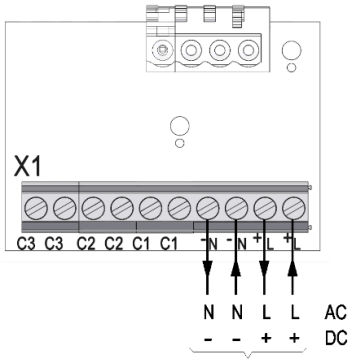
Cable gland IP 66 (Option)

M12 plug-in connector IP 66, for low-voltage devices (Option)

6.2 Electrical connection PY L-M

The electrical connection is established on the connection board in the lower part.



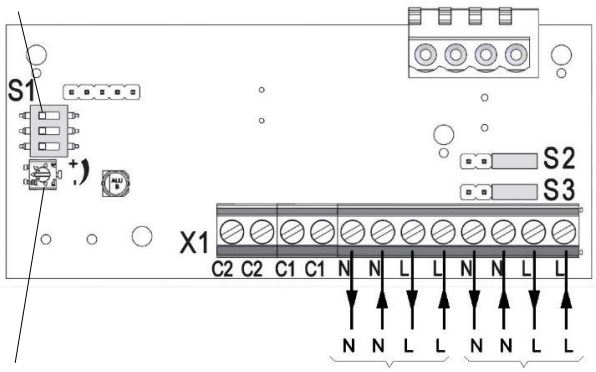


Operating voltage connection

6.3 Electrical connection/ Control elements PY L-MA

AC version

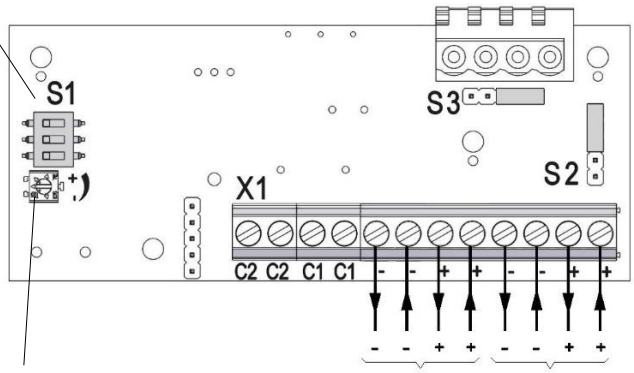
S1 Tone selector switch



Volume control | Operating voltage connection for sounder | Operating voltage connection for light

DC version

S1 Tone selector switch



Volume control | Operating voltage connection for sounder | Operating voltage connection for light

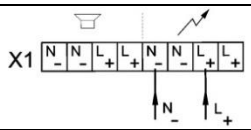
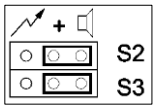
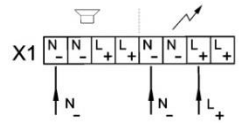
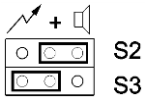
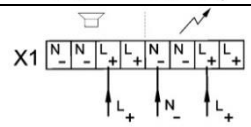
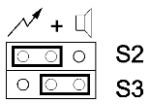
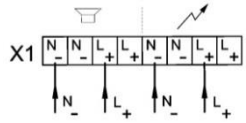
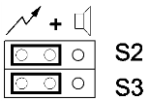
Note:

Devices with DC voltage are equipped with reverse polarity protection. No function if the polarity of the connections is reversed.

6.3 Electrical connection PY L-MA

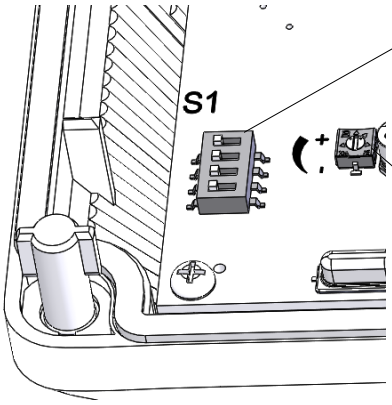
The light and sounder systems PY L-MA can be operated together or separately.

S2 and S3 switch setting on the connection board should be as follows:

Simultaneous operation of light and sounder **(Factory setting)**		
Operation with common "+" (DC) or L (AC) voltage		
Operation with common "-" (DC) or N (AC) voltage		
Separate operation of flashing light and sounder		

6.4 Setting the operating modes - PY L-M/ PY L-MA single-color LED

Circuit board in the lens:



S1
Selection of operating mode

Light intensity control

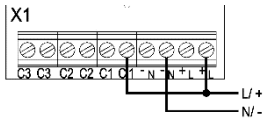
Flashing light: 10 – 100%
Blinking- / Continuous light: 45 – 100%

6.4.1 without external control

S1				Operating mode
1	2	3	4	
OFF	OFF	OFF	OFF	Flashing light 1 Hz *
OFF	OFF	ON		Flashing light 0.75 Hz
OFF	ON	OFF		Continuous light
OFF	ON	ON		Blinking light 1 Hz
ON	OFF	OFF		Flashing light 2 Hz
ON	OFF	ON		Blinking light 2 Hz
ON	ON	OFF		Flashing light 0.1 Hz
ON	ON	ON		Flashing light 0.5 Hz
OFF	*OFF*	*ON*		Double Flash mode (DFM) see Option

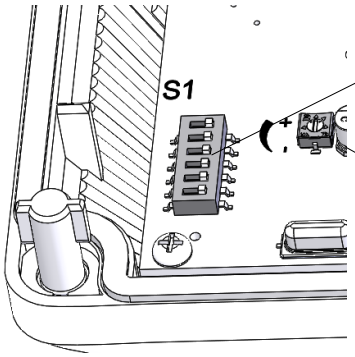
***** Factory setting

6.4.2 with external control

S1				Operating mode	
1	2	3	4	C1 not activated	
OFF	OFF	OFF	ON	Standby	Flashing light 1 Hz *
OFF	OFF	ON			Flashing light 0.75 Hz
OFF	ON	OFF			Continuous light
OFF	ON	ON			Blinking light 1 Hz
ON	OFF	OFF			Flashing light 2 Hz
ON	OFF	ON			Blinking light 2 Hz
ON	ON	OFF			Flashing light 0.1 Hz
ON	ON	ON			Flashing light 0.5 Hz
OFF	*OFF*	*ON*			*Double Flash mode (DFM) see* Option

6.5 Setting the operating modes - PY L-M/ PY L-MA Multicolor LED

Circuit board in the lens:



S1
Selection of operating mode

Light intensity control

Flashing light: 10 – 100%
Blinking- / Continuous light: 45 – 100%

6.5.1 without external control

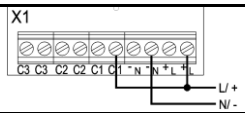
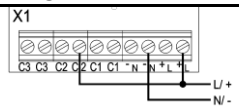
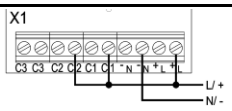
S1			Operating mode
1	2	3	
OFF	OFF	OFF	Flashing light 1 Hz *
OFF	OFF	ON	Flashing light 0.75 Hz
OFF	ON	OFF	Continuous light
OFF	ON	ON	Blinking light 1 Hz
ON	OFF	OFF	Flashing light 2 Hz
ON	OFF	ON	Blinking light 2 Hz
ON	ON	OFF	Flashing light 0.1 Hz
ON	ON	ON	Flashing light 0.5 Hz
OFF	*OFF*	*ON*	*Double Flash mode (DFM) see* Option

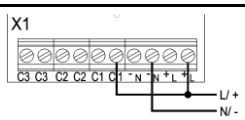
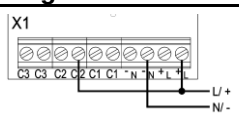
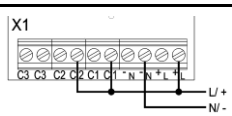
S1			Color assignment
4	5	6	
OFF	OFF	OFF	Red *
	OFF	ON	Blue
	ON	OFF	Green
	ON	ON	Yellow

* Factory setting

6.5.2 with external control

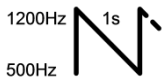
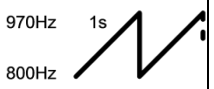
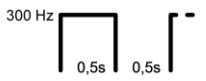
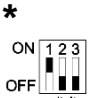
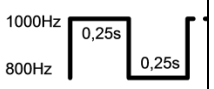
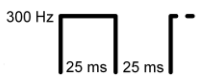
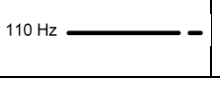
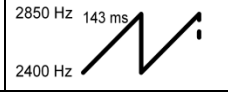
Setting on the circuit board in lower part

S1				Operating mode			
1	2	3	4	C1/ C2 not activated			
OFF	OFF	OFF	ON	Standby	Blinking light 1 Hz	Continuous light	Continuous light
OFF	OFF	ON		Standby	Continuous light	Continuous light	Continuous light
OFF	ON	OFF		Standby	Blinking light 1 Hz	Continuous light	Blinking light 1 Hz
OFF	ON	ON		Standby	Flashing light 1 Hz	Continuous light	Continuous light
ON	OFF	OFF		Standby	Flashing light 1 Hz	Continuous light	Blinking light 1 Hz
ON	OFF	ON		Standby	Flashing light 1 Hz	Continuous light	Flashing light 1 Hz
ON	ON	OFF		Standby	Blinking light 1 Hz	Blinking light 1 Hz	Blinking light 1 Hz
ON	ON	ON		Standby	Continuous light	Continuous light	Blinking light 1 Hz
Option DFM				*Standby*	*DFM1*	*DFM2*	*DFM3*
OFF	*OFF*	*ON*					

S1			Color assignment			
4	5	6	C1/ C2 not activated			
ON	OFF	OFF	Standby	Red	Green	Blue
	OFF	ON	Standby	Red	Green	Yellow
	ON	OFF	Standby	Red	Green	White
	ON	ON	Standby	Yellow	Green	Red

6.6 Setting the tone types (PY L-MA)

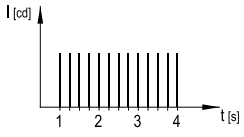
S1 switch setting on the connection board in base part should be as follows:

2	Sawtooth DIN 33404-3 (emergency signal) PFEER PTAP			**161**	Continuous tone		
9	Slow whoop Fire alarm UK BS5839-1			**162**	Interrupted tone		* 
131	Alternating tone UK BS5839-1, Level crossing fire alarm			**163**	Interrupted tone		
160	Continuous tone (horn)			**164**	Slow whoop		

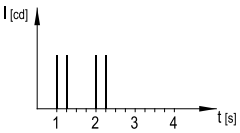
***** Factory setting

7. Option

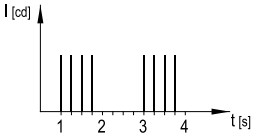
Double Flash mode



DFM1



DFM2



DFM3

PY L-M / PY L-MA with single color LED:
Instead of the "Flash 0.75 Hz" mode, the double flash DFM3 is available.

PY L-M / PY L-MA with multicolor-LED:
It is possible to choose between DFM1, DFM2 and DFM3 (**D**ouble **F**lash **M**ode) via the external control, see 6.5.2 with external control.

8. Accessories

Item No.	Designation
28300000002	Sealing plug, 4-pack
28912000000	Spare locking bolt, 4-pack
28111500000	Surface seal

9. Maintenance, service, repairs

- Observe the Safety information during all work on the device.

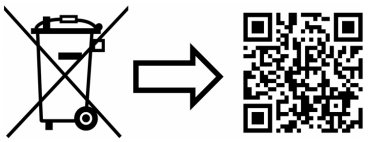
The device requires no special maintenance.

- Clean the outside only with a weak soap solution without using solvents.
  Do not use sharp tools for cleaning and especially avoid scratching the lens.
  Do not clean with high pressure.
- Only replace components using original spare parts.
- Only have repairs carried out at the manufacturer's premises.

Conversions, modifications, improper and impermissible use as well as failure to observe the notes in these operating instructions shall void any warranty.

10. Decommissioning, dismantling and disposal

- Observe the Safety information during all work on the device.



www.pfannenberg.com/disposal

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