

Illustration may differ



Ordering information

Type	Part no.
WTT12L-B2561	1072611

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression, Optical time-of-flight
Dimensions (W x H x D)	20 mm x 49.6 mm x 44.2 mm
Housing design (light emission)	Rectangular
Sensing range max.	50 mm ... 3,800 mm ¹⁾
Sensing range	100 mm ... 3,800 mm ^{1) 2)}
Type of light	Visible red light
Light source	Laser ³⁾
Light spot size (distance)	Ø 18 mm (3,800 mm)
Wave length	658 nm
Laser class	1 (IEC 60825-1 / CDRH 21 CFR 1040.10 & 1040.11)
Adjustment	Potentiometer, 4 turns (1 x)

¹⁾ Object with 6 ... 90% remission (based on standard white, DIN 5033).

²⁾ Adjustable.

³⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	70 mA ³⁾
Switching output	Push-pull: PNP/NPN ⁴⁾
Number of switching outputs	2 (Q, /Q) ⁴⁾
Switching mode	Light/dark switching ⁴⁾
Output current I_{max}	≤ 100 mA
Response time	≤ 5 ms ⁵⁾
Switching frequency	100 Hz ⁶⁾
Analog output	-
Input	Sender off
Connection type	Male connector M12, 5-pin
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾
Protection class	III
Weight	48 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-35 °C ... +50 °C ¹⁰⁾
Ambient temperature, storage	-40 °C ... +70 °C
Warm-up time	< 15 min ¹¹⁾
Initialization time	< 300 ms
UL File No.	NRKH.E181493

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

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load. At $V_S = 24$ V.

⁴⁾ Q, /Q = 1 switching threshold, light/dark switching (complementary).

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⁾ C = interference suppression.

¹⁰⁾ As of $T_a = 45$ °C, a max.load current $I_{max} = 50$ mA is permitted.

¹¹⁾ Below $T_U = -10$ °C a warm-up time is necessary.

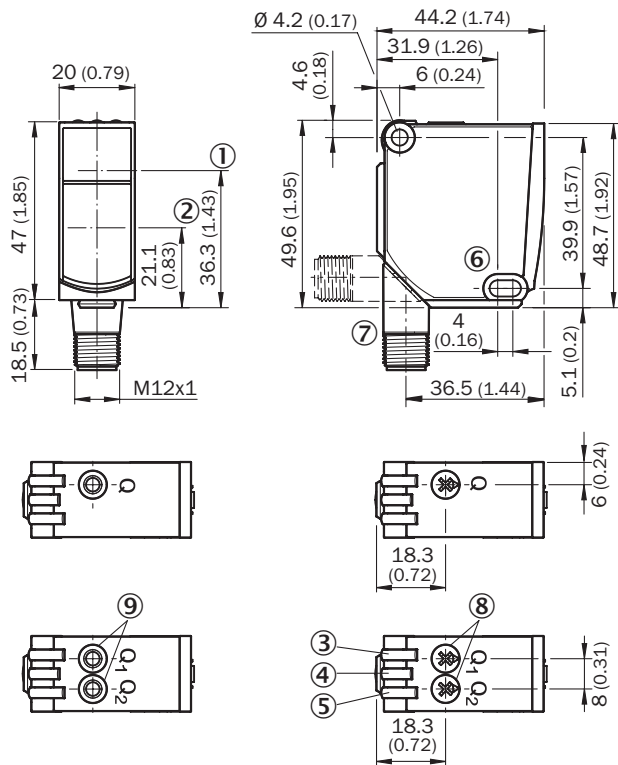
Safety-related parameters

MTTF_D	133 years
DC_{avg}	0 %
T_M (mission time)	20 years

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
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

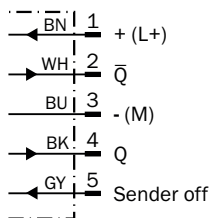
Dimensional drawing (Dimensions in mm (inch))



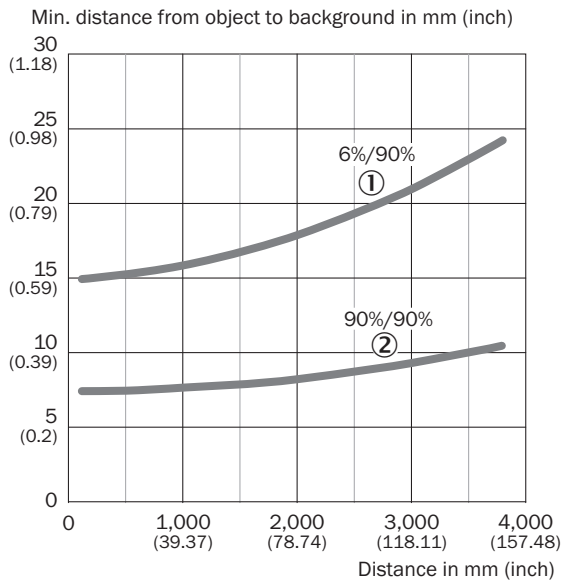
- ① Optical axis, sender
- ② Optical axis, receiver
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: power on
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Mounting hole, $\varnothing 4.2$ mm
- ⑦ Connection
- ⑧ Potentiometer
- ⑨ Single teach-in button

Connection diagram

Cd-282

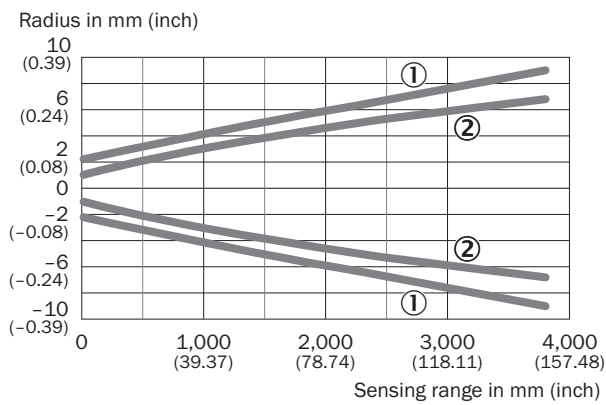


Characteristic curve



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

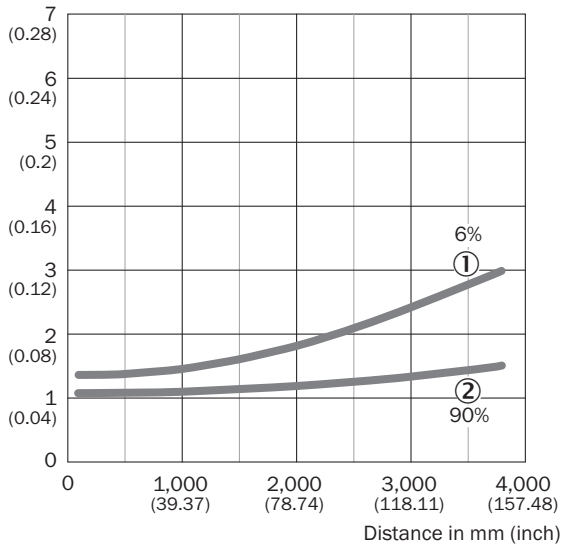
Light spot size



- ① Light spot horizontal
- ② Light spot vertical

Repeatability

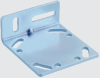


Repeatability in mm (inch)



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

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting brackets	BEF-WTT12L	2078538
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A15-050VB5XLEAX	2096240
	Head A: male connector, M12, 5-pin, straight Cable: unshielded For field bus technology	STE-1205-G	6022083

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