GTB6-F7411V

G6

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

GTB6-F7411V | G6
PHOTOELECTRIC SENSORS

Illustration may differ
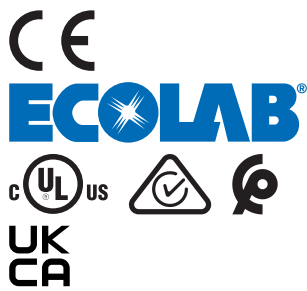
Ordering information

Type	part no.
GTB6-F7411V	1084096

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Sensing range max.	5 mm ... 250 mm [1]
Sensing range	35 mm ... 140 mm
Emitted beam	
Light source	PinPoint LED [2]
Type of light	Visible red light
Light spot size (distance)	Ø 6 mm (100 mm)
Key LED figures	
Wave length	650 nm
Adjustment	Mechanical spindle, 5 turns
Special applications	Hygienic and washdown zones

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Average service life: 100,000 h at T_U = +25 °C.

Electronics

Supply voltage U$_B$	10 V DC ... 30 V DC [1]
Ripple	± 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$_S$ - (≤ 3 V) / approx. 0 V
Output current I$_{max.}$	≤ 100 mA [4]
Response time	< 1.25 ms [5]
Switching frequency	500 Hz [6]
Output function	Complementary switching output
Circuit protection	A [7] B [8] D [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] Without load.

[4] At Uv > 24 V, IA 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.

Mechanics

Housing	Rectangular
Dimensions (W x H x D)	15 mm x 44 mm x 22 mm
Connection	Cable with M12 male connector, 4-pin [1]
Connection detail	
Length of cable (L)	300 mm [1]
Material	
Housing	Metal, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	70 g

[1] Do not bend below 0 °C.

Ambient data

Enclosure rating	IP67 IP69K [1]
Ambient operating temperature	–25 °C ... +55 °C [2]

[1] According to ISO 20653:2013-03.

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

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	✓
ECOLAB certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

|	
ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

## Dimensional drawing GTB6, GTE6, GL6, GSE6 Inox, cable (with male connector)
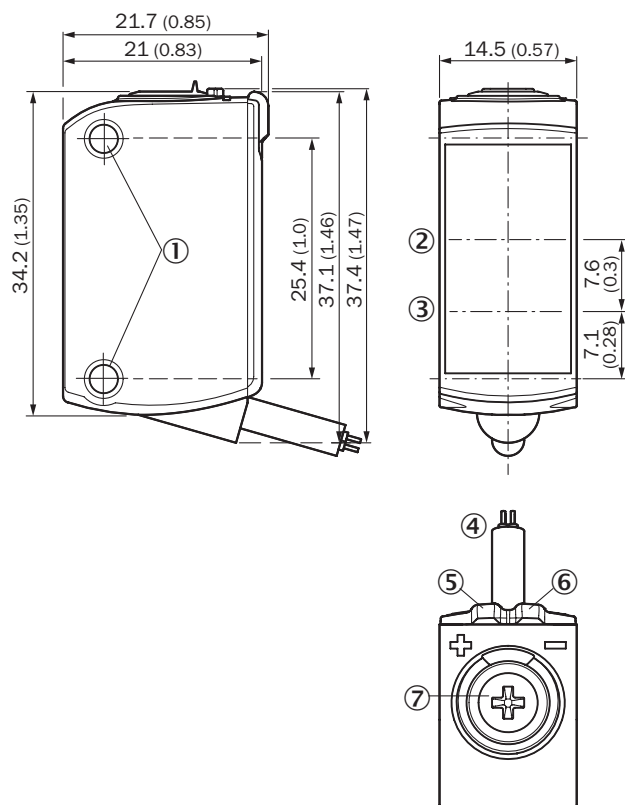
Dimensions in mm (inch)
① M3 mounting hole
② Optical axis, receiver
③ Optical axis, sender
④ Connection
⑤ LED indicator yellow: Status of received light beam
⑥ LED indicator green: Supply voltage active
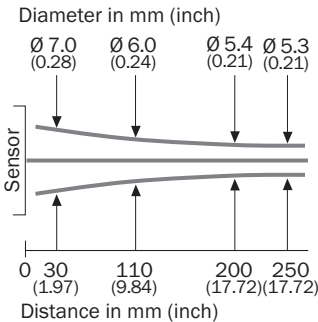⑦ Potentiometer

Connection diagram Cd-084

BN	1	+ (L+)
WH	2	Q̄
BU	3	- (M)
BK	4	Q
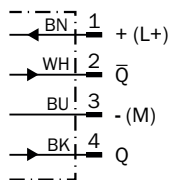
Characteristic curve GTB6 Inox, Red, Standard
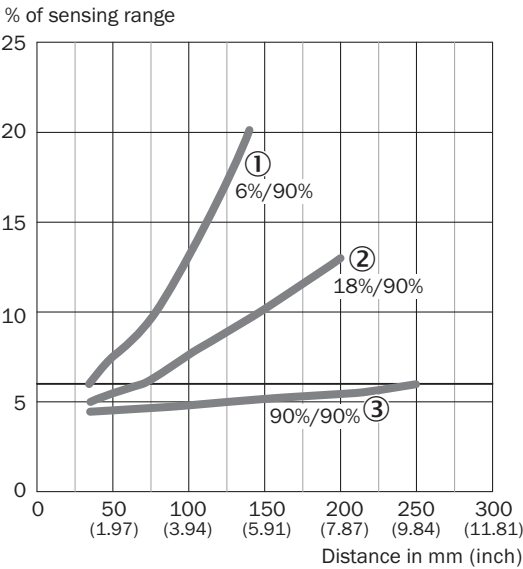
% of sensing range
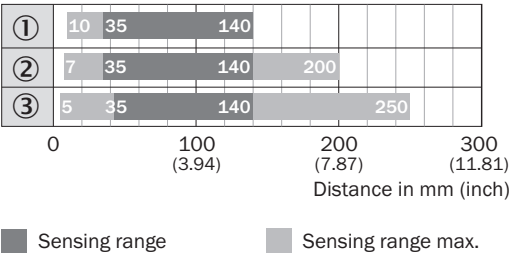

① 6%/90%
② 18%/90%
90%/90% ③

Distance in mm (inch)

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

Light spot size GTB6 Inox, Red, Standard

Diameter in mm (inch)

Ø 7.0 (0.28) Ø 6.0 (0.24) Ø 5.4 (0.21) Ø 5.3 (0.21)

Sensor

0 30 (1.97) 110 (9.84) 200 (17.72) 250 (17.72)
Distance in mm (inch)

Sensing range diagram GTB6 Inox, Red, Standard

① 10 35 140
② 7 35 140 200
③ 5 35 140 250

0 100 (3.94) 200 (7.87) 300 (11.81)
Distance in mm (inch)

■ Sensing range   ■ Sensing range max.

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

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness • **Material:** Steel • **Details:** Aluminum (clamp bar), stainless steel (bracket) • **Items supplied:** Clamp bar mounting and clamp function, mounting bracket, mounting hardware	BEF-KHS-IS12G6	2086865
	• **Description:** Mounting bracket for wall mounting • **Material:** Stainless steel • **Details:** Stainless steel • **Items supplied:** Mounting hardware included • **Suitable for:** W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S	BEF-W100-A	5311520
connectors and cables			
	• **Connection type head A:** Female connector, M12, 4-pin, straight • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Note:** This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) • **Application:** Hygienic and washdown zones	DOL-1204-G05MNI	6052615

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."

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