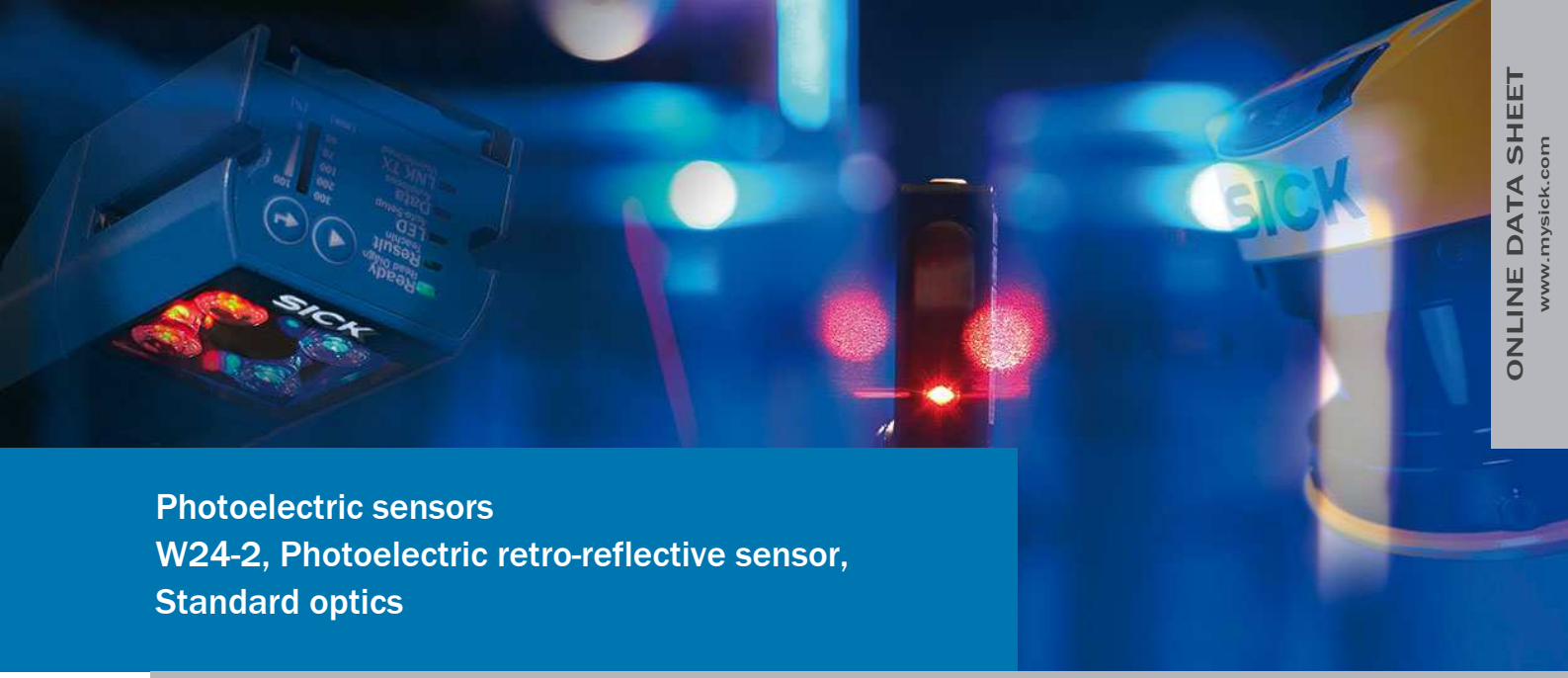


ONLINE DATA SHEET
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Photoelectric sensors
W24-2, Photoelectric retro-reflective sensor, Standard optics

WL24-2V530



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Sensor Intelligence.

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

Model Name > WL24-2V530
Part No. > 1017881





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)]
Alarm output:	✓
Adjustment:	Sensitivity adjustment
Light spot size (distance):	Ø 250 mm (15 m)

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

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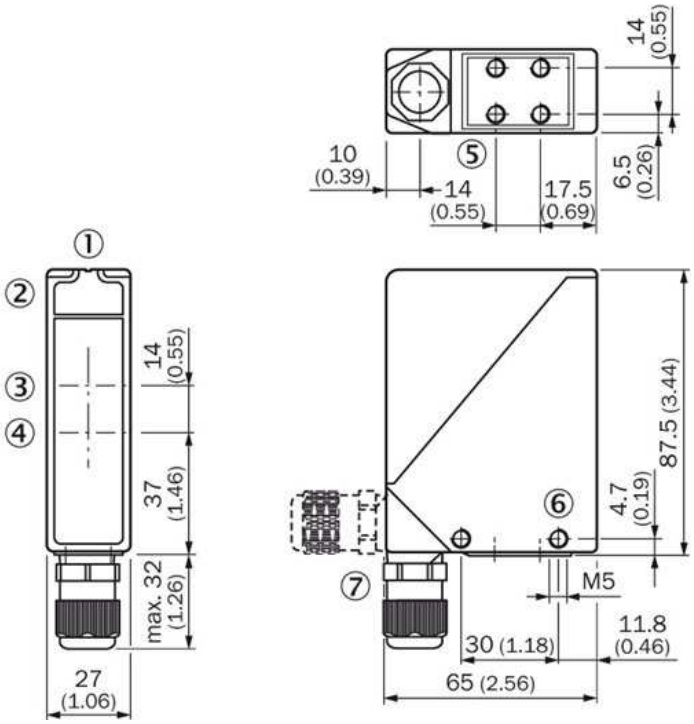
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	< 5 Vpp [2]
Current consumption:	≤ 50 mA [3]
Output type:	NPN, PNP
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark selector, Selectable via NPN/PNP selector
Output current Imax.:	≤ 100 mA
Response time:	≤ 500 µs [4]
Switching frequency:	1,000 Hz [5]
Connection type:	Connector M12, 5-pin [6]
Circuit protection:::	A, C, D [7] [8] [9]
Protection class:	II [10]
Weight:	330 g
Polarisation filter:	✓
Housing material:	Metal, Zinc diecast
Optics material:	PMMA
Enclosure rating:	IP 69K
Test input sender off:	TE to 0 V
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] 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] Connection rotable by 90° [7] A = V_S connections reverse-polarity protected [8] C = interference suppression [9] D = outputs overcurrent and short-circuit protected [10] Reference voltage: 50 V DC

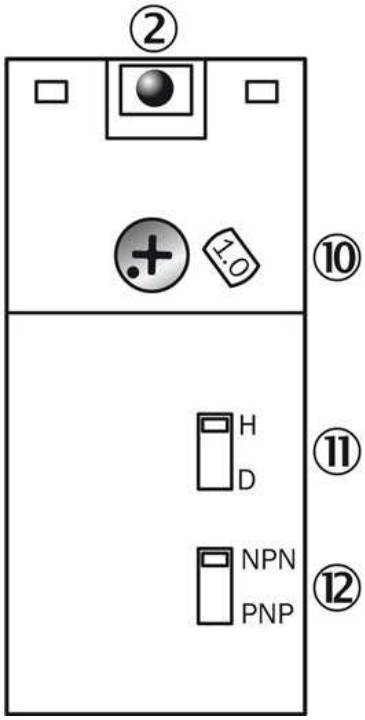
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Dimensional drawing



|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°

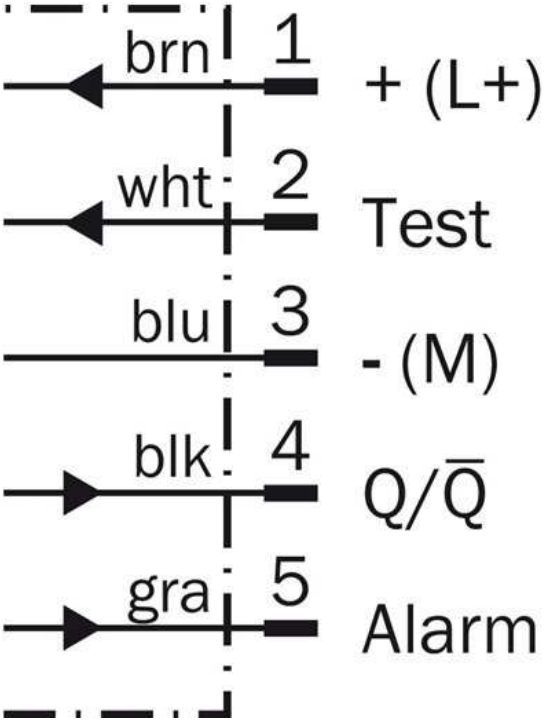
Adjustments possible



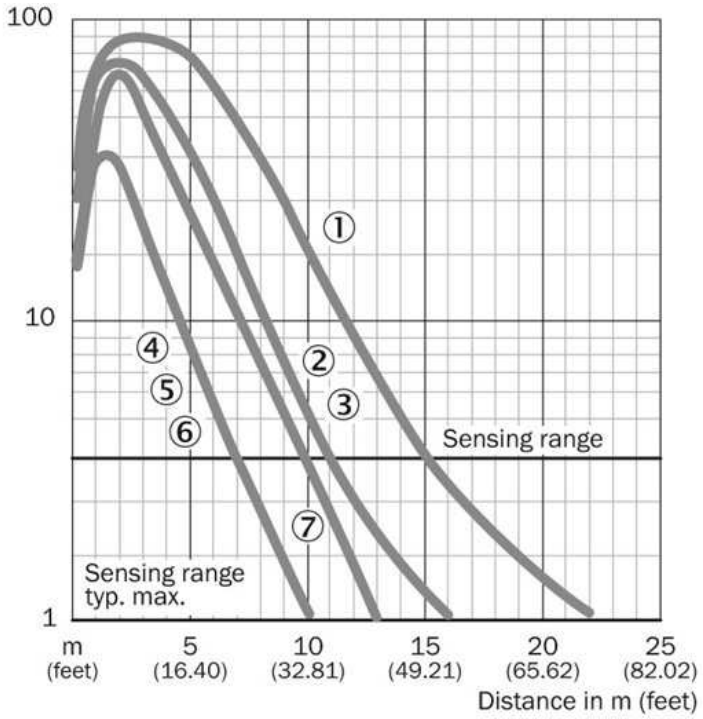
|2| LED signal strength indicator
|10| Adjustment sensing range (WT) / sensitivity (WL, WS/WE)
|11| Light/dark selector
|12| NPN/ PNP selector

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Connection diagram



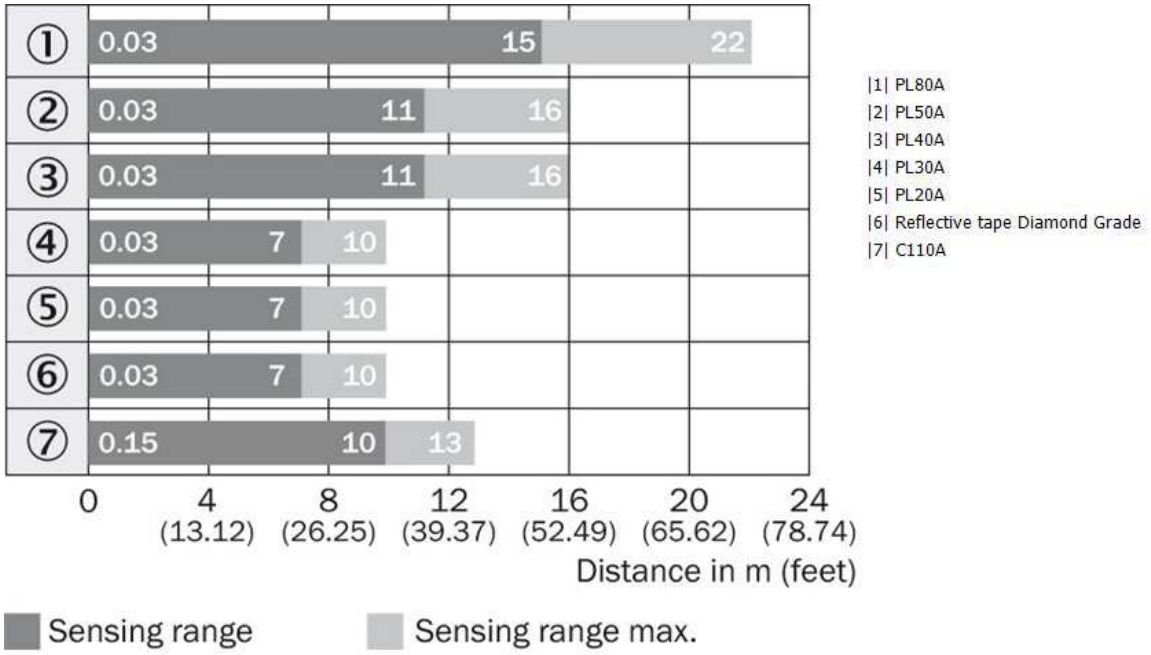
Characteristic curve



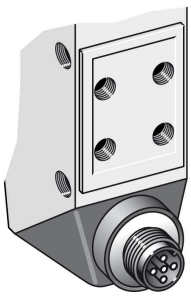
|1| PL80A
|2| PL50A
|3| PL40A
|4| PL30A
|5| PL20A
|6| Reflective tape Diamond Grade
|7| C110A

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Sensing range diagram



Connection type



A4 4c int43

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