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

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
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]
Sensing range	0.03 m ... 15 m [1]
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_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	50 mA

[1] Limit values.
[2] May not fall below or exceed 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 delayswitch-on delayadjustable
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

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[3] Signal transit time with resistive load.

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

[5] A = V_S connections reverse-polarity protected.

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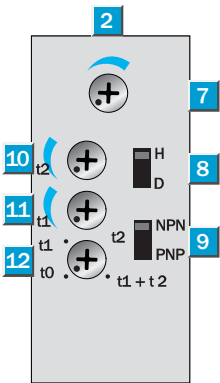
Safety-related parameters

$MTTF_D$	656 years
DC_{avg}	0 %

Classifications

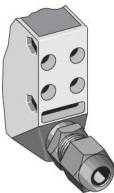|	
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902

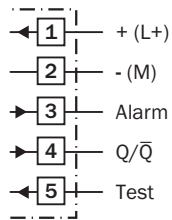| ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

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

Connection type

Connection diagram

Cd-152

```
┌─┐
→│1│├── + (L+)
 ├─┤
─│2│├── - (M)
 ├─┤
←│3│├── Alarm
 ├─┤
←│4│├── Q/Q̄
 ├─┤
→│5│├── Test
 └─┘
```
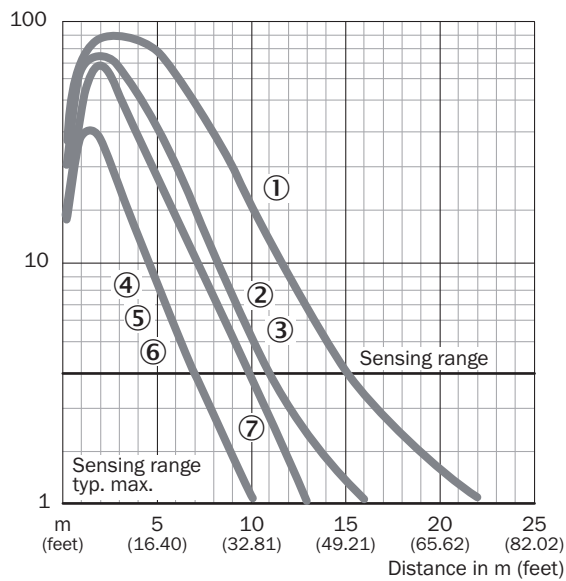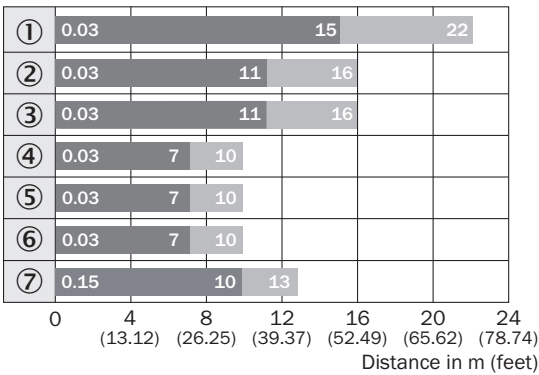
Characteristic curve

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

①	0.03	15	22	
②	0.03	11	16	
③	0.03	11	16	
④	0.03	7	10	
⑤	0.03	7	10	
⑥	0.03	7	10	
⑦	0.15	10	13	

0   4   8   12   16   20   24
    (13.12) (26.25) (39.37) (52.49) (65.62) (78.74)
Distance in m (feet)

■ Sensing range   ■ Sensing range max.

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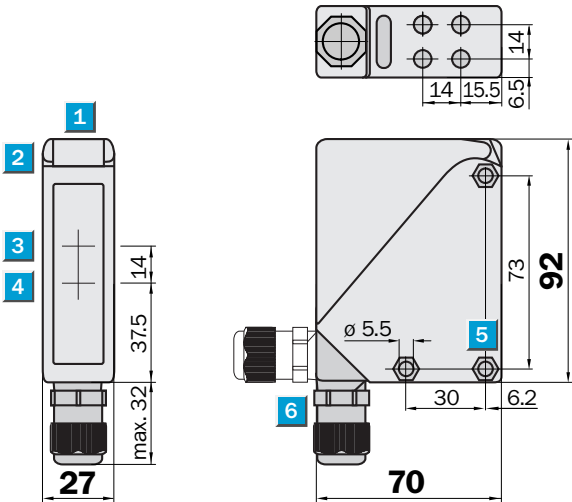⑤ Reflector PL20A
⑥ Reflective tape Diamond Grade
⑦ Reflector C110A

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 ø 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

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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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