

Detailed technical data

Features

Sensor principle	Photoelectric retro-reflective sensor
Detection principle	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. ¹⁾	0.01 m ... 5 m
Sensing range ¹⁾	0 m ... 3 m
Type of light	Visible red light
Light source ²⁾	PinPoint LED
Light spot size (distance)	Ø 45 mm (1.5 m)
Wave length	650 nm
Adjustment	Cable, Single teach-in button / Single teach-in button (depending on type)
Continuous threshold adaption (AutoAdapt)	✓
Special feature	Detection of transparent objects

¹⁾ PL80A.

²⁾ Average service life of 100,000 h at $T_A = +25 \text{ °C}$.

Mechanics/electronics

Supply voltage ¹⁾	10 V DC ... 30 V DC
Ripple ²⁾	< 5 V _{pp}
Power consumption	≤ 20 mA ³⁾
With IO-Link	≤ 30 mA ³⁾
Output type	PNP / NPN (depending on type)
Switching mode	Light switching / Dark-switching / Light/dark-switching (depending on type)
Output current I_{max.}	≤ 100 mA
Response time ⁴⁾	< 0.5 ms
Switching frequency ⁵⁾	1,000 Hz
Angle of reception	30°
Attenuation along light beam	> 8 %
Connection type	Male connector, M8 / Cable, 2 m ⁶⁾ (depending on type)
Circuit protection	A ⁷⁾ , C ⁸⁾ , D ⁹⁾
Protection class	III
Weight	30 g
Polarisation filter	✓
IO-Link	✓
Housing material	ABS
Optics material	PMMA
Enclosure rating	IP 66, IP 67
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C

¹⁾ Limit values.

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⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Ordering information

Other models available at www.mysick.com/en/W4S-3_Glass

WLG4S-3

- **Detection principle:** autocollimation
- **Polarisation filter:** ✓

Sensing range max. ¹⁾	Output type	Switching mode	Adjustment	Connection	Connection diagram	Model name	Part no.
0.01 m ... 5 m	PNP	Light switching	Cable, Single teach-in button	Connector M8, 4-pin	Cd-092	WLG4S-3P2234	1052999
		Dark-switching	Cable, Single teach-in button	Connector M8, 4-pin	Cd-092	WLG4S-3F2234	1042084
		Light/dark-switching	Single teach-in button	Connector M8, 4-pin	Cd-083	WLG4S-3P2232	1044186
	NPN	Light switching	Single teach-in button	Cable, 3-wire, 2 m, PVC	Cd-044	WLG4S-3N1332	1046111
		Dark-switching	Cable, Single teach-in button	Cable, 4-wire, 2 m, PVC	Cd-044	WLG4S-3E1134	1042085

¹⁾ PL80A.

WLG4S-3 Alarm output

- **Detection principle:** autocollimation
- **Polarisation filter:** ✓

Sensing range max. ¹⁾	Output type	Switching mode	Adjustment	Connection	Connection diagram	Model name	Part no.
0.01 m ... 5 m	PNP	Dark-switching	Single teach-in button	Cable, 4-wire, 2 m, PVC	Cd-107	WLG4S-3V1132	1055895
				Connector M8, 4-pin	Cd-107	WLG4S-3V2232	1042087
	NPN	Dark-switching	Single teach-in button	Cable, 4-wire, 2 m, PVC	Cd-107	WLG4S-3W1132	1042086

¹⁾ PL80A.

WLG4S-3 IO-Link

- **Detection principle:** autocollimation
- **Output type:** PNP
- **Switching mode:** light/dark-switching
- **Polarisation filter:** ✓

Sensing range max. ¹⁾	Adjustment	IO-Link	Advanced functions	Connection	Connection diagram	Model name	Part no.
0.01 m ... 5 m	Single teach-in button	Standard functions	–	Connector M8, 4-pin	Cd-098	WLG4SC-3P2232	1057177
		Standard functions, Advanced functions	Timer, False Tripping Suppression (Debouncing)			WLG4SC-3P2232A70	1067763
			High-Speed Counter, False Tripping Suppression (Debouncing)			WLG4SC-3P2232A71	1067765
			Time Stamp, False Tripping Suppression (Debouncing)			WLG4SC-3P2232A91	1067766

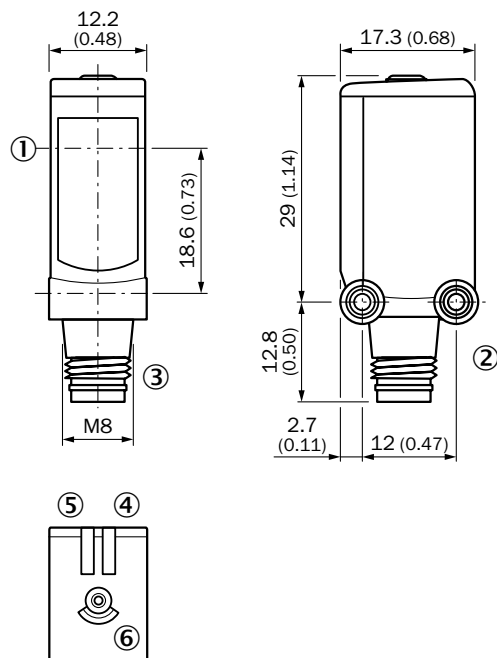
¹⁾ PL80A.

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Dimensional drawings

Dimensions in mm (inch)

WLG4S-3, single teach-in button

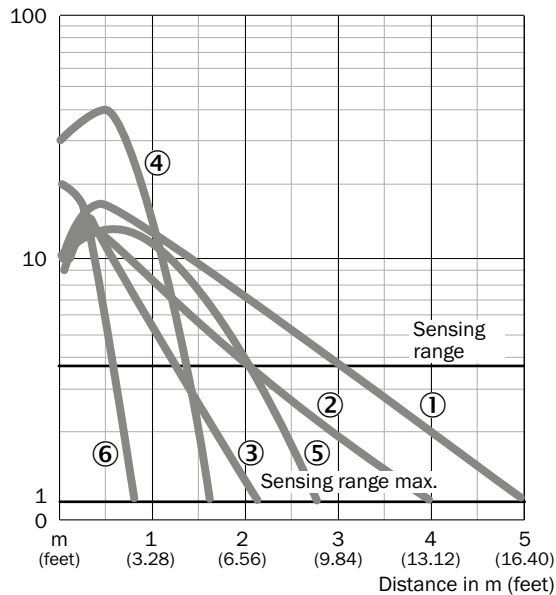


- ① Center of optical axis
- ② Threaded mounting hole M3
- ③ Connection
- ④ Status indicator LED green: power on
- ⑤ LED indicator orange: status of received light beam
- ⑥ Teach-in button

Characteristic curves

WLG4S-3, 5 m

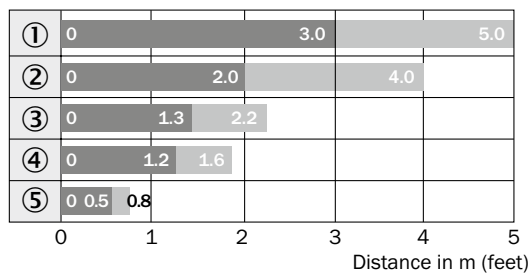
Operating reserve



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

Bar diagrams

WLG4S-3, 5 m

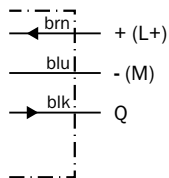


■ Sensing range ■ Sensing range max.

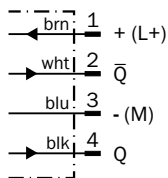
- ① PL80A
- ② PL40A
- ③ PL20A
- ④ PL10F
- ⑤ REF-IRF-56

Connection diagram

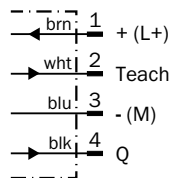
Cd-044



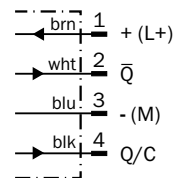
Cd-083



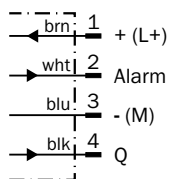
Cd-092



Cd-098



Cd-107



Recommended accessories

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Plug connectors and cables

Connecting cable (female connector-open)M8, 4-pin, PVC

- Cable material: PVC
- Connector material: PVC

Figure	Connection type head A	Connection type head B	Connecting cable	Enclosure rating	Model name	Part no.
	Female connector, M8, 4-pin, straight	Cable, open conductor heads	2 m, 4-wire	IP 67	DOL-0804-G02M	6009870
			5 m, 4-wire	IP 67	DOL-0804-G05M	6009872
	Female connector, M8, 4-pin, angled	Cable, open conductor heads	2 m, 4-wire	IP 67	DOL-0804-W02M	6009871
			5 m, 4-wire	IP 67	DOL-0804-W05M	6009873

Universal bar clamp systems

Figure	Material	Description	Model name	Part no.
	Zinc plated steel (sheet), Diecast zinc (clamp)	Plate N02 for universal clamp bracket	BEF-KHS-N02	2051608
	Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	Plate N02N for universal clamp bracket	BEF-KHS-N02N	2051618
	Zinc plated steel (sheet), Diecast zinc (clamp)	Plate N08 for universal clamp bracket	BEF-KHS-N08	2051607
	Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	Plate N08N for universal clamp bracket	BEF-KHS-N08N	2051616


Device protection (mechanical)

Protective housing/tubes








Figure	Material	Description	Model name	Part no.
	Stainless steel 1.4571	Safety bracket for floor mounting	BEF-SW-W4S	2051497

Reflectors

Angular


Figure	Material	Description	Model name	Part no.
	PMMA/ABS	Rectangular, screw connection, 80 mm x 80 mm	PL80A	1003865

Fine triple reflectors




Figure	Material	Description	Model name	Part no.
	PMMA/ABS	Fine triple, screw connection, suitable for laser sensors, 47 mm x 47 mm	P250F	5308843
		Fine triple, screw connection, suitable for laser sensors, 18 mm x 18 mm	PL10F	5311210
	Plastic	Fine triple, chemically resistant, screw connection, 18 mm x 18 mm	PL10F CHEM	5321636
	PMMA/ABS	Fine triple, screw connection, suitable for laser sensors, 38 mm x 16 mm	PL20F	5308844
	Plastic	Fine triple, chemically resistant, screw connection, suitable for laser sensors, 16 mm x 38 mm	PL20F-CHEM	5326089
	PMMA/ABS	Fine triple, screw connection, suitable for laser sensors, 56 mm x 28 mm	PL30F	5326523
		Fine triple, screw connection, suitable for laser sensors, 76 mm x 45 mm	PL81-1F	5325060

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Reflective tape

Figure	Description	Model name	Part no.
	Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm	REF-AC1000-56	4063030

Special reflectors

Figure	Material	Description	Model name	Part no.
	Stainless steel V4A (1.4404, 316L)	Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, D12-adapter shaft, 25 mm x 25 mm	PLH25-D12	2063404
		Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, M12-adapter thread, 25 mm x 25 mm	PLH25-M12	2063403
		Stainless steel reflector, wash-down design, chemically resistant, Enclosure rating IP 69K, screw connection, 14 mm x 14 mm	PLV14-A	2063405

→ For additional accessories, please see page L-861