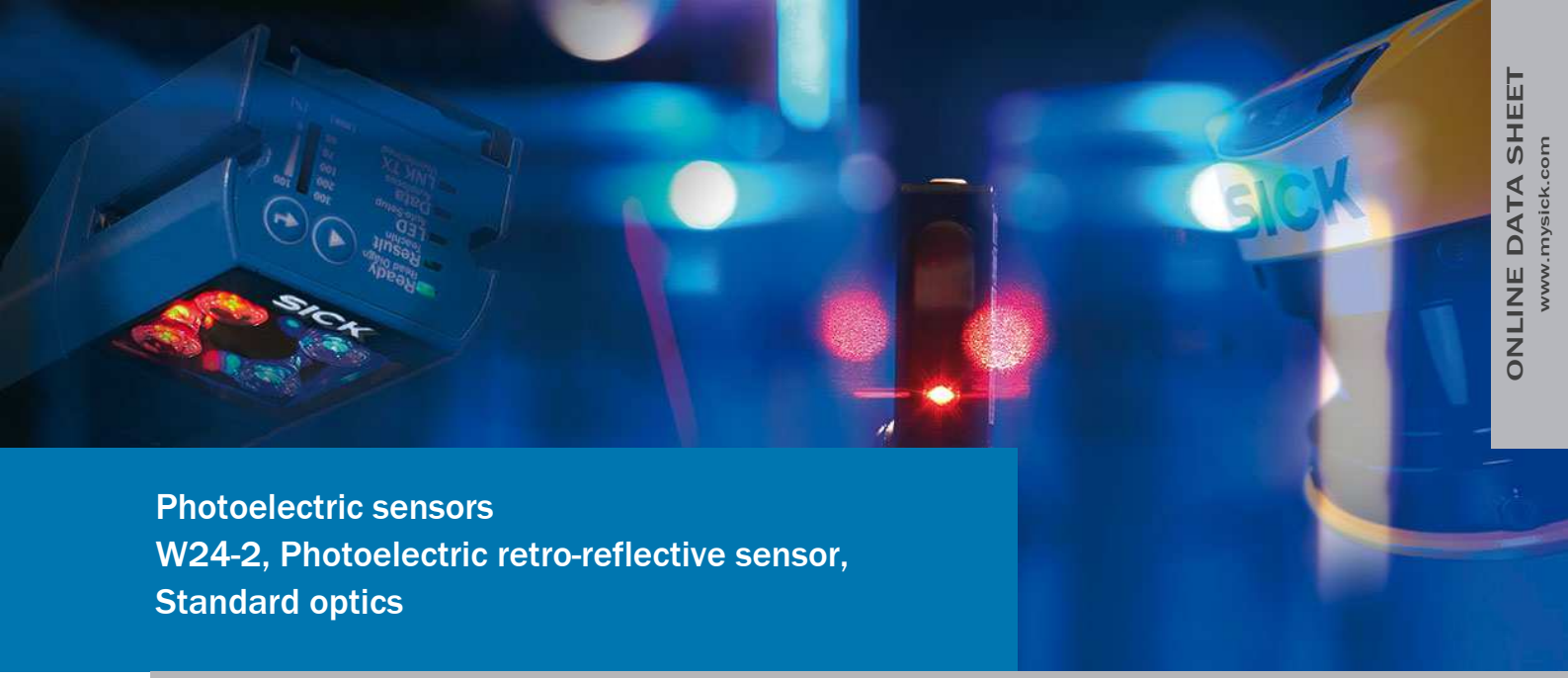


ONLINE DATA SHEET
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Photoelectric sensors
W24-2, Photoelectric retro-reflective sensor, Standard optics

WL24-2R240



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Sensor Intelligence.

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Photoelectric sensors
W24-2, Photoelectric retro-reflective sensor, Standard optics

Model Name > WL24-2R240
Part No. > 1017858



Illustration may differ

At a glance

- Metal housing that has been IP 69k tested
- Switch selectable PNP or NPN output
- Switch selectable Light or Dark operating mode
- Variants with DC voltage and universal AC/DC voltage with UL approval
- Optional test input, adjustable ON and OFF time delays, alarm output and front screen heating
- M12 or terminal chamber connection: 90° rotatable

Your benefits

- Metal housing that has been IP 69K tested provides reliability and a long service life
- High operating reserve at a long sensing range reduces downtime
- Alarm output signals marginal operation to provide an early warning
- Test input provides diagnostic feedback for example misalignment
- Selectable output type, operating mode, and adjustable time delays makes integration easier and reduce the number of devices needed
- Ensuring reliable operation in environments with temperatures fluctuation due to standard or high-power front lens heating (prevention and reduction of condensation water on the front lens)
- Variants with DC voltage and universal AC/DC voltage provide installation flexibility
- Red light provides easy alignment, which saves time

Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	27 mm x 87.5 mm x 65 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 22 m [1)]
Sensing range:	0 m ... 15 m [2)]
Type of light:	Visible red light
Light source:	LED [3)]
Time type:	On delay off delay
Delay time:	Adjustable via time delay selector switch, 0.5 s, 10 s
Alarm output:	-
Adjustment:	Potentiometer
Light spot size (distance):	Ø 250 mm (15 m)

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

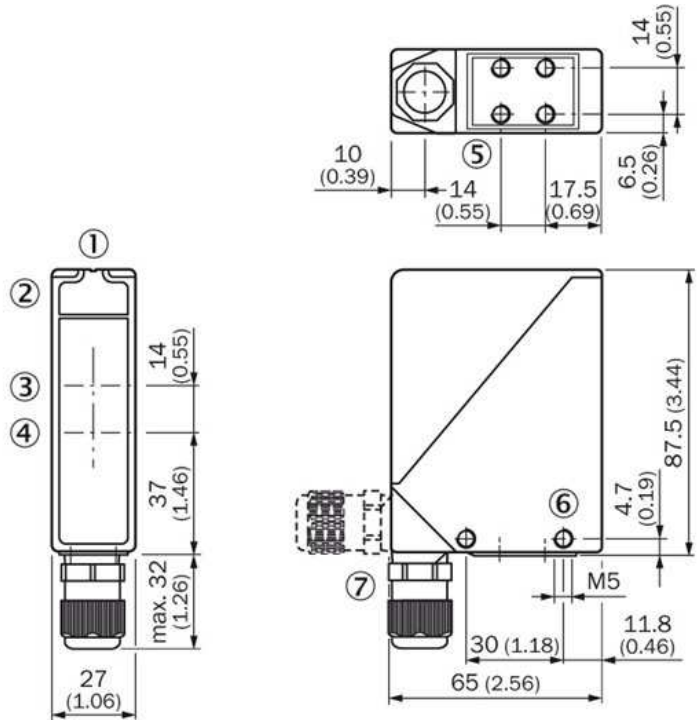
Mechanics/electronics

Supply voltage::	12 V DC ... 240 V DC, 24 V ... 240 V AC [1] [2]
Power consumption:	< 2 VA
Output type:	Relay, electrically isolated [3]
Output function:	Change-over contacts
Switching mode:	Light/dark switching [4]
Switching mode selector:	Selectable via light/dark selector
Switching current (switching voltage):	4 A (24 V DC), 4 A (250 V AC)
Response time:	≤ 10 ms
Switching frequency:	10 Hz [5]
Connection type:	Terminal connection with M16 gland [6]
Circuit protection::	A, C [7] [8]
Protection class:	II [9]
Weight:	330 g
Polarisation filter:	✓
Front screen heating:	✓
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 69K
Usage category:	AC-15, DC-13, According to EN 60947-1
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	Metal, Zinc diecast

[1] Limit values, operation in short-circuit protected network max. 8 A [2] +- 10 % [3] [4] Provide suitable spark suppression for inductive or capacitive loads [5] With light/dark ratio 1:1 [6] Connection rotable by 90° [7] A = V_S connections reverse-polarity protected [8] C = interference suppression [9] Rated voltage: 250 V AC/DC

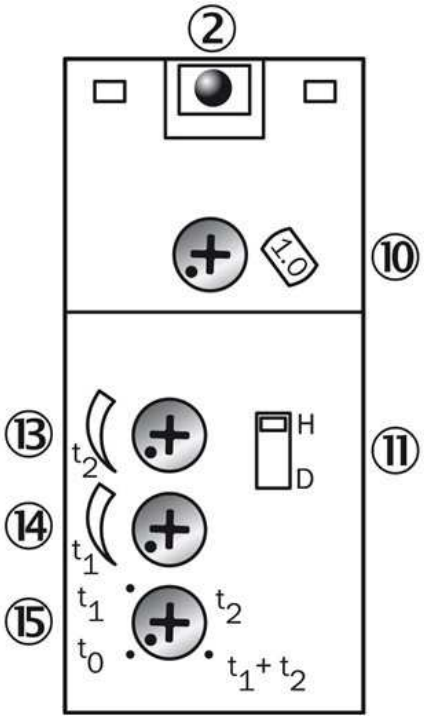
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Dimensional drawing



|1| Alignment sight
|2| LED signal strength indicator
|3| Center of optical axis, sender
|4| Center of optical axis, receiver
|5| M5 threaded mounting hole, 6 mm deep
|6| M5 threaded mounting hole, through-hole
|7| M16 screw fixing and plug rotatable by 90°

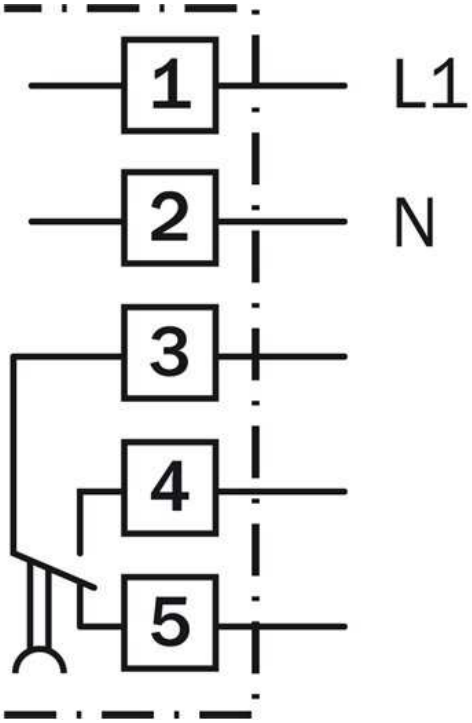
Adjustments possible



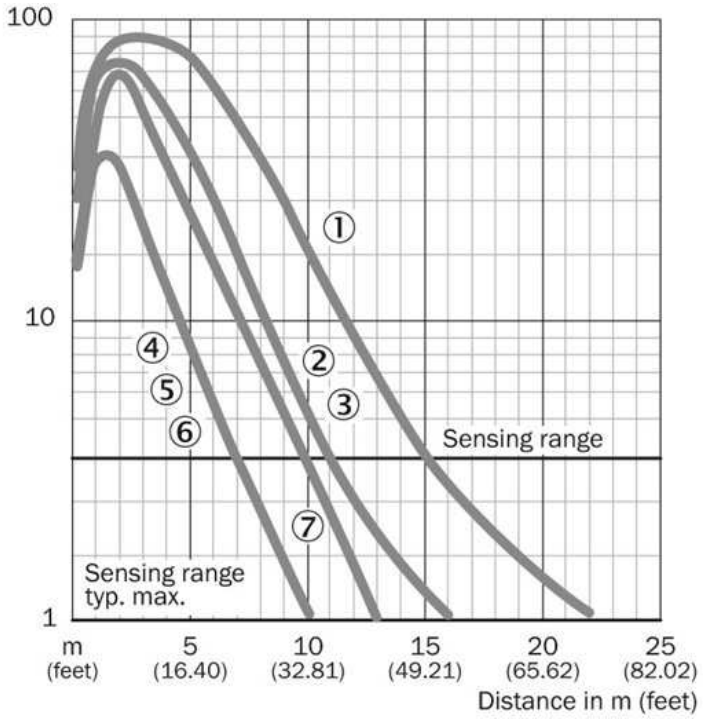
|2| LED signal strength indicator
|10| Adjustment sensing range (WT) / sensitivity (WL, WS/WE)
|11| Light/dark selector
|12| Time control t2=OFF-delay
|13| Time control t1=ON-delay
|14| time delay selector switch

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Connection diagram



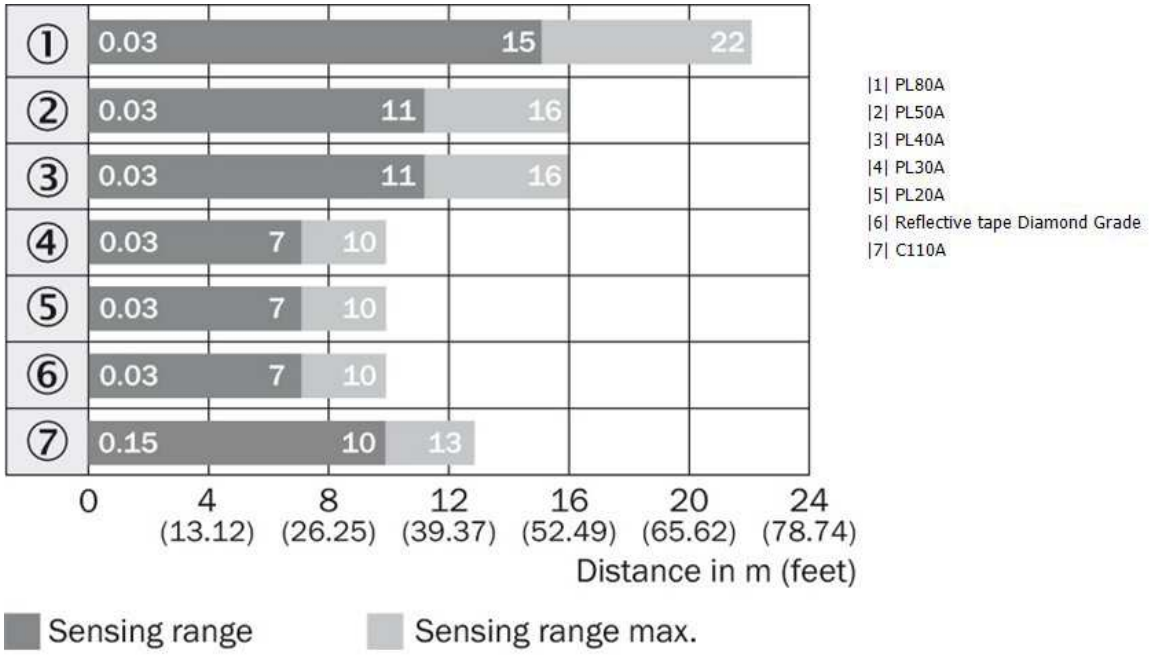
Characteristic curve



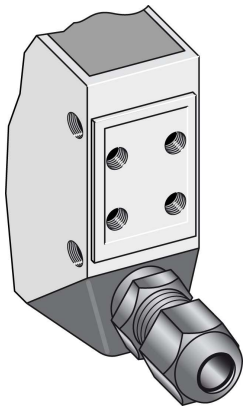
|1| PL80A
|2| PL50A
|3| PL40A
|4| PL30A
|5| PL20A
|6| Reflective tape Diamond Grade
|7| C110A

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Sensing range diagram



Connection type



A4 4c int43

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