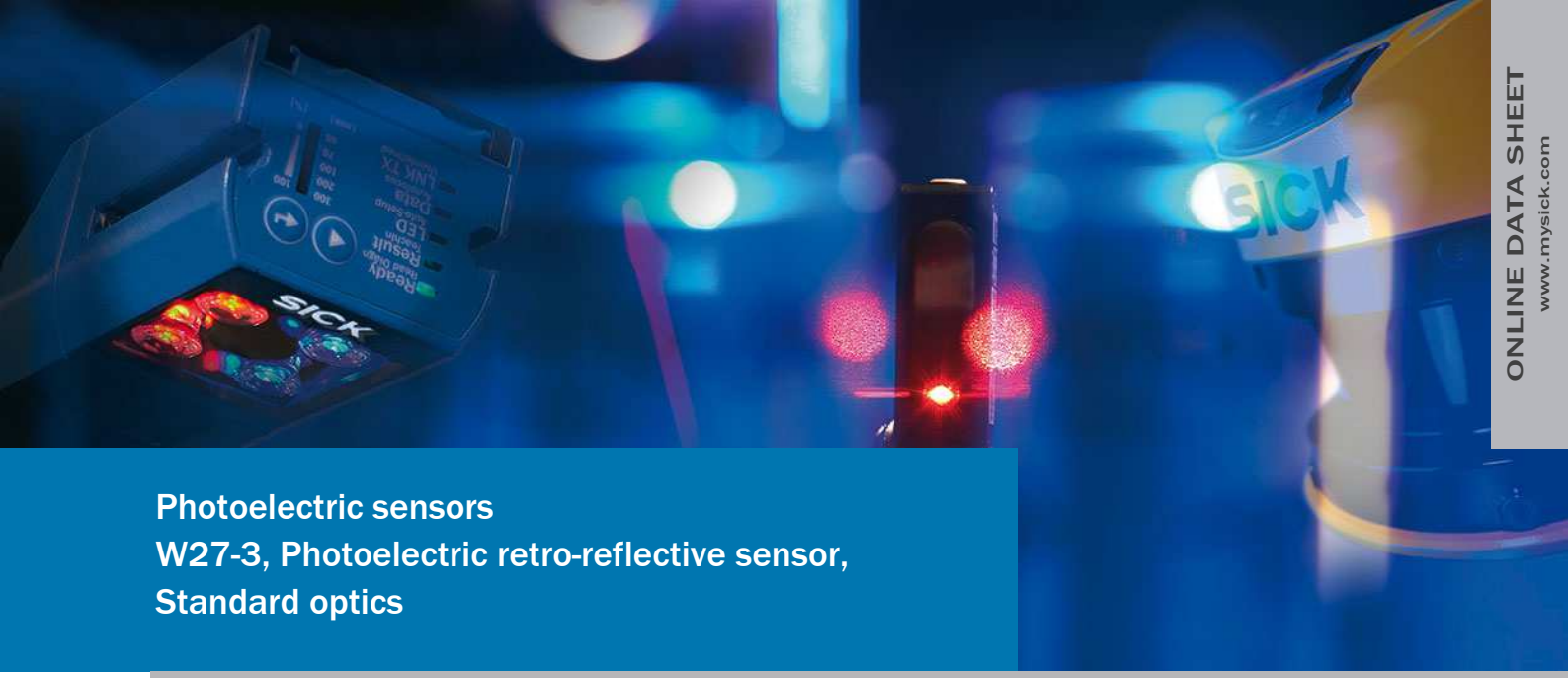


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Photoelectric sensors
W27-3, Photoelectric retro-reflective sensor, Standard optics

WL27-3P2450



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Photoelectric sensors
W27-3, Photoelectric retro-reflective sensor, Standard optics

Model Name > WL27-3P2450
Part No. > 1027771



Illustration may differ

At a glance

- Long sensing range with a high operating reserve
- Quick alignment with red emitting LED
- Resistant to ambient noise such as crosstalk from another sensor
- Optional front screen heating and time delays
- Operating temperature: -40 °C - +60 °C
- UL approval

Your benefits

- Resistant to contamination due to high operating reserve
- Optional features, such as time delays, enhance functionality when needed
- Resistant to vibrations, reducing downtime
- Reliable operation in harsh environments with temperatures as low as –40 °C
- Durable housing with reinforced mounting holes withstands harsh conditions
- Quick alignment with red emitting LED

Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
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 [2]
Type of light:	Visible red light
Light source:	LED [3]
Wave length:	660 nm
Angle of dispersion:	Ca. 1.5 °
Light spot size (distance):	Ø 220 mm (10 m)

1) 2) PL80A 3) Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

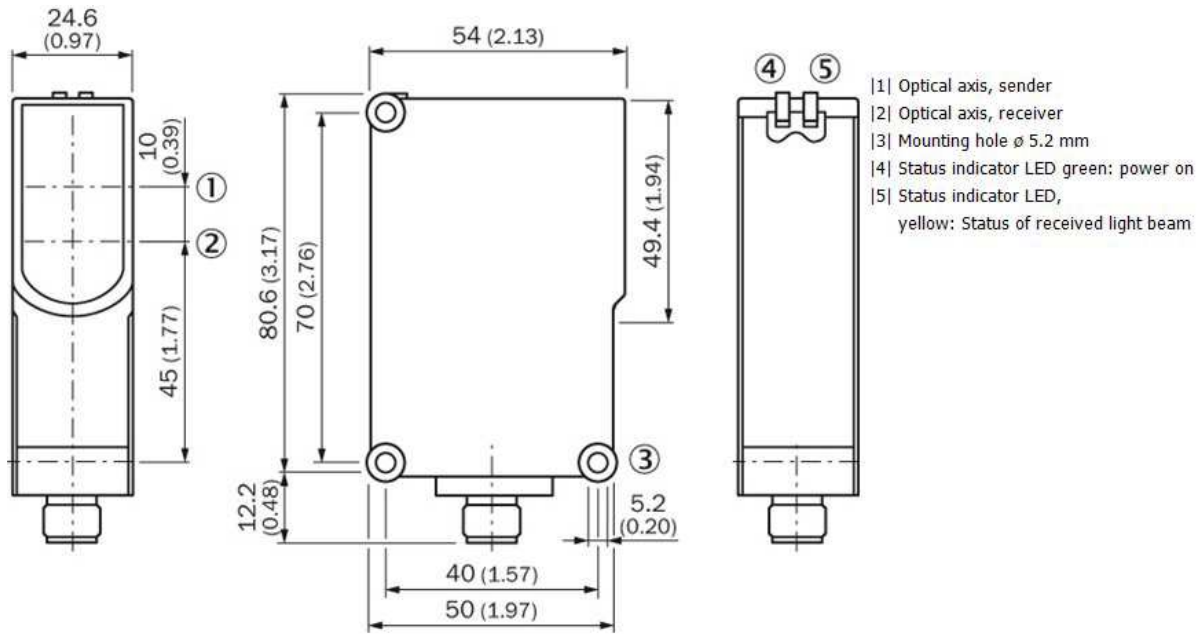
Supply voltage:	10 V DC ... 30 V DC [1]
Power consumption:	≤ 45 mA [2]
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Signal voltage PNP HIGH/LOW:	Approx. VS - 2.5 V/0 V

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Output current Imax.:	≤ 100 mA
Response time:	≤ 500 µs [3]
Switching frequency:	1,000 Hz [4]
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C [5] [6] [7]
Protection class:	II [8]
Weight:	100 g
Polarisation filter:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 69K
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

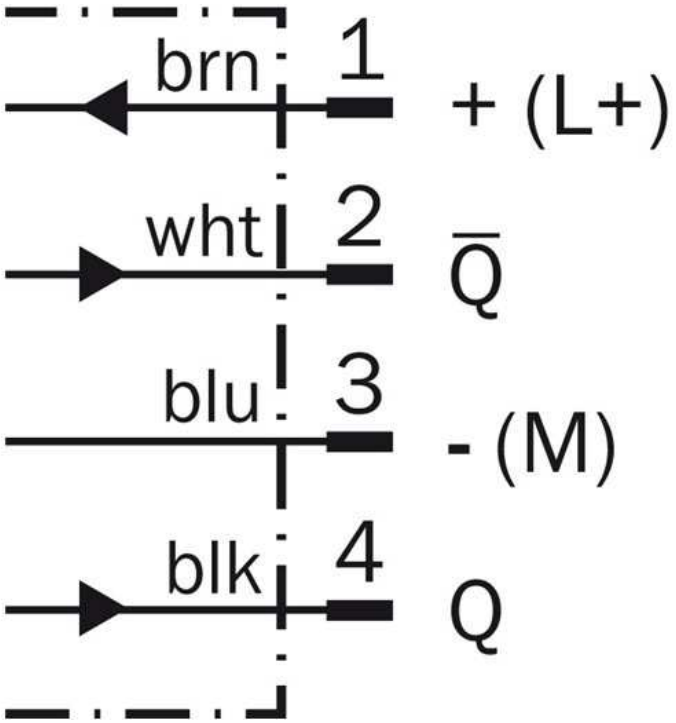
[1] Limit values, operation in short-circuit protected network max. 8 A [2] Without load [3] Signal transit time with resistive load [4] With light/dark ratio 1:1 [5] A = V_S connections reverse-polarity protected [6] B = inputs and output reverse-polarity protected [7] C = interference suppression [8] Reference voltage 50 V DC

Dimensional drawing

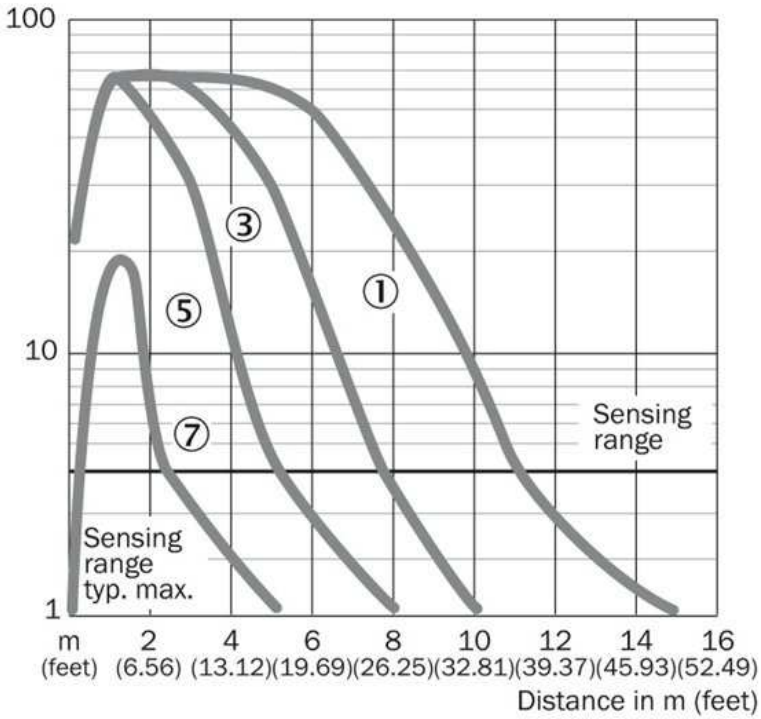


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Connection diagram



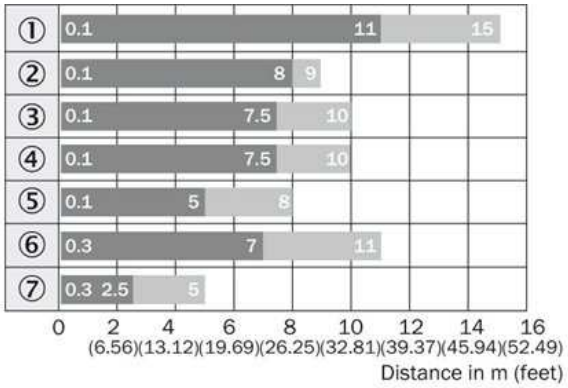
Characteristic curve



|1| PL80A
|3| PL40A
|5| PL20A
|7| Reflective tape Diamond Grade

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Sensing range diagram



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

Reflector type

① PL80A
② PL50A
③ PL40A
④ PL30A
⑤ PL20A
⑥ C110
⑦ Reflective tape Diamond Grade

Connection type



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