



Photoelectric sensors  
W4S-3 Glass, Photoelectric retro-reflective  
sensor, autocollimation

WLG4SC-3P3235H



**Model Name** > [WLG4SC-3P3235H](#)  
**Part No.** > [1063777](#)



*Illustration may differ*

**At a glance**

- Continuous threshold adaption of the switching threshold compensates for environmental changes
- Single-lens autocollimation optics
- PinPoint LED technology with a small, highly visible, well-defined light spot enables high reserve levels when using small reflectors
- Flexible sensor settings, monitoring, extended diagnostics, and visualization thanks to IO-Link

**Your benefits**

- Optimal detection of any kind of transparent object
- Less downtime due to a Continuous Threshold Adaption which compensates for changing environmental conditions, including temperature, dust and drift effects
- IO-Link provides easy data access from the PLC
- Quick and easy configuration
- Quick and easy integration using function blocks
- Easy device replacement and identification



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	12.2 mm x 41.8 mm x 17.3 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.01 m ... 5 m <sup>1)</sup>
Sensing range:	0 m ... 3 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	PinPoint LED <sup>3)</sup>
Wave length:	650 nm
Teach-in:	Single teach-in button
Adjustment:	Teach-in
Light spot size (distance):	Ø 45 mm (1.5 m)
Continuous threshold adaption:	✓
IO-Link functions:	Standard functions

<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

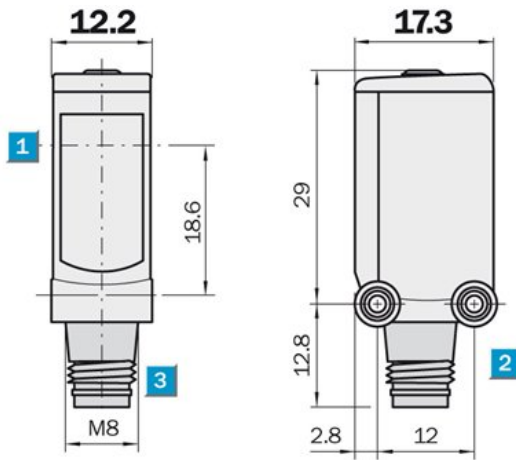
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp <sup>2)</sup>
Power consumption:	≤ 30 mA <sup>3)</sup>
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I <sub>max.</sub> :	≤ 100 mA
Response time:	< 0.5 ms <sup>4)</sup>
Switching frequency:	± 1,000 Hz <sup>5)</sup>
Angle of reception:	Ca. 30 °
Attenuation along light beam:	> 8 %
Connection type:	Connector M8, 4-pin, 150 mm
Circuit protection:::	A, C, D <sup>6) 7) 8)</sup>
Protection class:	III
Weight:	30 g
Polarisation filter:	✓
IO-Link:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67 IP 66
Special feature:	For transparent objects
Description:	IO-Link, 2 Bit Proceccdata Length Q and VMP, COM2, 2.3 ms, SIO Mode
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> A =  $V_S$   
<sup>7)</sup> C = interference suppression <sup>8)</sup> D = outputs overcurrent and short-circuit protected

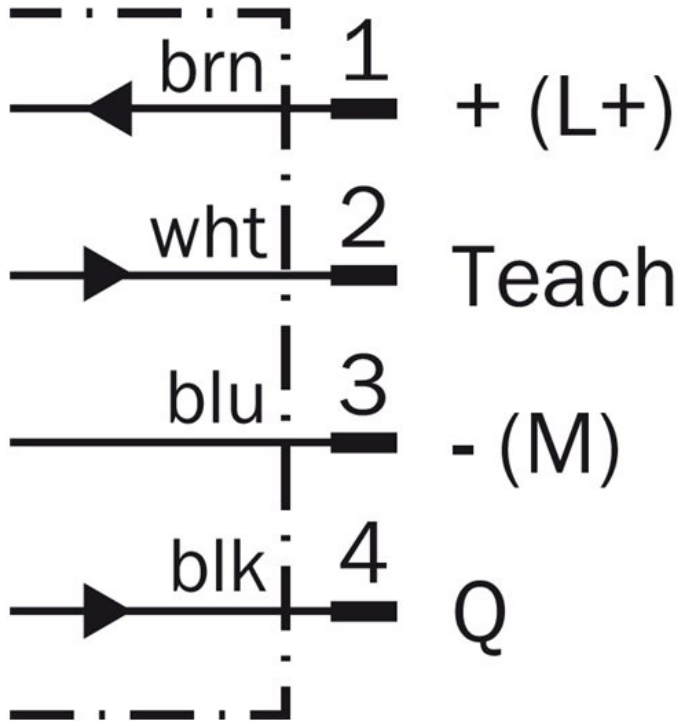
Dimensional drawing



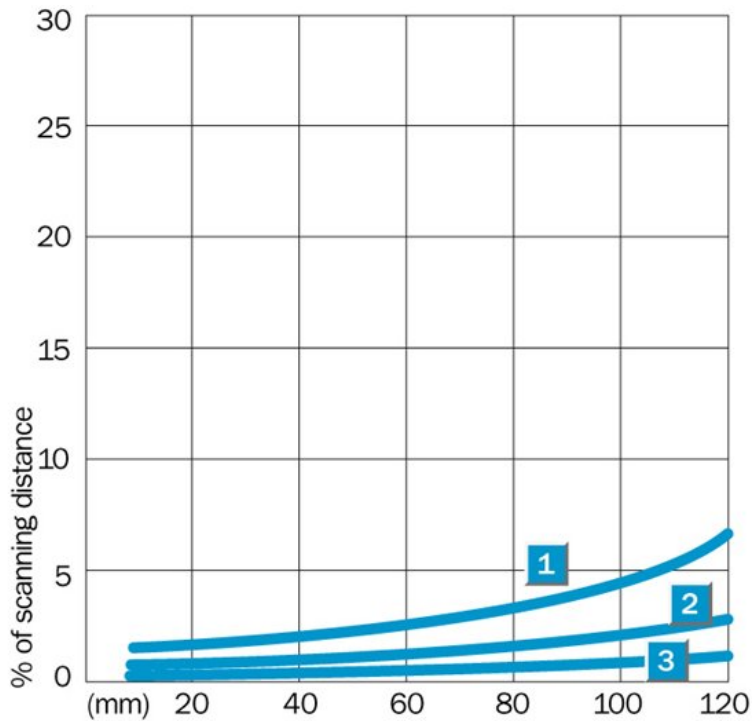
- |1| Center of optical axis
- |2| Threaded mounting hole M3
- |3| Connection
- |4| Status indicator LED green: power on
- |5| LED indicator orange: status of received light beam
- |6| Teach-in button



Connection diagram

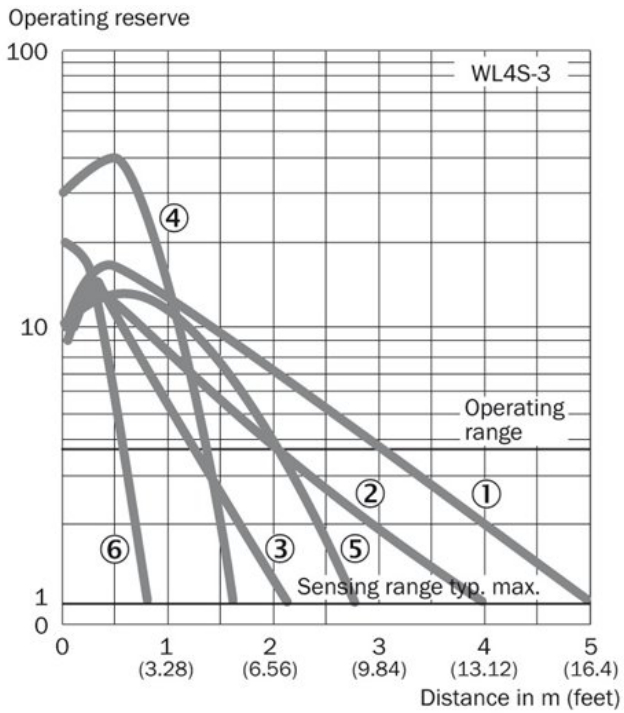


**Characteristic curve**



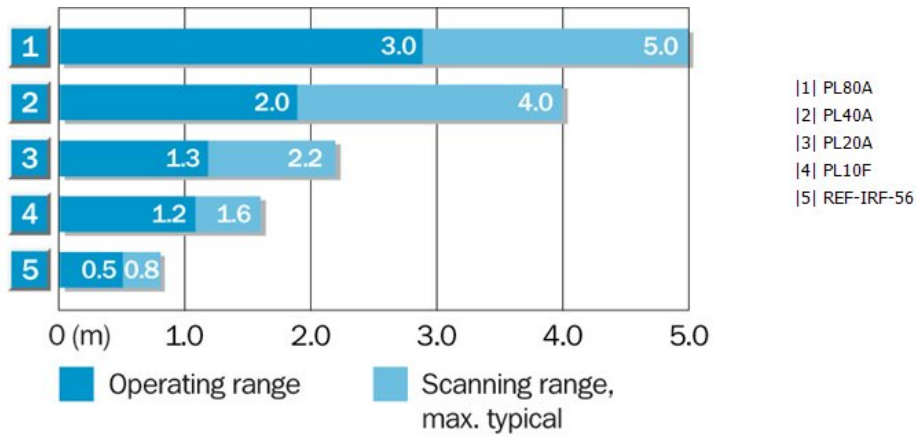
- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

**Characteristic curve**



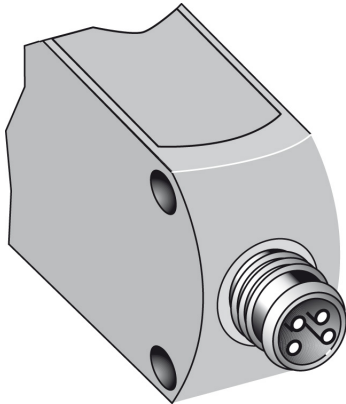
- |1| PL80A
- |2| PL40A
- |3| PL20A
- |4| PL10F
- |5| P250 CHEM
- |6| REF-IRF-56

## Sensing range diagram

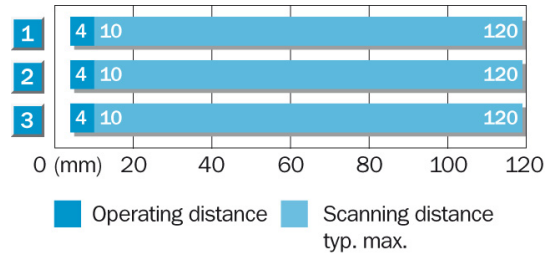


Reflector type	Operating range
1   PL80A	0 ... 3.0 m
2   PL40A	0 ... 2.0 m
3   PL20A	0 ... 1.3 m
4   PL10F	0 ... 1.2 m
5   REF-IRF-56	0 ... 0.5 m

## Connection type



## Sensing range diagram



1	Scanning distance on black, 6% remission
2	Scanning distance on grey, 18% remission
3	Scanning distance on white, 90% remission

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