



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

WL27-3P2430



Model Name > [WL27-3P2430](#)
Part No. > [1027769](#)



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

Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Sensing range max.:	0.1 m ... 15 m ¹⁾
Sensing range:	0.1 m ... 11 m ²⁾
Housing desig (light emission):	Cuboid
Light source:	LED ³⁾
Type of light:	visible red light
Wave length:	660 nm
Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Light spot (distance):	220 mm (10 m)

^{1) 2)} PL80A ³⁾ Average service life 100,000 h at Ta = +25 °C

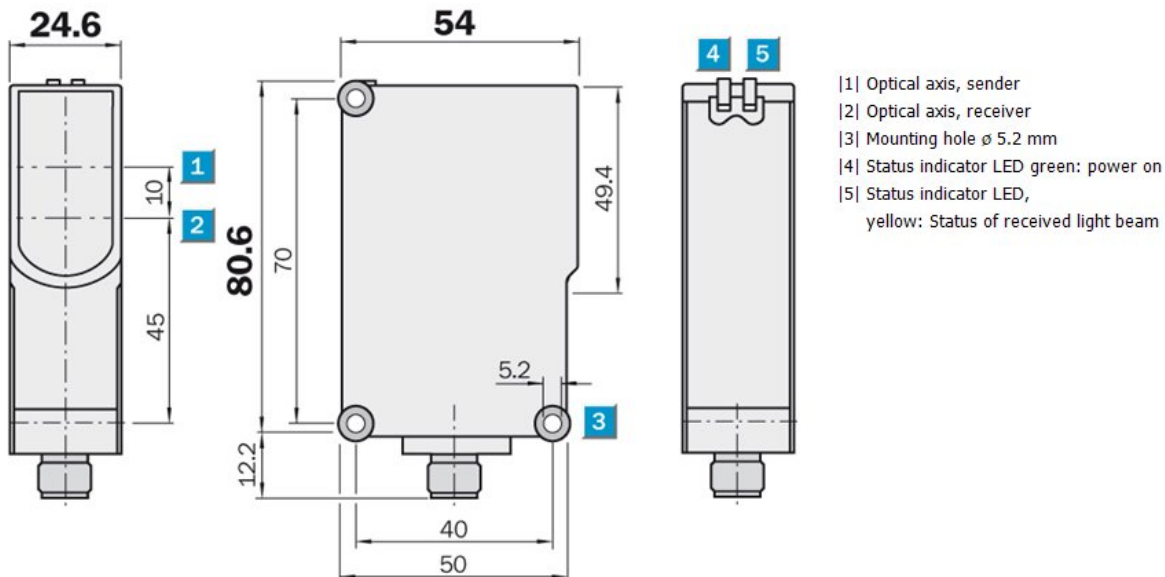
Mechanics/electronics

Enclosure rating:	IP 69K
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 5 Vpp ²⁾
Power consumption:	≤ 30 mA ³⁾
Switching output:	PNP, light/dark-switching, Complementary
Output current I _{max.} :	≤ 100 mA
Response time:	≤ 500 μs ⁴⁾

Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Protection class:	II ⁶⁾
Circuit protection:::	A B ^{7) 8) 9)} C
Weight:	100 g
Housing material:	ABS
Optics material:	PMMA
Ambient temperature, operation:	-40 °C ... 60 °C
Ambient temperature, storage:	-40 °C ... 75 °C
Polarisation filter:	✓
Signal voltage PNP HIGH/LOW:	approx. VS - 2.5 V / 0 V
Special device:	-
Angle of dispersion:	1.5 °
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

1) Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_{S8} ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Reference voltage 50 V DC ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression

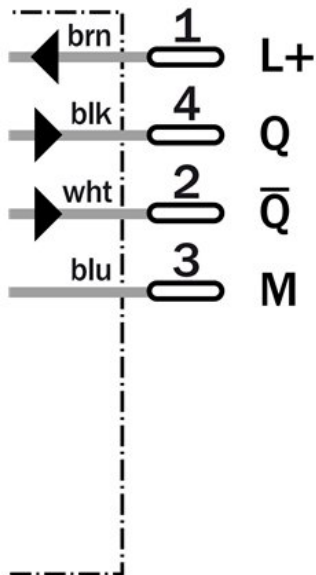
Dimensional drawing



Einstell-Möglichkeiten



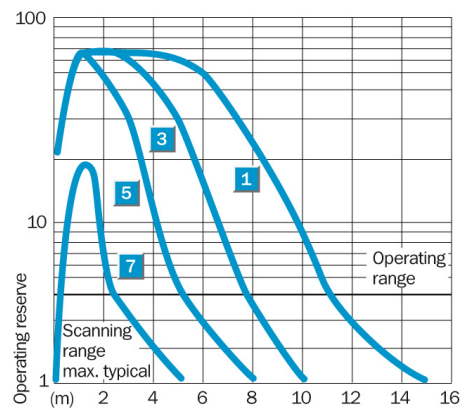
Connection diagram



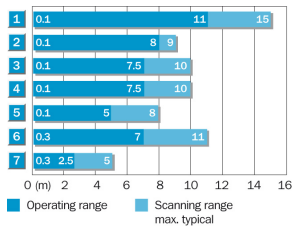
Connection type



Characteristic curve



Sensing range diagram



Reflector type	Operating range
1	PL 80 A 0.1 ... 11.0 m
2	PL 50 A 0.1 ... 8.0 m
3	PL 40 A 0.1 ... 7.5 m
4	PL 30 A 0.1 ... 7.5 m
5	PL 20 A 0.1 ... 5.0 m
6	C 110 0.3 ... 7.0 m
7	Reflective tape Diamond Grade 0.3 ... 2.5 m

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