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Product data sheet



GTB2S-P1331

G2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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GTB2S-P1331 | G2

MINIATURE PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
GTB2S-P1331	1064351

Other models and accessories → www.sick.com/G2

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	7.7 mm x 21.8 mm x 13.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	1 mm ... 36 mm [1]
Sensing range	5 mm ... 30 mm [2]
Background suppression typ. from	38 mm
Type of light	Visible red light
Light source	PinPoint LED [3]
Light spot size (distance)	Ø 3 mm (15 mm)
Wave length	640 nm
Adjustment	None
Special applications	Detecting small objects

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Object with 6 % remission.
[3] Average service life: 100,000 h at T_U = +25 °C.

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Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	20 mA [3]
Switching output	PNP
Switching mode	Light switching
Output current $I_{max.}$	≤ 50 mA
Response time	< 0.6 ms [4]
Switching frequency	800 Hz [5]
Connection type	Cable, 3-wire, 2 m [6]
Cable material	PVC
Cable diameter	Ø 3 mm
Circuit protection	A [7] C [8] D [9]
Weight	33.7 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–25 °C ... +50 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493

[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] Signal transit time with resistive load.
[5] With light/dark ratio 1:1.
[6] Do not bend below 0 °C.
[7] A = V_S connections reverse-polarity protected.
[8] C = interference suppression.
[9] D = outputs overcurrent and short-circuit protected.

Safety-related parameters

$MTTF_D$	3,487 years
DC_{avg}	0 %

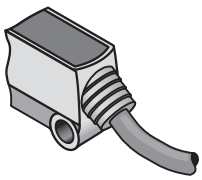
Classifications

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eCl@ss 5.1.4	27270904
eCl@ss 6.0	27270904
eCl@ss 6.2	27270904
eCl@ss 7.0	27270904
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eCl@ss 8.1	27270904

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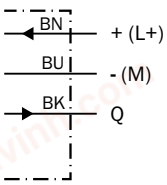
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eCl@ss 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type



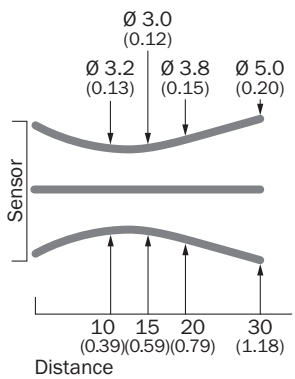
Connection diagram

Cd-043



Light spot size

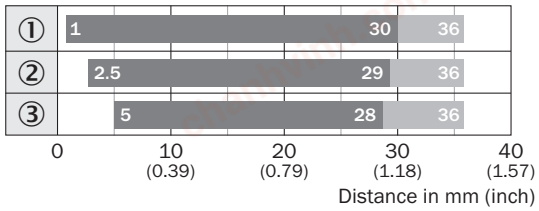
GTB2S, 30 mm



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Sensing range diagram

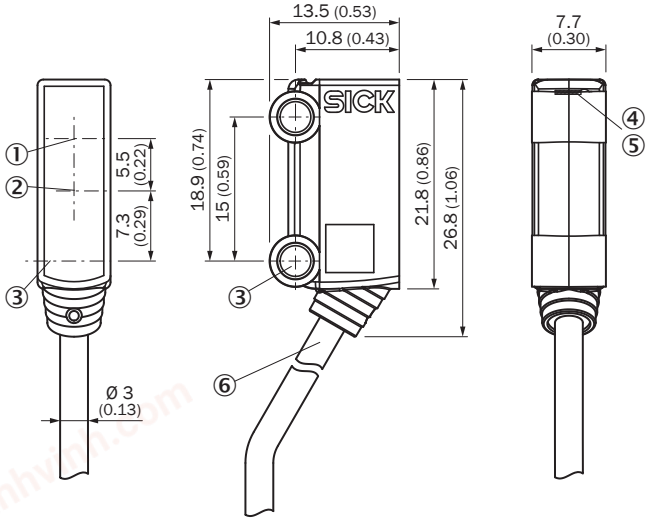
GTB2S, 30 mm



Sensing range Sensing range max.

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

Dimensional drawing (Dimensions in mm (inch))



① Optical axis, receiver
② Optical axis, sender
③ Mounting hole, Ø 3.2 mm
④ LED indicator green: Supply voltage active
⑤ LED indicator yellow: Status of received light beam
⑥ Connection

Recommended accessories

Other models and accessories ➜ www.sick.com/G2

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322

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SICK AT A GLANCE

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For us, that is “Sensor Intelligence.”

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