

SICK.COM



DATA SHEET

GL10-F4633S12

G10
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

GL10-F4633S12

ORDERING INFORMATION

Type	part no.
GL10-F4633S12	1102891

Further device versions and accessories at www.sick.com/G10



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
Dimensions (W x H x D)	20 mm x 50 mm x 39 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.15 m ... 17 m ¹⁾ 0.15 m ... 12.5 m ²⁾
Sensing range	0.15 m ... 14 m ¹⁾ 0.15 m ... 10.5 m ²⁾
Type of light	Visible red light
Light source	PinPoint LED ³⁾
Light spot size (distance)	Ø 58 mm (5 m)
Wave length	625 nm
Adjustment	Potentiometer, 270°

¹⁾ Reflector PL80A.
²⁾ Reflector P250.
³⁾ Average service life: 100,000 h at T_u = +25 °C.

MECHANICS/ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max}	≤ 100 mA
Response time	≤ 1,250 μs ³⁾
Switching frequency	400 Hz ⁴⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁵⁾ B ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	III
Weight	35 g
Polarizing filter	✓
Housing material	Plastic, ABS/PMMA
Enclosure rating	IP67
Items supplied	Reflector P250
Electromagnetic compatibility (EMC)	EN 60947-5-2
Ambient operating temperature	-30 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498
More standards	UL325 ⁹⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_B connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Complies with the UL325 standard when used with sturdy protection hood (e.g. BEF-G10WSG, 2071960).

SAFETY-RELATED PARAMETERS

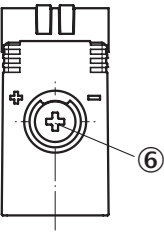
MTTF ₀	1,505 years
DC _{avg}	0%
T _M (mission time)	20 years

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

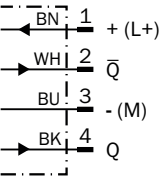
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

ADJUSTMENTS

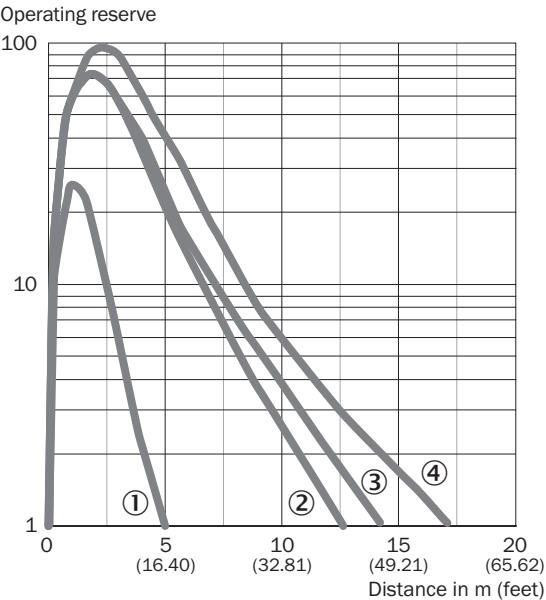


⑥ Adjustment of sensing range

CONNECTION DIAGRAM CD-083

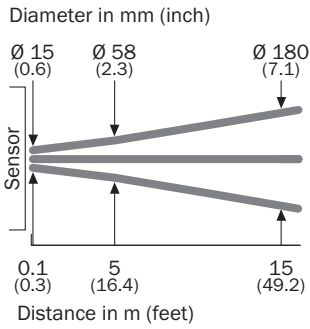


CHARACTERISTIC CURVE

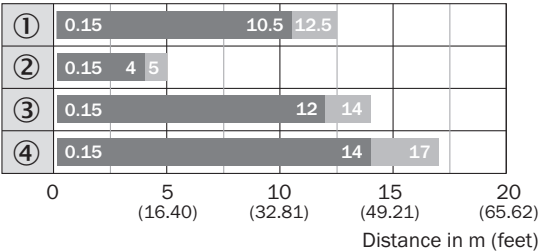


- ① Reflective tape REF-IRF-56
- ② Reflector P250
- ③ Reflector PL40A
- ④ Reflector PL80A

LIGHT SPOT SIZE



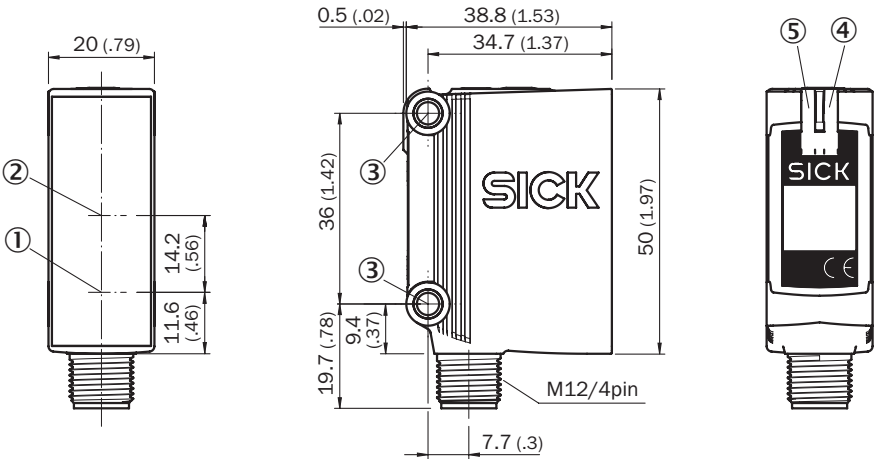
SENSING RANGE DIAGRAM



■ Sensing range ■ Sensing range max.

- ① Reflector P250
- ② Reflective tape REF-IRF-56
- ③ Reflector PL40A
- ④ Reflector PL80A

DIMENSIONAL DRAWING GTE10, GL10, GL10G, DC, CONNECTOR



- Dimensions in mm (inch)
- ① Center of optical axis, sender
 - ② Center of optical axis, receiver
 - ③ Mounting hole, Ø 4.2 mm
 - ④ LED indicator yellow: Status of received light beam
 - ⑤ LED indicator green: power on

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1102891



SICK AG
WALDKIRCH
GERMANY
SICK.COM

SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK
Sensor Intelligence