



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

WL27-302630S12



Model Name > [WL27-302630S12](#)
Part No. > [1045988](#)



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 ... 1.8 m ¹⁾
Sensing range:	0.1 mm ... 700 mm 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 10 mm (400 m)

^{1) 2)} PL30A ³⁾ Average service life of 100,000 h at T_A = +25 °C

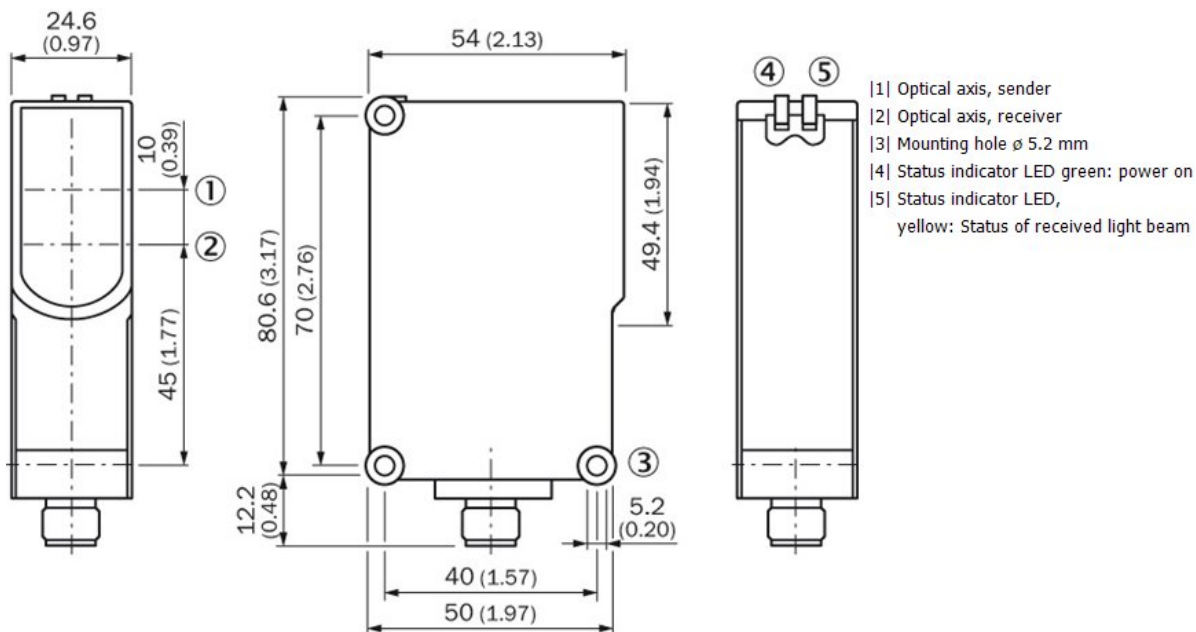
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 Vpp ²⁾
Power consumption:	≤ 45 mA ³⁾
Output type:	Semiconductor relay
Switching mode:	Light switching
Switching current (switching voltage):	0.1 A (20 V AC), 0.1 A (30 V DC)

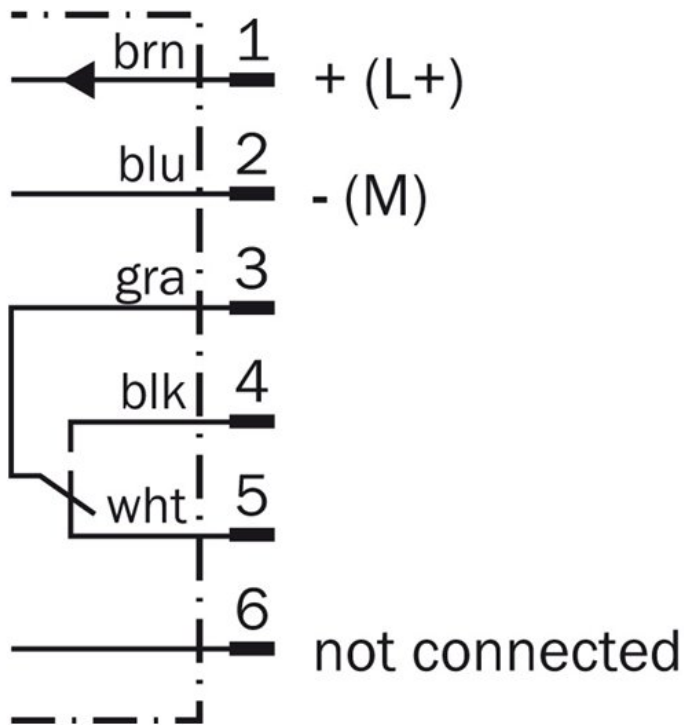
Response time:	$\leq 3 \text{ ms}$ ⁴⁾
Switching frequency:	200 Hz ⁵⁾
Connection type:	Connector Q6, 6-pin, AC/UC-coding
Circuit protection::	A, C ^{6) 7)}
Protection class:	II ⁸⁾
Weight:	120 g
Polarisation filter:	✓
Special device:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 65
Special features:	With semiconductor relay 24 VDCWith semiconductor relay 24 VDC
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
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_S 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⁾ C = interference suppression
 ⁸⁾ Reference voltage 50 V DC

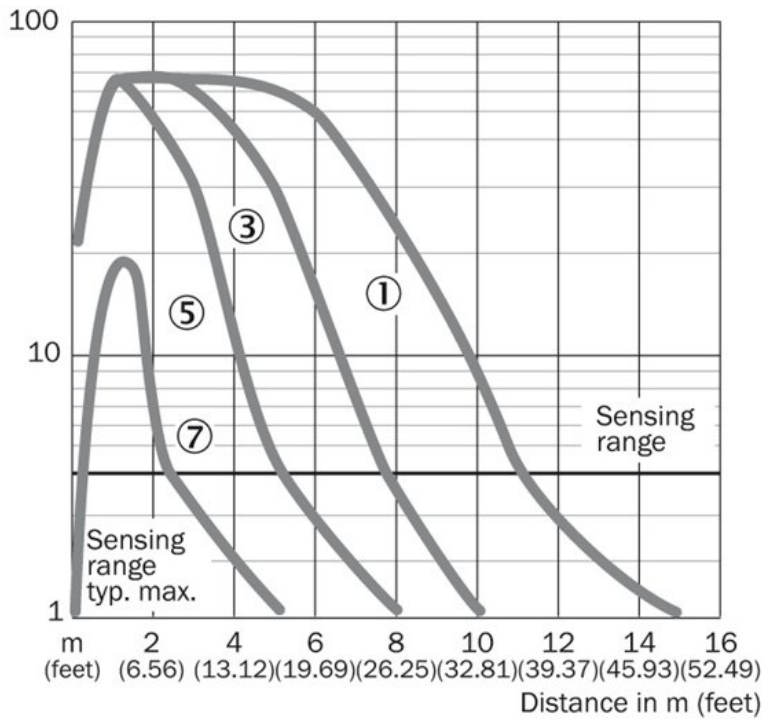
Dimensional drawing



Connection diagram

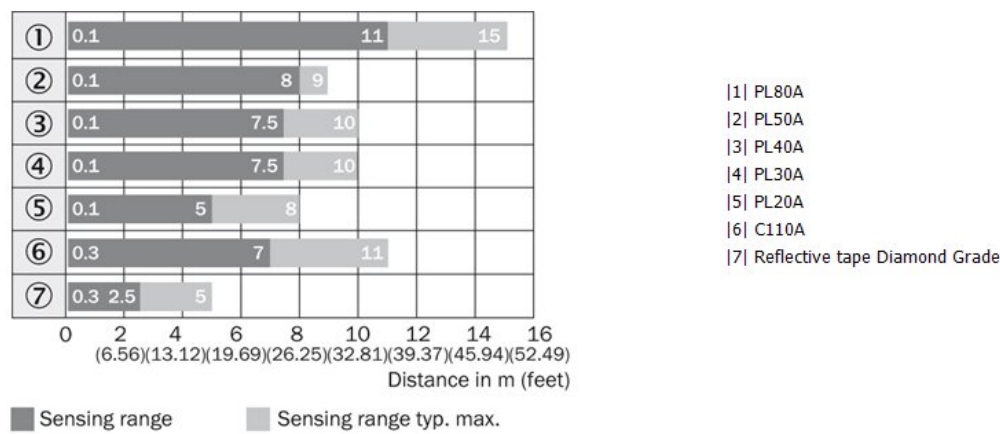


Characteristic curve



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

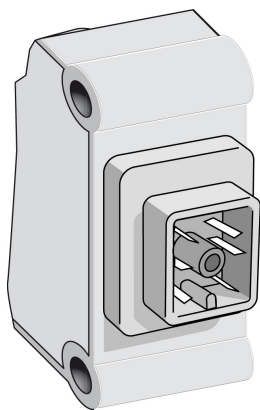
Sensing range diagram



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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