



GTB6-F4431V

G6 Inox

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
GTB6-F4431V	1086172

Other models and accessories → www.sick.com/G6_Inox

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	15 mm x 44 mm x 22 mm
Housing design (light emission)	Rectangular
Sensing range max.	5 mm ... 400 mm ¹⁾
Sensing range	50 mm ... 220 mm
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 6 mm (100 mm)
Wave length	650 nm
Adjustment	Mechanical spindle, 5 turns
Special applications	Hygienic and washdown zones

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

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

Mechanics/electronics

Supply voltage	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 exceed or fall below U_v 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.

¹⁰⁾ According to ISO 20653:2013-03.

¹¹⁾ Temperature stability following adjustment +/-10 °C.

Ripple	± 10 % ²⁾
Power consumption	32 mA ³⁾
Switching output	PNP
Output function	Complementary switching output
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	V _S - (≤ 3 V) / approx. 0 V
Output current I_{max.}	≤ 100 mA ⁴⁾
Response time	< 1.25 ms ⁵⁾
Switching frequency	± 500 Hz ⁶⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Protection class	III
Weight	40 g
Housing material	Stainless steel, Stainless steel V4A (1.4404, 316L)
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP69K ¹⁰⁾
Ambient operating temperature	-25 °C ... +55 °C ¹¹⁾
Ambient storage temperature	-30 °C ... +75 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

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Classifications

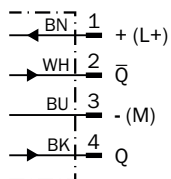
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ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
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ETIM 5.0	EC002719
ETIM 6.0	EC002719

UNSPSC 16.0901

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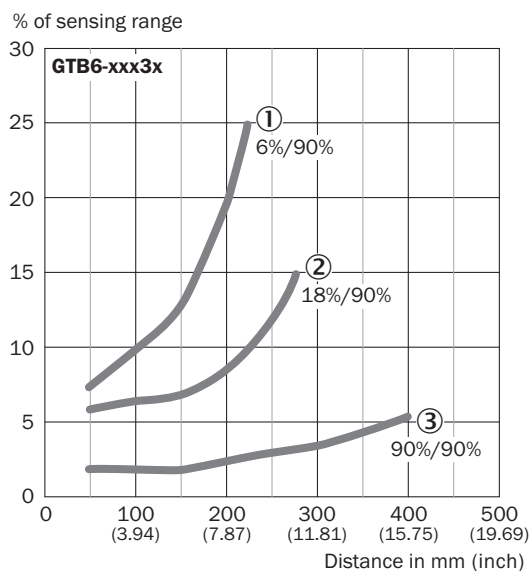
Connection diagram

Cd-084



Characteristic curve

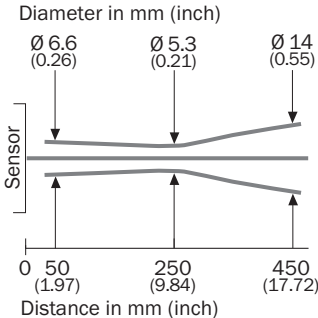
GTB6 Inox, Red, LongRange



- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

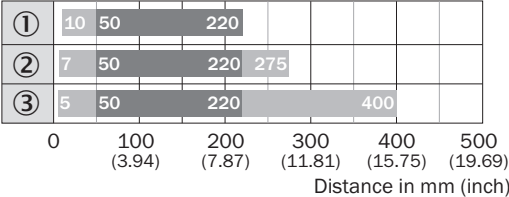
Light spot size

GTB6 Inox, Red, LongRange



Sensing range diagram

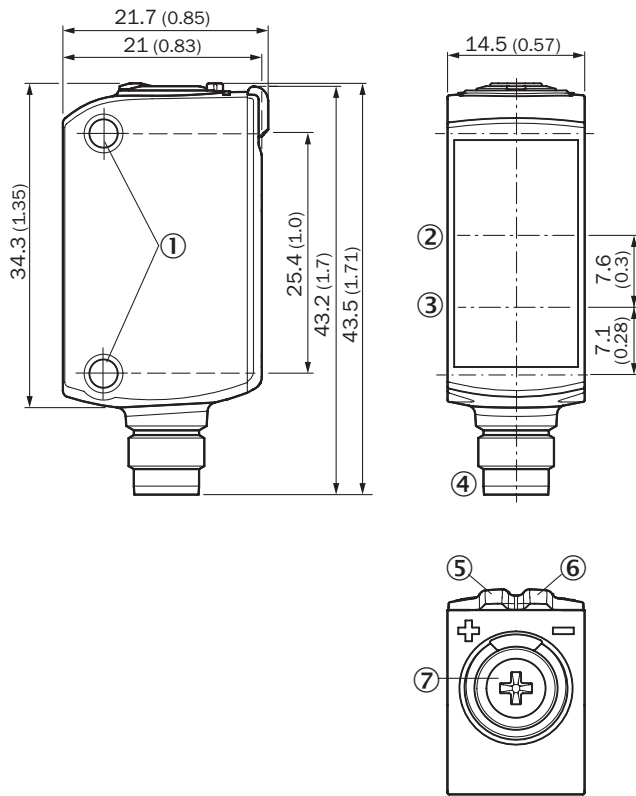
GTB6 Inox, Red, LongRange



- Sensing range
- Sensing range max.
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Dimensional drawing (Dimensions in mm (inch))



GTB6, GTE6, GL6, GSE6 Inox, male connector



- 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

Recommended accessories

Other models and accessories → www.sick.com/G6_Inox

	Brief description	Type	Part no.
Universal bar clamp systems			
	Clamp bar to fix G6 and W16 sensors on rods of 10 mm, clamp-on design up to 4 mm wall thickness, aluminum (clamp bar), stainless steel (bracket), clamp bar mounting and clamp function, mounting bracket, mounting hardware	BEF-KHS-ISG6	2075080
Mounting brackets and plates			
	Stainless steel (1.4301)	BEF-WN-G6	2062909

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