



DATA SHEET

GSE6-F2421V

G6
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

GSE6-F2421V

ORDERING INFORMATION

Type	part no.
GSE6-F2421V	1084113

Further device versions and accessories at www.sick.com/G6



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Sensing range max.	0 m ... 14.5 m
Sensing range	0 m ... 10 m
Polarisation filter	No
Emitted beam	
Light source	LED ¹⁾
Type of light	Infrared light
Light spot size (distance)	Ø 460 mm (10 m)
Key LED figures	
Wave length	850 nm
Adjustment	Potentiometer, 270°
Special applications	Hygienic and washdown zones

¹⁾ Average service life: 100,000 h at T_u = +25 °C.

ELECTRONICS

Supply voltage U _s	10 V DC ... 30 V DC ¹⁾
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¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_i tolerances.

³⁾ Without load.

⁴⁾ At U_v > 24 V, I_A max. = 50 mA.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_s connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Protection class	III
Digital output	Type PNP Switching mode Light/dark switching Signal voltage PNP HIGH/LOW $V_s - (\leq 3\text{ V}) / \text{approx. } 0\text{ V}$ Output current I_{max} $\leq 100\text{ mA}$ ⁴⁾ Response time $< 625\text{ }\mu\text{s}$ ⁵⁾ Switching frequency 1,000 Hz ⁶⁾
Output function	Complementary switching output
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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²⁾ May not fall below or exceed U_v tolerances.

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⁴⁾ At $U_v > 24\text{ V}$, $I_A \text{ max.} = 50\text{ mA}$.

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MECHANICS

Housing	Rectangular
Dimensions (W x H x D)	15 mm x 44 mm x 22 mm
Connection	Cable, 4-wire, 2 m ¹⁾
Connection detail	Conductor size 0.14 mm² Length of cable (L) 2 m ¹⁾
Material	Housing Metal, Stainless steel V4A (1.4404, 316L) Front screen Plastic, PMMA Cable Plastic, PVC
Weight	150 g

¹⁾ Do not bend below 0 °C.

AMBIENT DATA

Enclosure rating	IP67 IP69K ¹⁾
Ambient operating temperature	-25 °C ... +55 °C ²⁾
Ambient temperature, storage	-30 °C ... +75 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

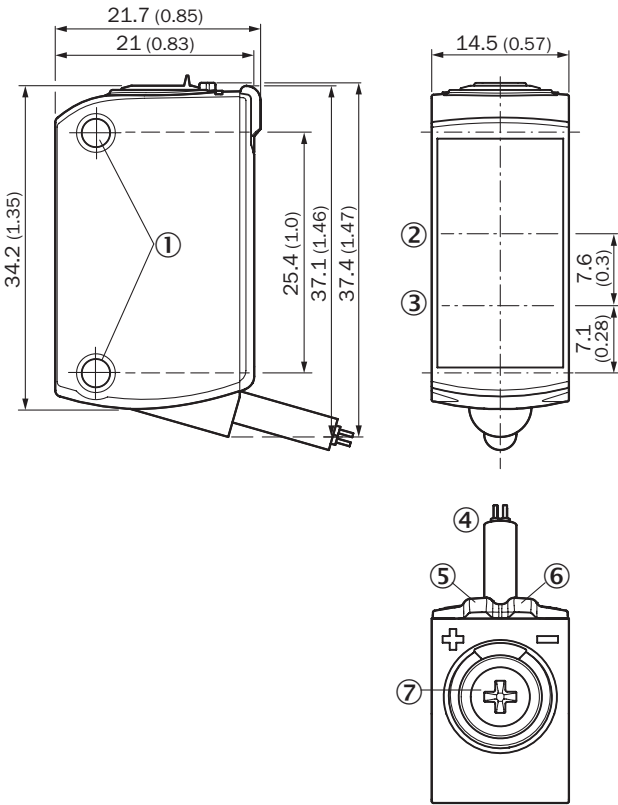
¹⁾ According to ISO 20653:2013-03.

²⁾ Temperature stability following adjustment +/-10 °C.

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) ex-empt	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

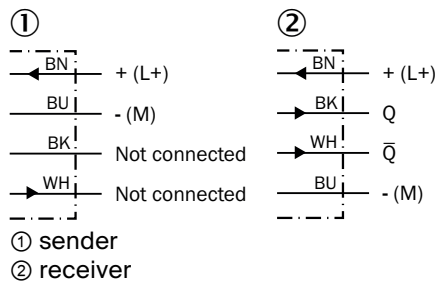
DIMENSIONAL DRAWING GTB6, GTE6, GL6, GSE6 INOX, CABLE (WITH MALE CONNECTOR)



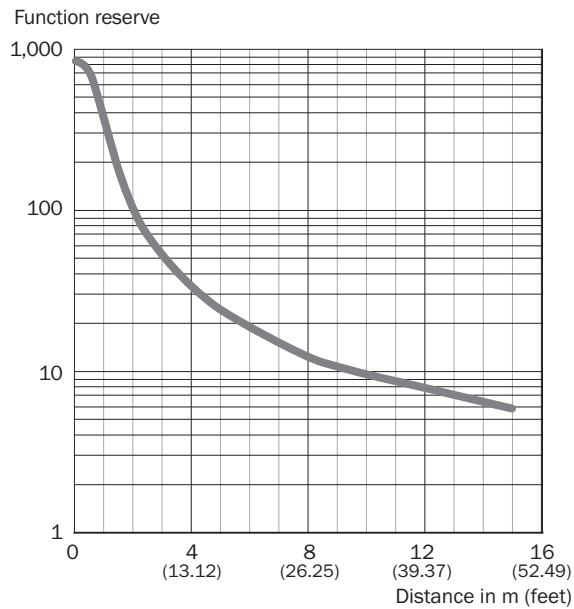
Dimensions in mm (inch)

- ① M3 mounting hole
- ② Optical axis, receiver
- ③ Optical axis, sender
- ④ Connection
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ LED indicator green: Supply voltage active
- ⑦ Potentiometer

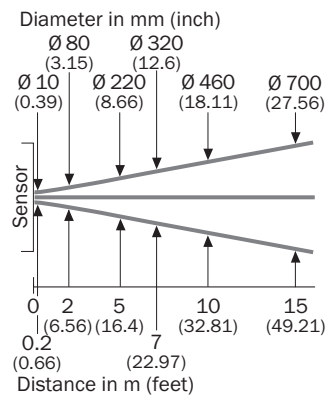
CONNECTION DIAGRAM CD-231



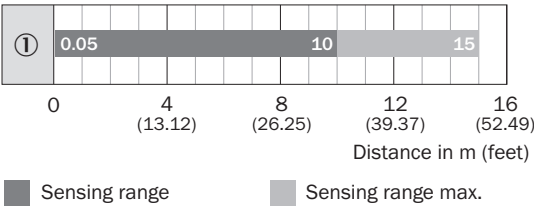
CHARACTERISTIC CURVE GSE6 INOX, IR, STANDARD



LIGHT SPOT SIZE GSE6 INOX, IR, STANDARD



SENSING RANGE DIAGRAM GSE6 INOX, IR, STANDARD



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/1084113



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SICK AT A GLANCE

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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

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