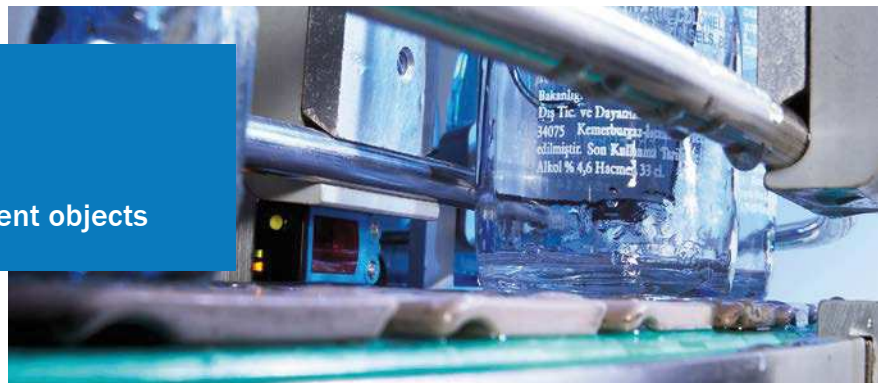


Reliable detection of transparent objects



F

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Product description

The WLG4-3 photoelectric retro-reflective sensor reliably detects transparent objects such as glass. Its small size is ideal for applications with limited mounting space. Adjusting these sensors can

be done with the click of an easy-to-use teach-in pushbutton. Plus, these sensors don't require any brackets, making them easy to mount directly to the machine – even in tight spaces.

At a glance

- Fast and reliable setup via teach-in pushbutton
- Continuous threshold adaptation (AutoAdapt) technology to detect objects in changing conditions such as temperature, contamination and reflector wear
- Versions without polarizing filters to better detect depolarizing objects such as PET bottles, CD sleeves and shrink-wrapped, glossy objects

Your benefits

- Reliable and quick setting via the push of a button
- Flat housing design eliminates alignment or mounting brackets, which saves time and money
- Low-cost machine integration due to small dimensions that enable mounting in areas with space restrictions
- Quick and easy setup due to highly visible intensive light spot
- The PinPoint LED's well-defined, intense light spot simplifies alignment
- Nearly all transparent objects can be reliably detected

→ www.mysick.com/en/W4-3_Glass

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

Sensor principle	Photoelectric retro-reflective sensor
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Housing design (light emission)	Rectangular
Sensing range max. ¹⁾	0.01 m ... 4.5 m
Sensing range ¹⁾	0.02 m ... 3.5 m
Type of light	Visible red light
Light source ²⁾	PinPoint LED
Light spot size (distance)	Ø 75 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 °C.

Mechanics/electronics

Supply voltage ¹⁾	10 V DC ... 30 V DC
Ripple ²⁾	< 5 V _{pp}
Power consumption ³⁾	≤ 20 mA
Output type	PNP / NPN (depending on type)
Switching mode	Light switching / 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	Approx. 30 °
Attenuation along light beam	> 8 %
Connection type	Cable, 2 m ⁶⁾ / Male connector, M8 / Cable with connector, M12, 150 mm ⁶⁾ (depending on type)
Circuit protection	A ⁷⁾ , C ⁸⁾ , D ⁹⁾
Protection class	III
Weight	30 g
Polarisation filter	✓
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/W4-3_Glass

WLG4-3 with polarisation filter

- Polarisation filter: ✓

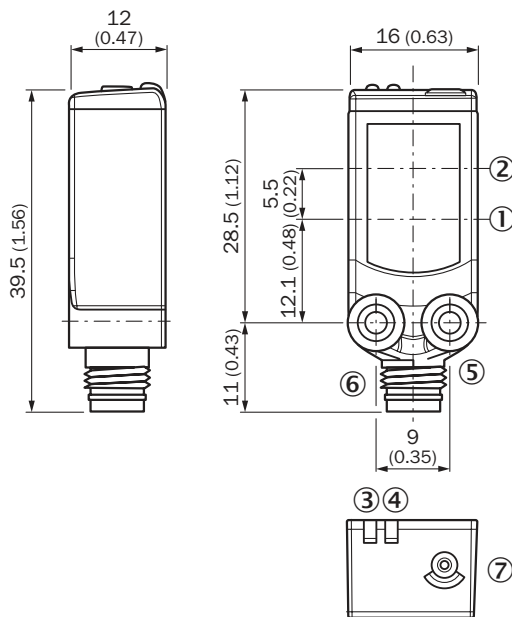
Sensing range max. ¹⁾	Output type	Switching mode	Adjustment	Connection	Connection diagram	Model name	Part no.
0.01 m ... 4.5 m	PNP	Light switching	Single teach-in button	Cable, 3-wire, 2 m, PVC	Cd-043	WLG4-3P1332	1042844
				Connector M8, 3-pin	Cd-045	WLG4-3P2132	1029567
		Dark-switching	Cable, Single teach-in button	Connector M8, 3-pin	Cd-045	WLG4-3F2132	1028127
				Connector M8, 4-pin	Cd-092	WLG4-3F2234	1028130
	NPN	Dark-switching	Single teach-in button	Cable with connector M12, 4-pin, 150 mm, PVC	Cd-092	WLG4-3F3434	1043683
				Cable, 3-wire, 2 m, PVC	Cd-043	WLG4-3E1332	1028131
				Connector M8, 3-pin	Cd-045	WLG4-3E2132	1028132

¹⁾ PL80A.

Dimensional drawings

Dimensions in mm (inch)

WLG4-3



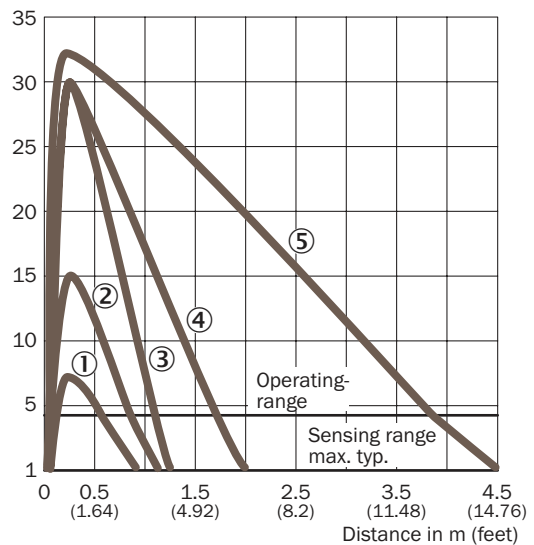
- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ LED indicator orange: status of received light beam
- ④ Status indicator LED green: power on
- ⑤ Threaded mounting hole M3
- ⑥ Connection
- ⑦ Teach-in button

Characteristic curves

Operating reserve

WLG4-3

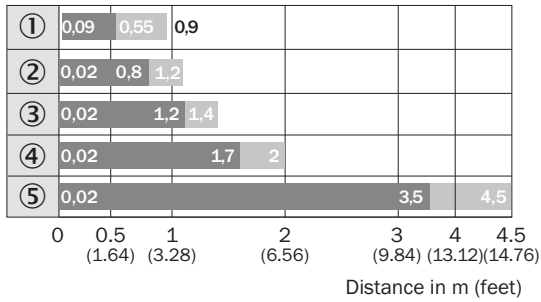
Operating reserve in %



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

Bar diagrams

WLG4-3

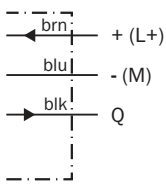


■ Sensing range ■ Sensing range max.

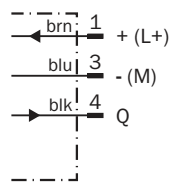
- ① REF-IRF-56
- ② PL10F
- ③ PL20A
- ④ PL40A
- ⑤ PL80A

Connection diagram

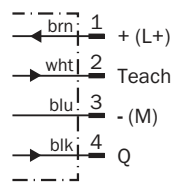
Cd-043



Cd-045



Cd-092



Recommended accessories







Plug connectors and cables

Connecting cable (female connector-open), PVC





- Cable material: PVC

Figure	Connection type head A	Connection type head B	Connecting cable	Enclosure rating	Model name	Part no.
	Female connector, M8, 3-pin, straight	Cable, open conductor heads	2 m, 3-wire	IP 67	DOL-0803-G02M	6010785
			5 m, 3-wire	IP 67	DOL-0803-G05M	6022009
	Female connector, M8, 3-pin, angled	Cable, open conductor heads	2 m, 3-wire	IP 67	DOL-0803-W02M	6008489
			5 m, 3-wire	IP 67	DOL-0803-W05M	6022010
	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
	Female connector, M12, 4-pin, straight	Cable, open conductor heads	2 m, 4-wire	IP 67	DOL-1204-G02M	6009382
			5 m, 4-wire	IP 67	DOL-1204-G05M	6009866
	Female connector, M12, 4-pin, angled	Cable, open conductor heads	2 m, 4-wire	IP 67	DOL-1204-W02M	6009383
			5 m, 4-wire	IP 67	DOL-1204-W05M	6009867


Female connector (ready to assemble)

Figure	Connection type head A	Connection type head B	Connector material	Enclosure rating	Model name	Part no.
	Female connector, M8, 3-pin, straight	Screw-type terminals	PBT	IP 67	DOS-0803-G	7902077
	Female connector, M8, 3-pin, angled	Pin penetration	PBT	IP 67	DOS-0803-W	7902078
	Female connector, M8, 4-pin, straight	Screw-type terminals	PBT	IP 67	DOS-0804-G	6009974
	Female connector, M8, 4-pin, angled	Pin penetration	PBT	IP 67	DOS-0804-W	6009975
	Female connector, M12, 4-pin, straight	Screw-type terminals	PBT	IP 67	DOS-1204-G	6007302
	Female connector, M12, 4-pin, angled	Screw-type terminals	PBT	IP 67	DOS-1204-W	6007303

Male connector (ready to assemble)

Figure	Connection type head A	Connection type head B	Connector material	Enclosure rating	Model name	Part no.
	Male connector, M8, 3-pin, straight	Screw-type terminals	PBT	IP 67	STE-0803-G	6037322
	Male connector, M8, 4-pin, straight	Screw-type terminals	PBT	IP 67	STE-0804-G	6037323
	Male connector, M12, 4-pin, straight	Screw-type terminals	PBT	IP 67	STE-1204-G	6009932
	Male connector, M12, 4-pin, angled	Screw-type terminals	PBT	IP 67	STE-1204-W	6022084

Universal bar clamp systems

Figure	Material	Description	Model name	Part no.
	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