



WL34-V240

W34

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|-----------|----------|
| WL34-V240 | 1019244 |

Other models and accessories → www.sick.com/W34

Illustration may differ



Detailed technical data

Features

| | |
|--|--|
| Device type | Photoelectric sensors |
| Sensor/ detection principle | Photoelectric retro-reflective sensor, Dual lens |
| Dimensions (W x H x D) | 27 mm x 92 mm x 70 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0.03 m ... 22 m ¹⁾ |
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| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 250 mm (15 m) |
| Wave length | 660 nm |
| Adjustment | Potentiometer |
| Alarm output | ✓ |

¹⁾ Reflector PL80A.

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

Mechanics/electronics

| | |
|----------------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | 50 mA |

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

⁸⁾ Reference voltage: 50 V DC.

| | |
|--|---|
| Switching output | NPN PNP |
| Switching mode | Light switching Dark switching |
| Switching mode selector | Selectable via PNP/NPN selector, selectable via light/dark selector |
| Output current I_{max} | ≤ 100 mA |
| Response time | ≤ 500 μs ³⁾ |
| Switching frequency | 1,000 Hz ⁴⁾ |
| Time functions | Off delay On delay Adjustable |
| Delay time | Adjustable via time delay selector switch, 0.5 s ... 10 s |
| Connection type | Terminal connection with M16 gland |
| Circuit protection | A ⁵⁾ C ⁶⁾ D ⁷⁾ |
| Protection class | II ⁸⁾ |
| Weight | 140 g |
| Polarisation filter | ✓ |
| Housing material | Plastic, ABS |
| Enclosure rating | IP67 |
| Test input sender off | TE to 0 V |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

1) Limit values.

2) May not exceed or fall below U_v tolerances.

3) Signal transit time with resistive load.

4) With light/dark ratio 1:1.

5) A = V_S connections reverse-polarity protected.

6) C = interference suppression.

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

8) Reference voltage: 50 V DC.

Safety-related parameters

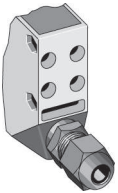
| | |
|-------------------------|-----------|
| MTTF_D | 656 years |
| DC_{avg} | 0 % |

Classifications

| | |
|---------------------|----------|
| ECl@ss 5.0 | 27270902 |
| ECl@ss 5.1.4 | 27270902 |
| ECl@ss 6.0 | 27270902 |
| ECl@ss 6.2 | 27270902 |
| ECl@ss 7.0 | 27270902 |
| ECl@ss 8.0 | 27270902 |
| ECl@ss 8.1 | 27270902 |

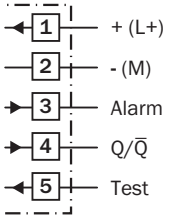
| | |
|-----------------------|----------|
| ECl@ss 9.0 | 27270902 |
| ECl@ss 10.0 | 27270902 |
| ECl@ss 11.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |
| ETIM 8.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Connection type

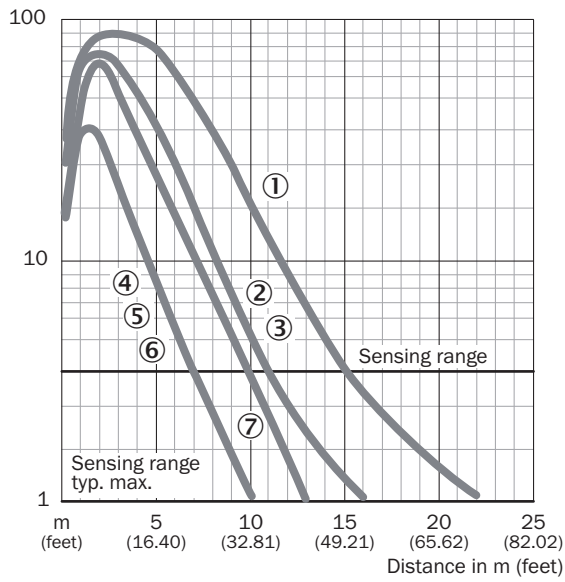


Connection diagram

Cd-152

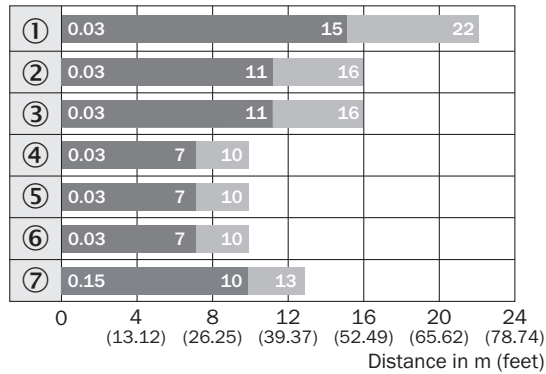


Characteristic curve



- ① Reflector PL80A
- ② Reflector PL50A
- ③ Reflector PL40A
- ④ Reflector PL30A
- ⑤ Reflector PL20A
- ⑥ Reflective tape Diamond Grade
- ⑦ Reflector C110A

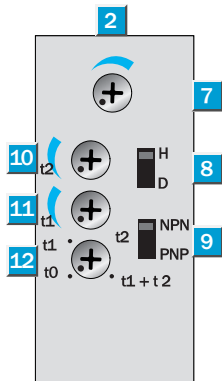
Sensing range diagram



■ Sensing range ■ Sensing range max.

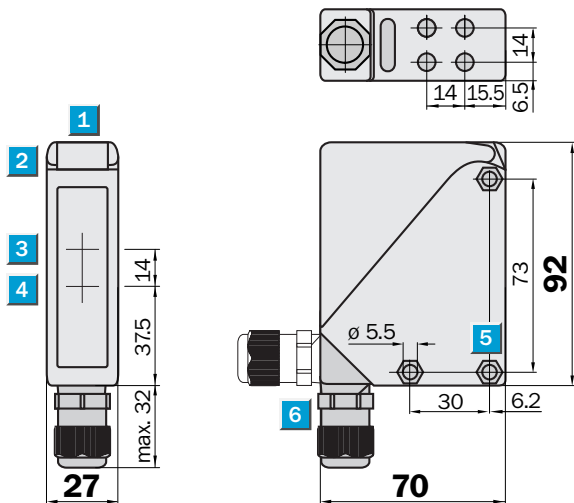
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Adjustments



- ② LED signal strength indicator
- ⑦ Sensitivity control
- ⑧ Light/dark selector
- ⑨ NPN/PNP changeover switch
- ⑩ Time control t_2 = OFF delay
- ⑪ Time control t_1 = ON delay
- ⑫ Time delay selector switch




Dimensional drawing (Dimensions in mm (inch))



- ① Alignment sight
- ② LED signal strength indicator
- ③ Center of optical axis, sender
- ④ Center of optical axis, receiver
- ⑤ Mounting hole $\varnothing 5.5$ mm, for M5 hexagon nuts on both sides
- ⑥ M16 screw fixing rotatable by 90°

Recommended accessories

Other models and accessories → www.sick.com/W34

| | Brief description | Type | Part no. |
|---|---|-------------|----------|
| Mounting brackets and plates | | | |
|  | Universal mounting bracket for reflectors, steel, zinc coated | BEF-WN-REFX | 2064574 |
|  | Mounting bracket, Stainless steel (1.4301), mounting hardware included | BEF-WN-W24 | 2015248 |
| Reflectors | | | |
|  | Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL80A | 1003865 |

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.”

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