

ENGLISH

**Photoelectric retro-reflective sensor
Operating instructions**

Safety notes

- Not a safety component in accordance with EU Machinery Directive.
- Read the operating instructions before commissioning.
- UL: Only for NFPA 79 applications
- Connection, mounting, and setting is only to be performed by trained specialists.
- When commissioning, protect the device from moisture and contamination.

Correct use

The GL10(G) is a photoelectric retro-reflective sensor for the optical, noncontact detection of objects. A reflector is required for operation.

Starting operation

- 1** Connect the device to the power supply: For devices with plug connectors, attach the cable socket while the device is deenergized and screw it in tightly. Connect the individual wires of the connecting cable as shown in Graphic [D]. Switch on the operating voltage. The green indicator LED lights up.
- 2** Check the application conditions: Adjust the distance between the sensor and the reflector according to the corresponding diagram [E].
- 3** Mount the appropriate reflector opposite the sensor. Align the light beam vertically with the center of the reflector [C].
- 4** **Versions without potentiometer:**
If the yellow indicator LED lights up continuously, this means the reflector is positively identified, function reserve ≥ 1.5 .
If the yellow indicator LED is flashing, this means the reflector is detected in the peripheral area (function reserve < 1.5). If the yellow indicator LED does not light up, this means the reflector is outside the sensing range. Readjust and clean the photoelectric sensor and reflector or use a larger reflector. Check the application conditions (see 2).

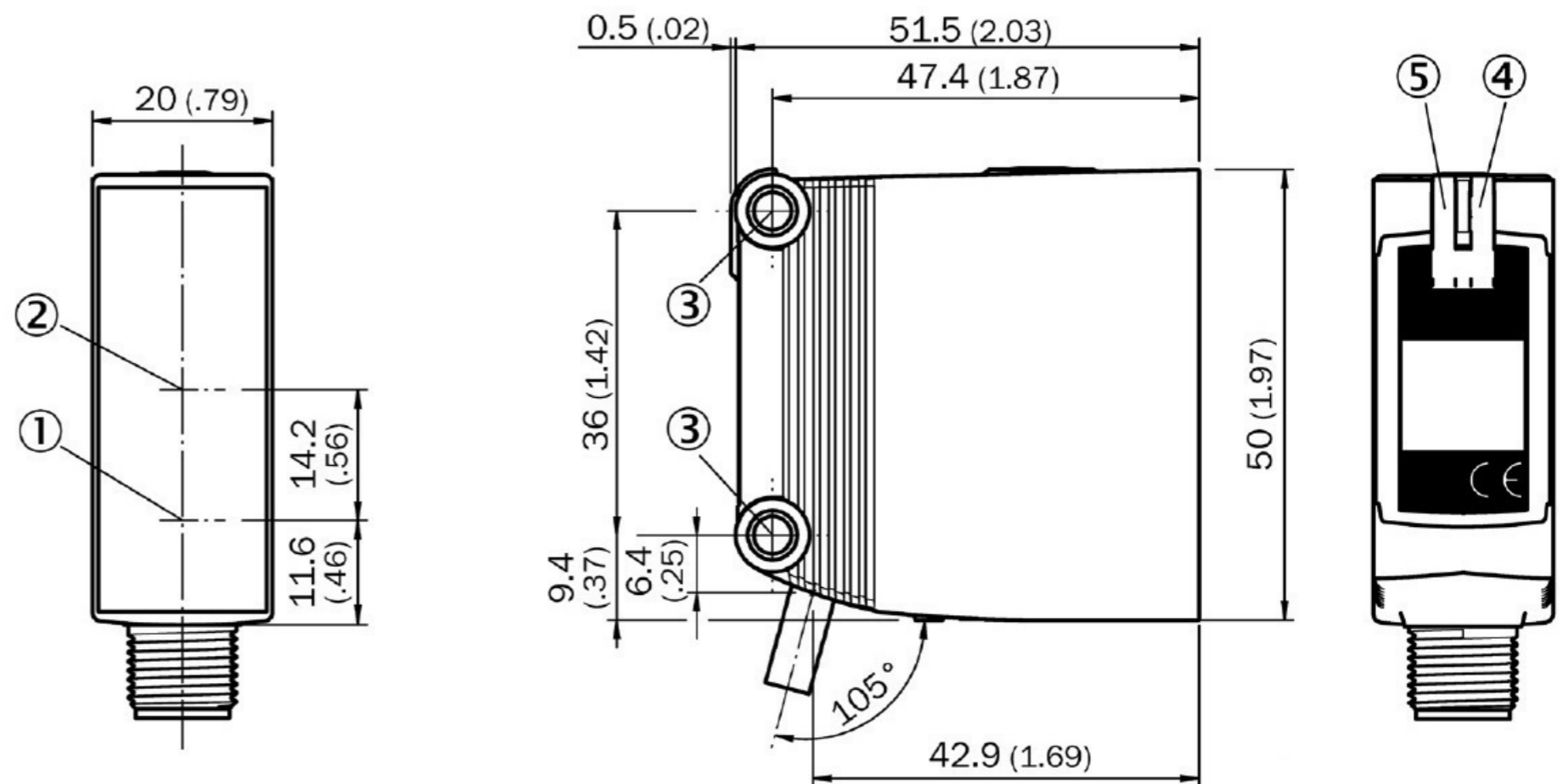
7 GL10(G)-xnnnn:

- Minimum signal damping 20 %
- Temperature stability after adjustment and warm-up time +/- 10 °C

Maintenance

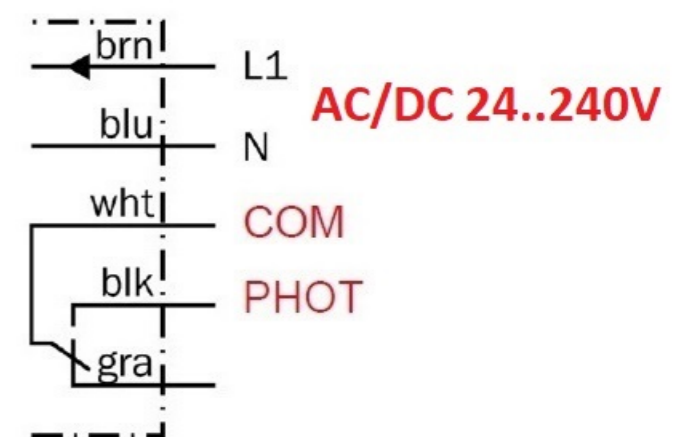
- light barriers are maintenance-free.
- We recommend doing the following regularly
- clean the external lens surfaces
 - check the screw connections and plug-in connections.
 - Do not use alcohol for cleaning.
- No modifications may be made to devices.

A GL10(G)-Rnnnn

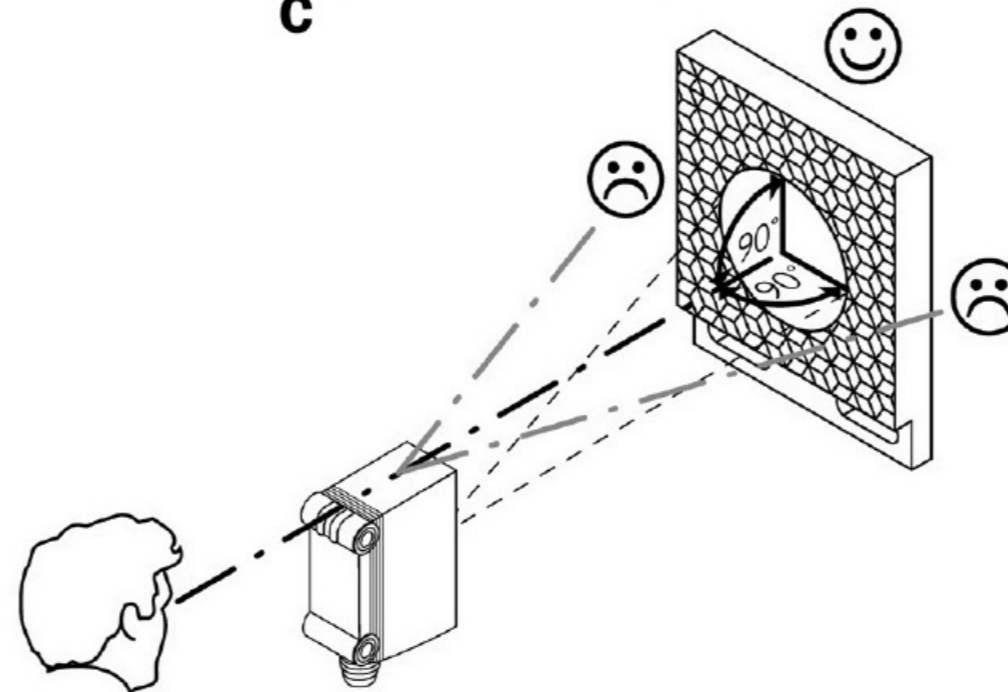


- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting hole, \varnothing 4.2 mm
- ④ LED indicator yellow: Light received
- ⑤ LED signal strength indicator green: power on

**D GL10(G)-R3nnn
GL10(G)-R9nnn**



C



GL10-Rnn1n

Sensing range max. (with reflector P250)	0.15 ... 10 m
Light source / type	
Light spot diameter / distance	
Supply voltage U_B	AC / DC 24 ... 240 V ²⁾
Switching output	Relay SPDT (electrically isolated)
Output current I_{max}	0.11 A (250 VDC), 3 A (30 VDC), 3 A (250 VAC)
Switching frequency max.	20 Hz
Response time	≤ 10 ms
Enclosure rating	
Protection class	<input type="checkbox"/> ⁴⁾
Circuit protection	C ⁵⁾
Ambient operating temperature	-30 ... +60 °C ⁶⁾

1) Limit values; Ripple max. 5 V_{pp}
 Operation in short-circuit protected network max. 8 A
 UL: Provide separate fuse protection (max. 1 A) at the infeed circuit.
 2) +/- 10 %. UL: Provide separate fuse protection (max. 2 A) at the infeed circuit.
 3) UL enclosure type 1
 4) Reference voltage AC 250 V
 5) A = U_B connections reversepolarity protected
 B = Inputs and output reverse-polarity protected
 C = Interference pulse suppression
 D = Outputs overcurrent and short-circuit protected
 6) UL: 0 ... +60 °C

- ① REF-IRF-56
- ② PL20A
- ③ PL30A
- ④ P250
- ⑤ PL40A
- ⑥ PL80A

E GL10-xnn1n

Operating reserve

