



WL27-3P2460P04
W27

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
WL27-3P2460P04	1047927

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

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
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 ... 3 m ¹⁾
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Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 30 mm (3 m)
Adjustment	None
Special features	WL27-3P2460S14, 1047908, premounted on BEF-KHS-A01 mounting bracket

¹⁾ Reflector PL20A.

²⁾ 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	< 5 V _{pp} ²⁾
Current consumption	35 mA ³⁾
Switching output	PNP
Output function	Complementary

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

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ Reference voltage: 50 V DC.

Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$
Output current I_{\max}	$\leq 100 \text{ mA}$
Response time	$\leq 2.5 \text{ ms}^{4)}$
Switching frequency	$200 \text{ Hz}^{5)}$
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾
Protection class	II ⁹⁾
Weight	100 g
Polarizing filter	✓
Special device	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	$-40 \text{ °C} \dots +60 \text{ °C}$
Ambient temperature, storage	$-40 \text{ °C} \dots +75 \text{ °C}$
UL File No.	NRKH.E181493 & NRKH7.E181493

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

2) May not fall below or exceed U_y tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) A = V_S connections reverse-polarity protected.

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

8) C = interference suppression.

9) Reference voltage: 50 V DC.

Safety-related parameters

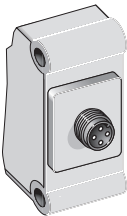
MTTF_D	2,205 years
DC_{avg}	0 %

Classifications

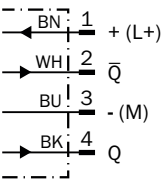
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902

ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

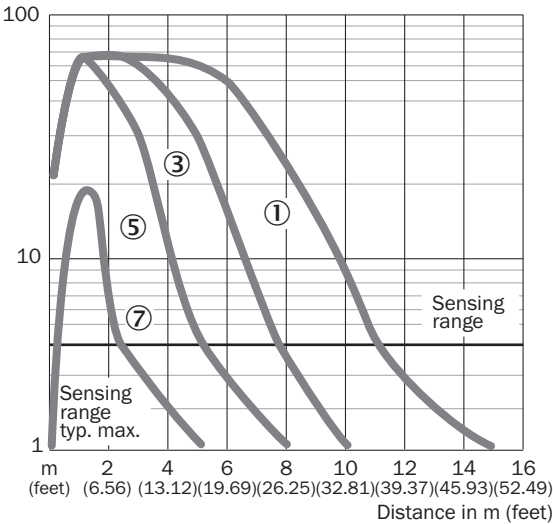
Connection type



Connection diagram Cd-083

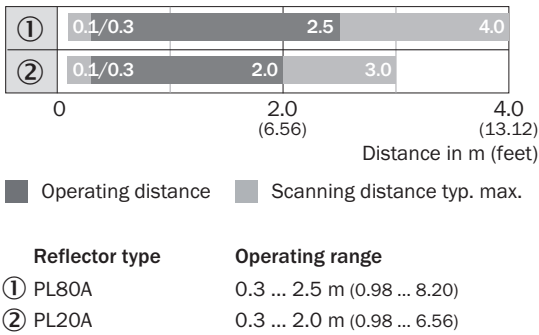


Characteristic curve WL27-3

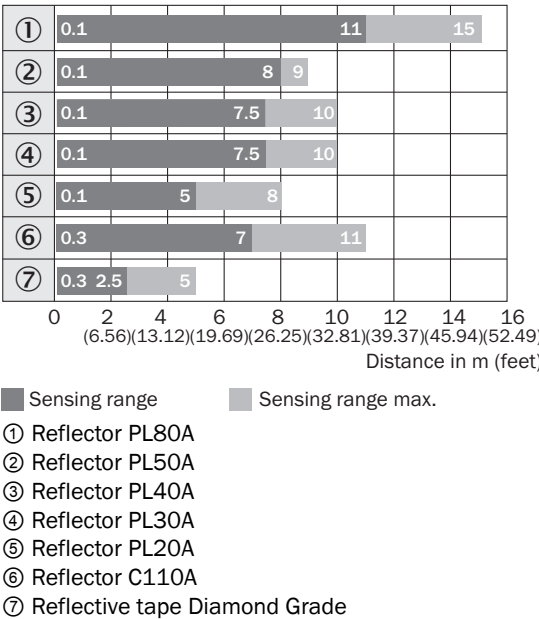


- ① Reflector PL80A
- ③ Reflector PL40A
- ⑤ Reflector PL20A
- ⑦ Reflective tape Diamond Grade

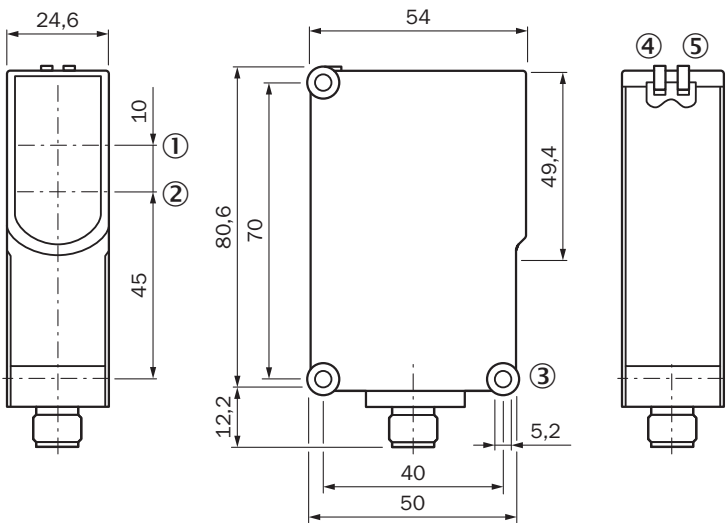
Sensing range diagram



Sensing range diagram WL27-3






Dimensional drawing WL27-3, WSE27-3








- Dimensions in mm (inch)
- 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

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Description: Mounting bracket with hinged arm• Material: Steel• Details: Steel, zinc coated• Items supplied: Mounting hardware included• Suitable for: W23-2, W27-3, Reflex Array	BEF-WN-W27	2009122
	<ul style="list-style-type: none">• Description: Universal mounting bracket for reflectors• Dimensions (W x H x L): 85 mm x 90 mm x 35 mm• Material: Steel• Details: Steel, zinc coated• Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A	BEF-WN-REFX	2064574
	<ul style="list-style-type: none">• Description: Plate N11N for universal clamp bracket• Material: Stainless steel• Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)• Items supplied: Universal clamp (5322627), mounting hardware• Usable for: DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081

	Brief description	Type	part no.
device protection and care			
	<ul style="list-style-type: none"> Description: Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm Material: Steel, zinc diecast Items supplied: Universal clamp BEF-KHS-KH1 (2022726), mounting hardware Suitable for: W27-3, W26, RAY26 	BEF-SG-W27	2039601
reflectors and optics			
	<ul style="list-style-type: none"> Description: Rectangular, screw connection Dimensions: 84 mm 84 mm Ambient operating temperature: -30 °C ... +65 °C 	PL80A	1003865
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-050UB3XLEAX	2095608

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.”

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