



WL27-3P2450

W27-3

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL27-3P2450	1027771

Other models and accessories → www.sick.com/W27-3

Detailed technical data

Features

Dimensions (W x H x D)	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.1 m ... 15 m ¹⁾
Sensing range	0.1 m ... 11 m ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 220 mm (10 m)
Angle of dispersion	Approx. 1.5°
Wave length	660 nm
Adjustment	None

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. V _S – 2.5 V / 0 V
Output current I_{max.}	≤ 100 mA
Response time	≤ 500 μs ³⁾
Switching frequency	1,000 Hz ⁴⁾
Circuit protection	A ⁵⁾ B ⁶⁾ C ⁷⁾
Protection class	II ⁸⁾
Weight	100 g
Polarisation filter	✓
Front screen heating	✓ ⁹⁾
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP69K
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C

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

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ Reference voltage: 50 V DC.

⁹⁾ Static, low heat output, use in +5 °C ... +15 °C.

Safety-related parameters

MTTF_D	1,640 years
DC_{avg}	0%

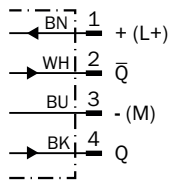
Classifications

ECI@ss 5.0	27270902
ECI@ss 5.1.4	27270902
ECI@ss 6.0	27270902
ECI@ss 6.2	27270902
ECI@ss 7.0	27270902
ECI@ss 8.0	27270902
ECI@ss 8.1	27270902

ECI@ss 9.0	27270902
ECI@ss 10.0	27270902
ECI@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

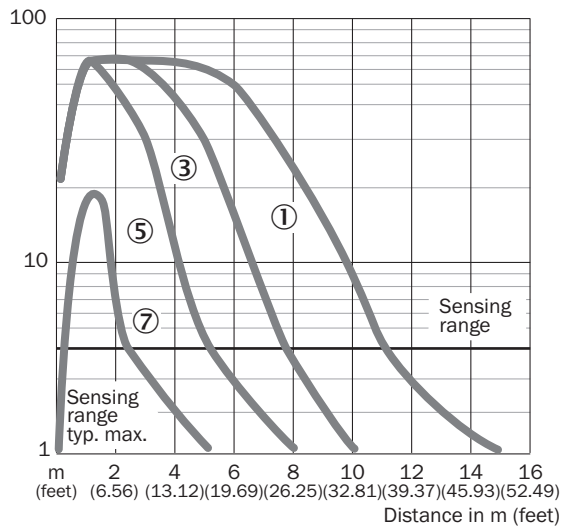
Connection diagram

Cd-083



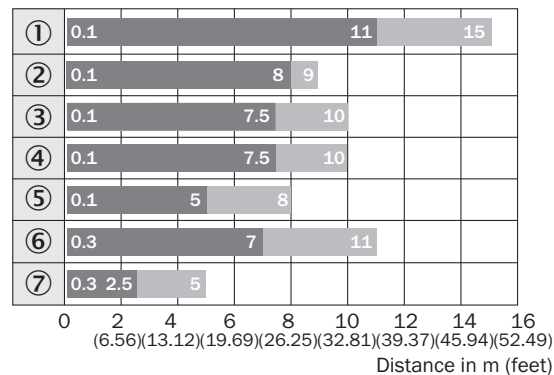
Characteristic curve

WL27-3



Sensing range diagram

WL27-3

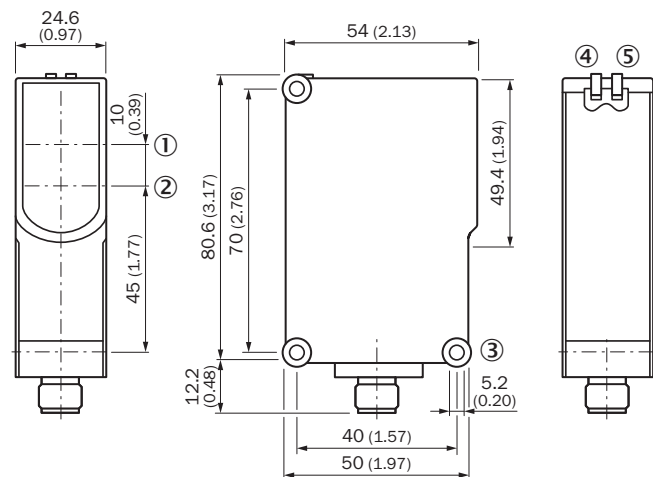


■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector PL50A
- ③ Reflector PL40A
- ④ Reflector PL30A
- ⑤ Reflector PL20A
- ⑥ Reflector C110A
- ⑦ Reflective tape Diamond Grade

Dimensional drawing (Dimensions in mm (inch))

WL27-3, WSE27-3



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Mounting hole $\varnothing$ 5.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Recommended accessories

Mounting systems

Device protection (mechanical)

Protective housings and protective pipes

Mounting brackets and plates

Mounting brackets

Reflectors and optics

Reflectors

Angular

Plug connectors and cables

Plug connectors and cables

Connecting cables

Field-attachable connectors

Other models and accessories → www.sick.com/W27-3

Brief description	Type	Part no.
Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp BEF-KHS-KH1 (2022726), mounting hardware	BEF-SG-W27	2039601
Brief description	Type	Part no.
Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Brief description	Type	Part no.
Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
Brief description	Type	Part no.
Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
Brief description	Type	Part no.
Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

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