



WTB4-3P2100S81

MultiPulse

MULTITASK PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WTB4-3P2100S81	1067527

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

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Housing design (light emission)	Rectangular
Sensing range max.	28 mm ... 165 mm ¹⁾
Sensing range	30 mm ... 150 mm ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 7 mm (50 mm)
Wave length	650 nm
Adjustment	None
Special applications	Detecting small objects
Special features	Sensor with self-monitoring

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⁾
Ripple	< 5 V _{pp} ²⁾

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load.

⁴⁾ Pulsed.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Current consumption	20 mA ³⁾
Switching output	PNP ⁴⁾
Switching mode	Light switching ⁴⁾
Output current I_{max.}	< 100 mA
Response time	< 0.1 s ⁵⁾
Switching frequency	10 Hz ⁶⁾
Connection type	Connector M8, 3-pin
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	30 g
Special device	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Special feature	Oscillating output
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

1) Limit values.

2) May not exceed or fall below U_v tolerances.

3) Without load.

4) Pulsed.

5) Signal transit time with resistive load.

6) With light/dark ratio 1:1.

7) A = V_S connections reverse-polarity protected.

8) C = interference suppression.

9) D = outputs overcurrent and short-circuit protected.

Safety-related parameters

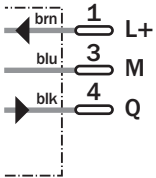
MTTF_D	781 years
DC_{avg}	0%

Classifications

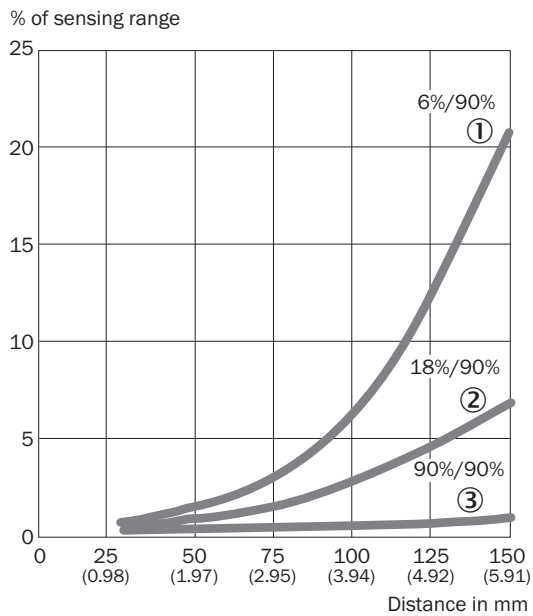
ECl@ss 5.0	27270904
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ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ECl@ss 10.0	27270904

ECl@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

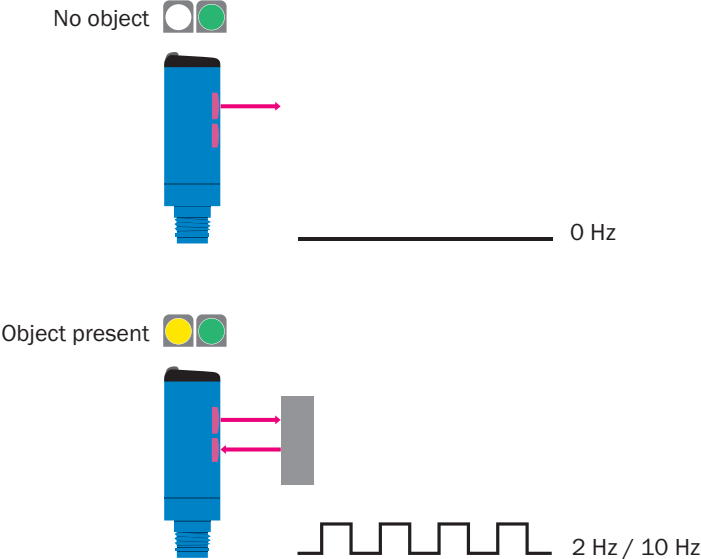
Connection diagram



Characteristic curve



Functional principle

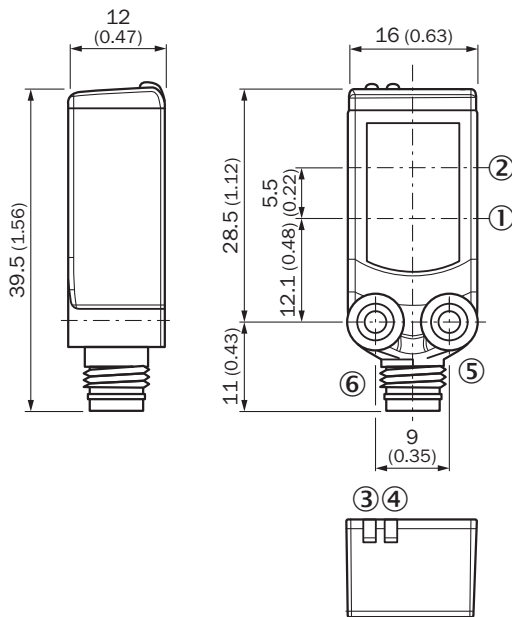


Sensing range diagram

①	28	30								135	145		
②	28	30								145	160		
③	28	30								150	165		
	20	40	60	80	100	120	140	160					
	(0.79)	(1.57)	(2.36)	(3.15)	(3.94)	(4.72)	(5.51)	(6.29)					
	Distance in mm (inch)												



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

Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U13-050VA1XLEAX	2095884
	Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded	STE-0803-G	6037322

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