



WLG8-P1131S04

W8G

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| WLG8-P1131S04 | 1072259 |

Included in delivery: BEF-W100-A (1), P250F (1)

Other models and accessories → www.sick.com/W8G

Detailed technical data

Features

| | |
|--|---|
| Functional principle | Photoelectric retro-reflective sensor |
| Functional principle detail | Without reflector minimum distance (autocollimation/coaxial optics) |
| Dimensions (W x H x D) | 11 mm x 31 mm x 20 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 m ... 3 m ¹⁾ |
| Sensing range | 0 m ... 1.7 m ¹⁾ |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 70 mm (2 m) |
| Wave length | 650 nm |
| Adjustment | Potentiometer, 270° |
| Special feature | Detecting transparent objects |
| Special applications | Detecting transparent objects |

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

| | |
|-------------------------------------|-----------------------------------|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ± 10 % ²⁾ |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

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⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

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

| | |
|---|--|
| Current consumption | 30 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark rotary switch |
| Signal voltage PNP HIGH/LOW | Approx. $V_S - 1.8 \text{ V} / 0 \text{ V}$ |
| Output current I_{max} | $\leq 100 \text{ mA}$ |
| Response time | $\leq 0.5 \text{ ms}$ ⁴⁾ |
| Switching frequency | 1,000 Hz ⁵⁾ |
| Attenuation along light beam | $\leq 20 \%$ |
| Connection type | Cable with connector M8, 3-pin, 1,000 mm ⁶⁾ |
| Cable material | Plastic, PVC |
| Circuit protection | A ⁷⁾ B ⁸⁾ D ⁹⁾ |
| Weight | 50 g |
| Polarisation filter | ✓ |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Items supplied | Stainless steel mounting bracket (1.4305, 303) BEF-W170, Reflector P250F |
| Special feature | Detecting transparent objects |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_y 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⁾ B = inputs and output reverse-polarity protected.

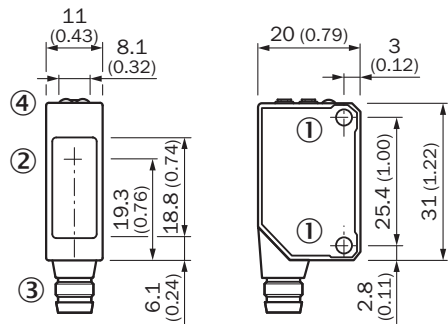
⁹⁾ D = outputs overcurrent and short-circuit protected.

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270902 |
| ECLASS 5.1.4 | 27270902 |
| ECLASS 6.0 | 27270902 |
| ECLASS 6.2 | 27270902 |
| ECLASS 7.0 | 27270902 |
| ECLASS 8.0 | 27270902 |
| ECLASS 8.1 | 27270902 |
| ECLASS 9.0 | 27270902 |
| ECLASS 10.0 | 27270902 |
| ECLASS 11.0 | 27270902 |

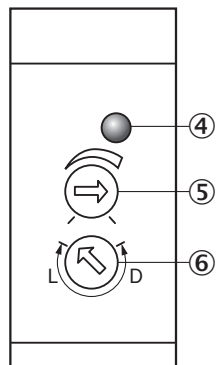
| | |
|-----------------------|----------|
| ECLASS 12.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |
| ETIM 8.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Dimensional drawing (Dimensions in mm (inch))



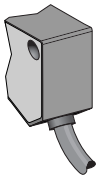
- ① Threaded mounting hole M3, max. tightening torque: 0.6 Nm
- ② Center of optical axis
- ③ Connection
- ④ Orange LED indicator : switching output active

Adjustments



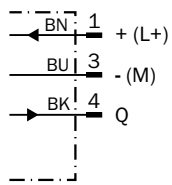
- ④ Orange LED indicator : switching output active
- ⑤ Sensitivity control
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Connection type



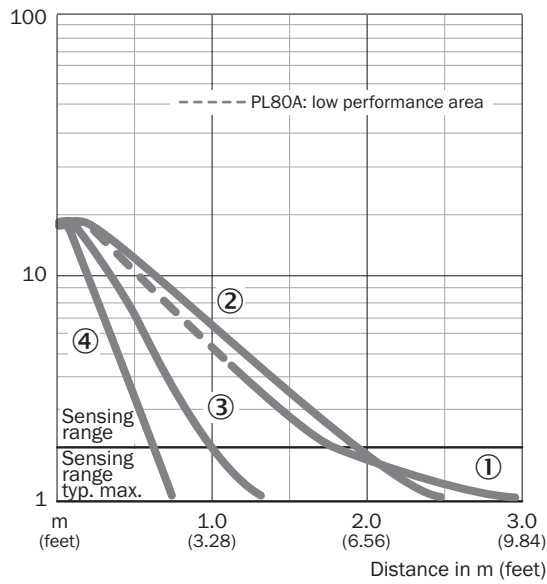
Connection diagram

Cd-045



Characteristic curve

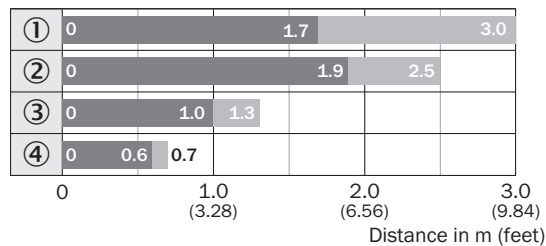
WL8G



- ① Reflector PL80A
- ② Reflector P250F
- ③ Reflector PL20F
- ④ PL10F reflector

Sensing range diagram

WL8G







■ Sensing range ■ Sensing range typ. max.

- ① Reflector PL80A
- ② Reflector P250F
- ③ Reflector PL20F
- ④ PL10F reflector

Recommended accessories

Other models and accessories → www.sick.com/W8G

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
| Mounting brackets and plates | | | |
|  | Universal mounting bracket for reflectors, steel, zinc coated | BEF-WN-REFX | 2064574 |
| Reflectors | | | |
|  | Fine triple reflector, screw connection, suitable for laser sensors, 52 mm x 62 mm, PM-MA/ABS, Screw-on, 2 hole mounting | P250F | 5308843 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-050VA1XLEAX | 2095884 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M8, 3-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com