WLT280L-2P2536

PowerProx

MULTITASK PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
WLT280L-2P2536	6048069

Included in delivery: P250 (1), BEF-W280 (1)

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)	23.5 mm x 76 mm x 55.8 mm
Housing design (light emission)	Rectangular
Sensing range max.	200 mm ... 18,000 mm [1] 200 mm ... 18,000 mm [1]
Sensing range	200 mm ... 18,000 mm [2]
Type of light	Visible red light
Light source	Laser [3]
Light spot size (distance)	Ø 50 mm (18 m)
Laser class	1 (EN 60825-1:2014, IEC 60825-1:2014)
Adjustment	Potentiometer (2 x)
Special applications	Detecting small objects
Special features	Detailed principle of operation of optical time-of-flight method Reflector on the object

[1] Reflector P250.

[2] Einstellbar.

[3] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 3 V_{pp}
Current consumption	70 mA [2]
Switching output	PNP
Number of switching outputs	2 (Q_1, Q_2) [3]
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Analog output	-
Input	Sender off
Connection type	Male connector M12, 5-pin
Circuit protection	A [6] B [7] C [8] D [9]
Protection class	III
Weight	120 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Mounting bracket BEF-W280, Reflector P250
Electromagnetic compatibility (EMC)	EN 60947-5-2
Ambient operating temperature	–10 °C ... +50 °C
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	NRKH2.E300503 & NRKH8.E300503

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

[2] Without load.

[3] Q1, Q2 = 2 switching thresholds, light/dark switching selectable via light/dark selector.

[4] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] A = V_S connections reverse-polarity protected.

[7] B = output reverse-polarity protected.

[8] C = interference suppression.

[9] D = outputs overcurrent and short-circuit protected.
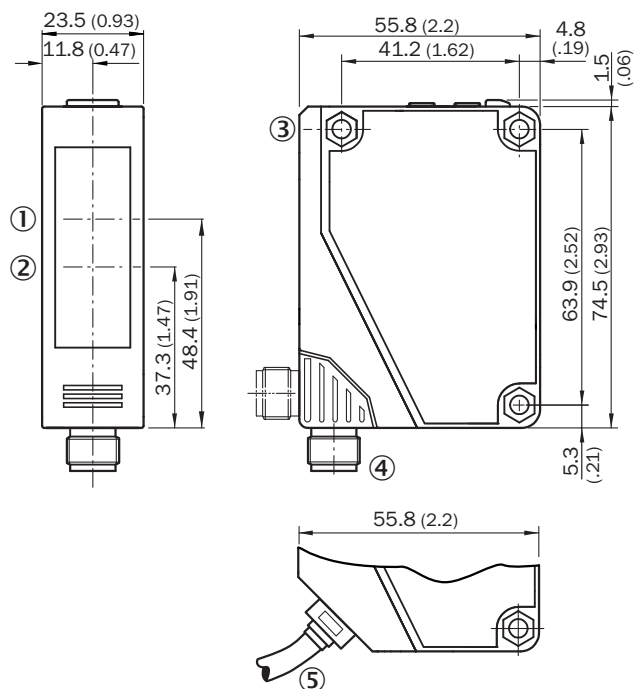
Safety-related parameters

$MTTF_D$	193 years
DC_{avg}	0 %

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

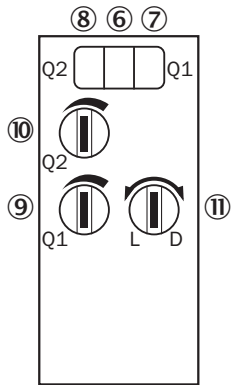## Dimensional drawing (Dimensions in mm (inch))

① Center of optical axis, receiver
② Center of optical axis, sender
③ Mounting hole, Ø 4.3 mm
④ M12 plug connector, 5-pin, can be rotated through 90°
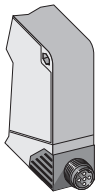⑤ Cable, 2 m, 5-wire, Ø 3.8 mm

Adjustments

WxT280L-2xxxx6

⑥ LED indicator green: Stability indicator
⑦ Status indicator LED, yellow: Status of received light beam (switching output 1)
⑧ Status indicator LED, yellow: Status of received light beam (switching output 2)
⑨ Sensing range adjustment: potentiometer for switching output 1
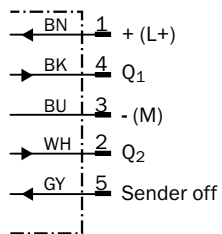⑩ Sensing range adjustment: potentiometer for switching output 2
⑪ Light/dark selector

Connection type

WTT280L-2x25xx WLT280L-2x25xx

Connection diagram

Cd-211

BN	1	+ (L+)
BK	4	Q_1
BU	3	- (M)
WH	2	Q_2
GY	5	Sender off

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, Stainless steel V2A (1.4301), 2 screws, 2 nuts, 2 circlips, 2 washers for mounting the sensor	BEF-W280	5313885
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
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812

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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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