



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

WL27-3S3731



Model Name > [WL27-3S3731](#)
Part No. > [1027777](#)



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 °
Adjustment:	Potentiometer
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

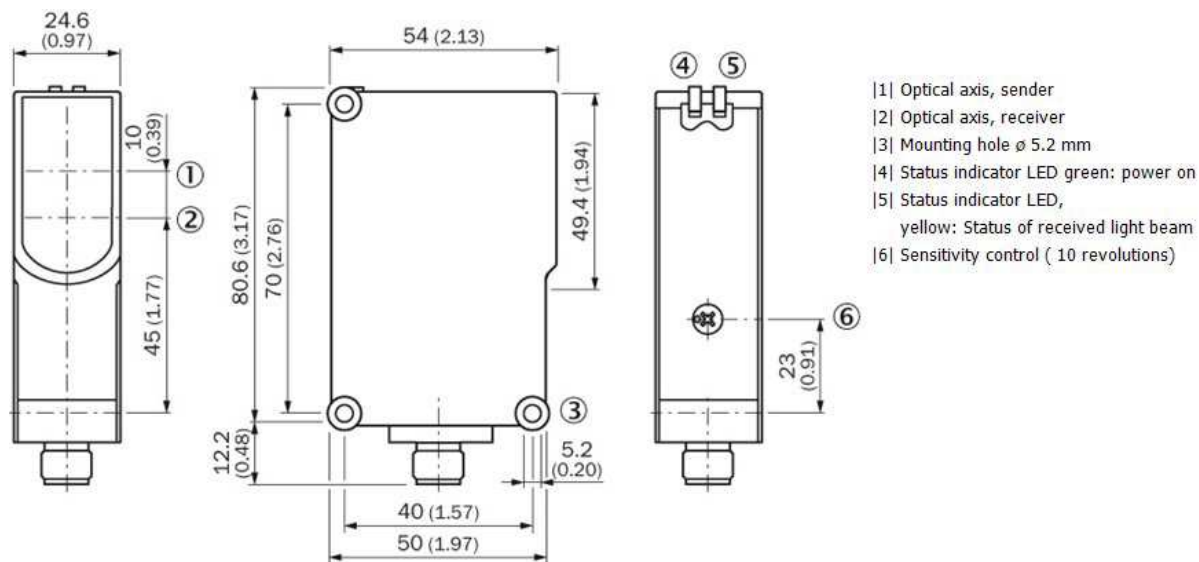
Mechanics/electronics

Supply voltage:	24 V AC/DC ... 240 V AC/DC ¹⁾
Power consumption:	≤ 2.5 VA
Output type:	Relay, electrically isolated ²⁾
Output function:	Change-over contacts
Switching mode:	Light switching ³⁾

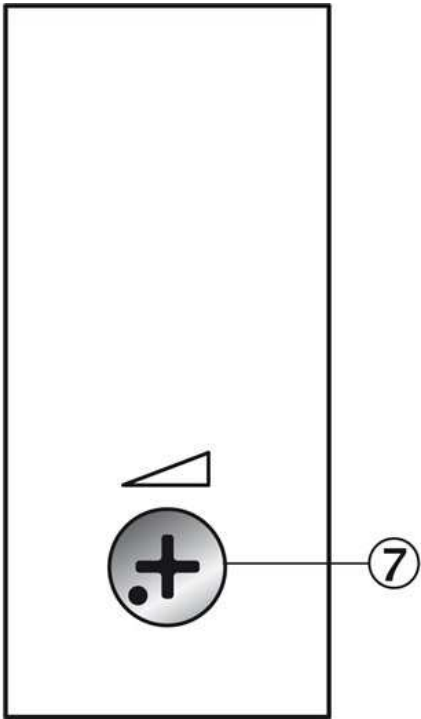
Switching current (switching voltage):	0.11 A (250 V DC), 3 A (24 V DC), 3 A (250 V AC)
Response time:	≤ 10 ms
Switching frequency:	10 Hz ⁴⁾
Connection type:	Cable with connector Q7, 7-pin, AC/UC-coding, 150 mm
Cable material:	PVC
Circuit protection::	A, C ^{5) 6)}
Protection class:	II ⁷⁾
Weight:	140 g
Polarisation filter:	✓
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Usage category:	AC-15, DC-13, According to EN 60947-1
Ambient operating temperature:	-40 °C ... +60 °C ⁸⁾
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	ABS, Plastic

1) ± 10 % 2) 3) Provide suitable spark suppression for inductive or capacitive loads 4) With light/dark ratio 1:1 5) A = V_S connections reverse-polarity protected 6) C = interference suppression 7) Reference voltage: 250 V AC 8) UL: 0 °C ... +60 °C

Dimensional drawing

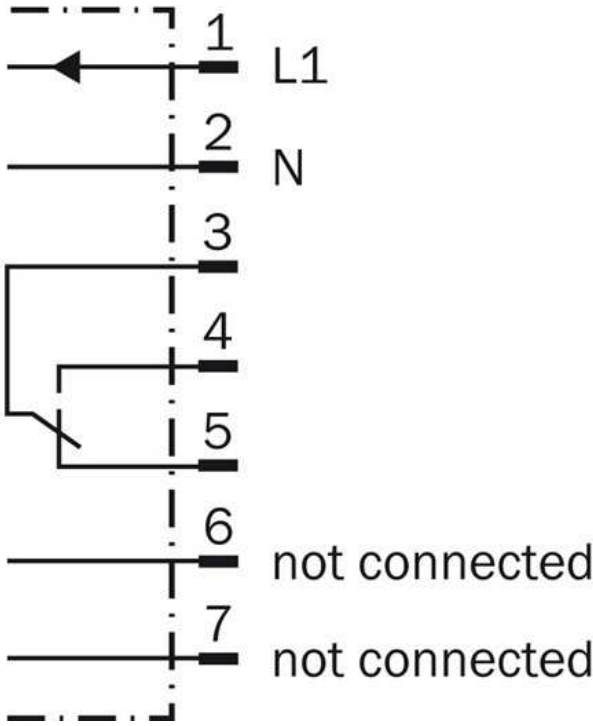


Adjustments possible

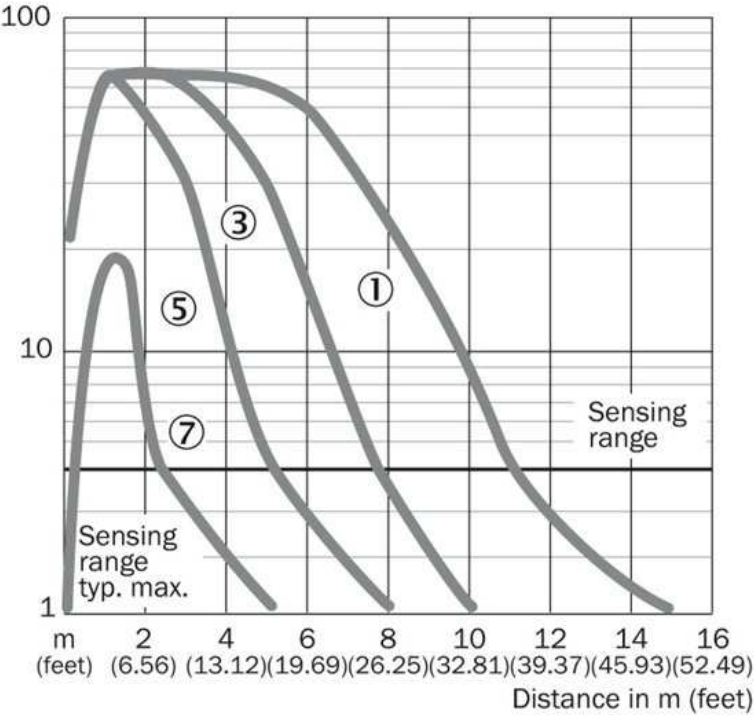


|1| Potentiometer

Connection diagram

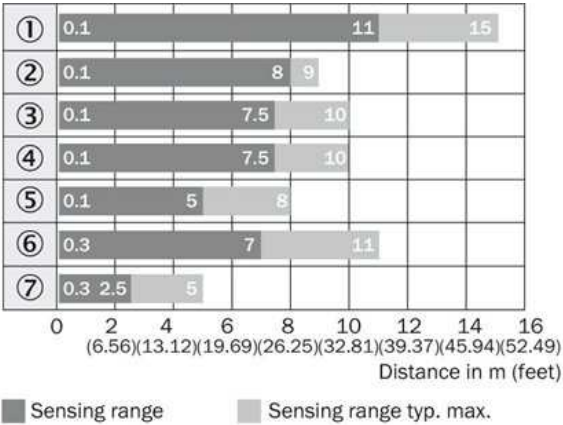


Characteristic curve



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

Sensing range diagram

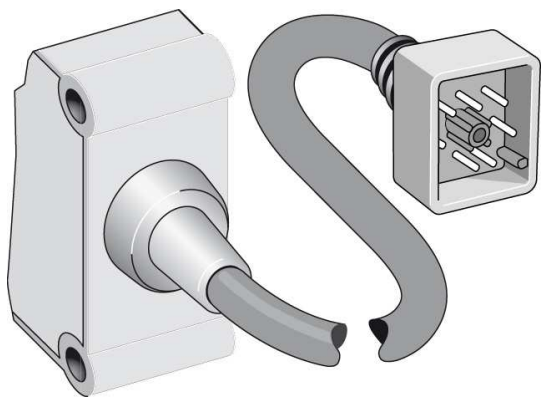


- |1| PL80A
- |2| PL50A
- |3| PL40A
- |4| PL30A
- |5| PL20A
- |6| C110A
- |7| Reflective tape Diamond Grade

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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