



GTB6-P5441

G6

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
GTB6-P5441	1081388

Other models and accessories → www.sick.com/G6

Detailed technical data

Features

Device type	Photoelectric sensors
Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Sensing range max.	5 mm ... 500 mm ¹⁾
Sensing range	50 mm ... 450 mm
Polarisation filters	No
Emitted beam	
Light source	LED ²⁾
Type of light	Infrared light
Light spot size (distance)	Ø 9 mm (100 mm)
Key LED figures	
Wave length	850 nm
Adjustment	Mechanical spindle, 5 turns

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Safety-related parameters

MTTF_D	1,923 years
DC_{avg}	0 %

Electrical data

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Power consumption	30 mA ³⁾
Protection class	III
Digital output	
Type	PNP
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	$< 1\text{ ms}$ ⁵⁾
Switching frequency	500 Hz ⁶⁾
Switching mode	Light switching
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

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

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.

Mechanical data

Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Cable with connector M8, 3-pin ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Length of cable	300 mm
Material	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
Cable	PVC
Weight	20 g

¹⁾ Do not bend below 0 °C.

Ambient data

Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C ¹⁾
Ambient temperature, storage	-40 °C ... +70 °C

¹⁾ Temperature stability following adjustment +/-10 °C.

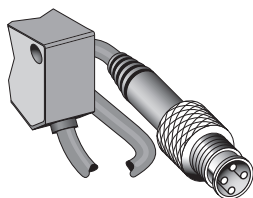
UL File No.	NRKH.E348498 & NRKH7.E348498
--------------------	------------------------------

¹⁾ Temperature stability following adjustment +/-10 °C.

Classifications

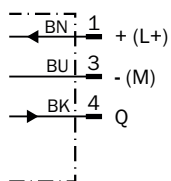
ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ECl@ss 10.0	27270904
ECl@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type

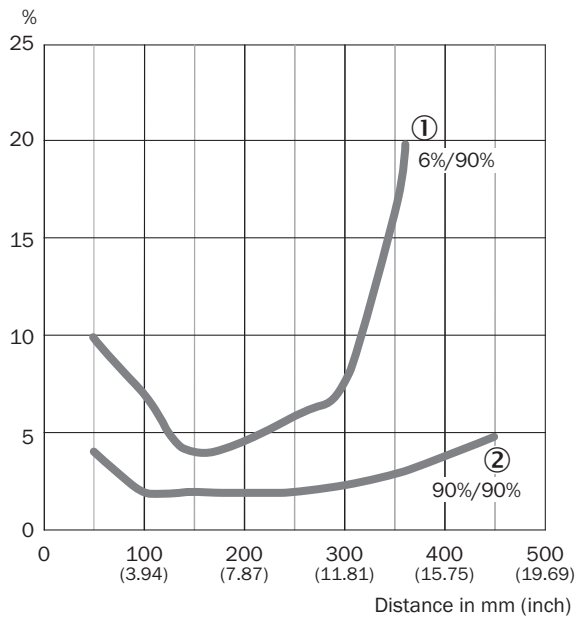


Connection diagram

Cd-045

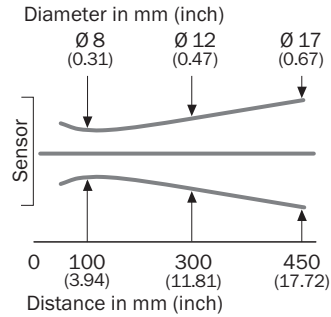


Characteristic curve

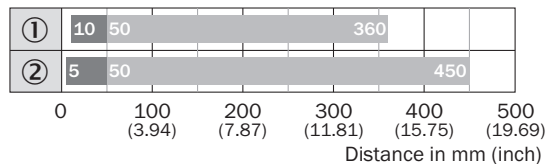


- ① Sensing range on black, 6% remission
- ② Sensing range on white, 90% remission

Light spot size



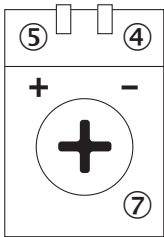
Sensing range diagram



- Sensing range max. ■ Sensing range
- ① Sensing range on black, 6% remission
- ② Object with 90% remission (based on standard white DIN 5033)

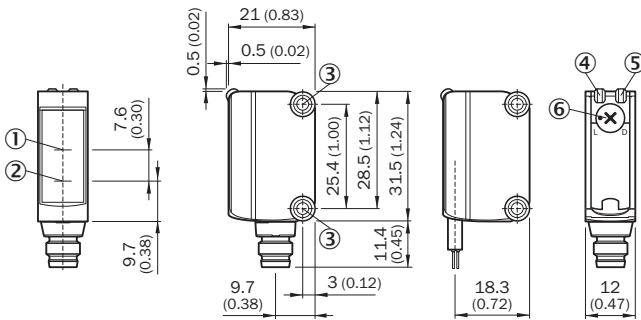
Adjustments

Adjustment possibility



- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑦ Sensitivity control: potentiometer




Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Recommended accessories

Other models and accessories → www.sick.com/G6

	Brief description	Type	Part no.
Mounting brackets and plates			
	Stainless steel (1.4301)	BEF-WN-G6	2062909
Plug connectors and cables			
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U13-050VA1XLEAX	2095884
	Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded	STE-0803-G	6037322

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com