SICK.COM



DATA SHEET

# WLG4S-3P2232

W4
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

## PHOTOELECTRIC SENSORS

# WLG4S-3P2232

### ORDERING INFORMATION

| Type | part no. |
|---|---|
| WLG4S-3P2232 | 1044186 |

Further device versions and accessories at www.sick.com/W4

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Functional principle | Photoelectric retro-reflective sensor |
| Functional principle detail | Without reflector minimum distance (autocollimation/coaxial optics) |
| Sensing range max. | 0.01 m ... 5 m [1] |
| Sensing range | 0 m ... 3 m [1] |
| Polarisation filter | Yes |
| Emitted beam | |
| Light source | PinPoint LED [2] |
| Type of light | Visible red light |
| Light spot size (distance) | Ø 45 mm (1.5 m) |
| Key LED figures | |
| Wave length | 650 nm |
| Adjustment | Single teach-in button |
| Special applications | Detecting transparent objects |
| AutoAdapt | ✓ |

[1] Reflector PL80A.

[2] Average service life: 100,000 h at $T_U$ = +25 °C.

### SAFETY-RELATED PARAMETERS

| | |
|---|---|
| $MTTF_D$ | 1,063 years |
| $DC_{avg}$ | 0 % |

## ELECTRONICS

| | |
|---|---|
| Supply voltage $U_B$ | 10 V DC ... 30 V DC [1] |
| Ripple | < 5 $V_{pp}$ [2] |
| Current consumption | 20 mA [3] |
| Protection class | III |
| Digital output | |
| Type | PNP |
| Switching mode | Light/dark switching |
| Output current $I_{max.}$ | ≤ 100 mA |
| Response time | < 0.5 ms [4] |
| Switching frequency | 1,000 Hz [5] |
| Attenuation along light beam | > 8 % |
| Output function | Complementary |
| Circuit protection | A [6]<br>C [7]<br>D [8] |

[1] Limit values.

[2] May not fall below or exceed $U_V$ tolerances.

[3] Without load.

[4] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] A = $V_S$ connections reverse-polarity protected.

[7] C = interference suppression.

[8] D = outputs overcurrent and short-circuit protected.

## MECHANICS

| | |
|---|---|
| Housing | Rectangular |
| Design detail | Slim |
| Dimensions (W x H x D) | 12.2 mm x 41.8 mm x 17.3 mm |
| Connection | Male connector M8, 4-pin |
| Material | |
| Housing | Plastic, ABS |
| Front screen | Plastic, PMMA |
| Weight | 30 g |

## AMBIENT DATA

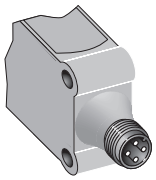
| | |
|---|---|
| Enclosure rating | IP67<br>IP66 |
| Ambient operating temperature | –40 °C ... +60 °C |
| Ambient temperature, storage | –40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

## CERTIFICATES

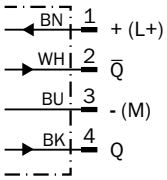
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |

| | |
|---|---|
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| ECOLAB certificate | ✓ |
| Photobiological safety (DIN EN 62471) certificate | ✓ |

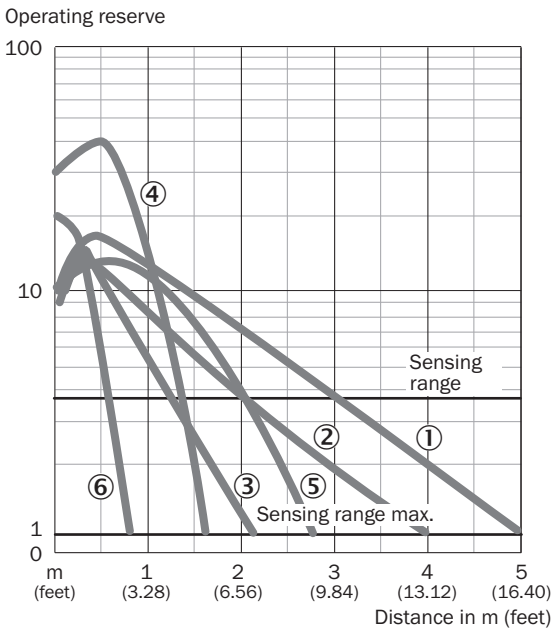
## CONNECTION TYPE



## CONNECTION DIAGRAM CD-083

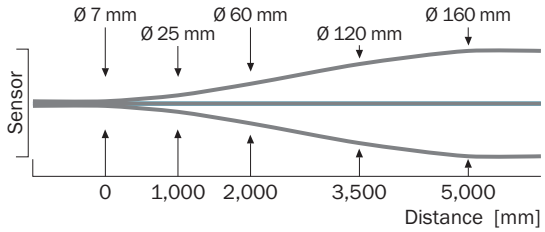



## CHARACTERISTIC CURVE WL4S-3, WLG4S-3, 5 M

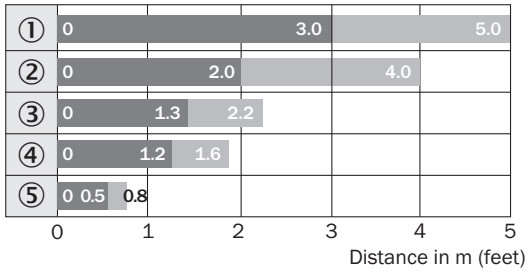



① Reflector PL80A
② Reflector PL40A
③ Reflector PL20A
④ PL10F reflector
⑤ Reflector P250 CHEM
⑥ Reflective tape REF-IRF-56

**LIGHT SPOT SIZE**



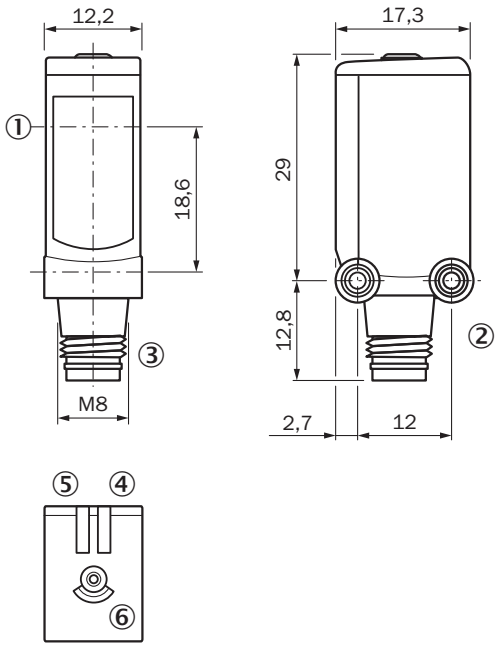

**SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 5 M**




Sensing range  Sensing range max.

① Reflector PL80A
② Reflector PL40A
③ Reflector PL20A
④ PL10F reflector
⑤ Reflective tape REF-IRF-56

**DIMENSIONAL DRAWING WL4S-3, WLG4S-3, SINGLE TEACH-IN BUTTON**




Dimensions in mm (inch)
① Center of optical axis
② Threaded mounting hole M3
③ Connection
④ LED indicator green: Supply voltage active
⑤ Orange LED indicator: status of received light beam
⑥ Teach-in button

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1044186

SICK AG
WALDKIRCH
GERMANY
SICK.COM

# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK

Sensor Intelligence