SICK.COM



DATA SHEET

WL34-R230

W34
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WL34-R230

ORDERING INFORMATION

Type	part no.
WL34-R230	1019249

Further device versions and accessories at 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

[1] Reflector PL80A.

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

MECHANICS/ELECTRONICS

Supply voltage U_B	20 V AC/DC ... 250 V AC/DC
Power consumption	< 2 VA
Switching output	Relay, electrically isolated [1]
Output function	Change-over contacts

[1] Provide suitable spark suppression for inductive or capacitive loads.

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

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

[4] C = interference suppression.

[5] Rated voltage: 250 V AC/DC.

Switching mode	Light switching, Dark switching [1]
Switching mode selector	Selectable via light/dark selector
Switching current (switching voltage)	4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 250 V DC UL: 4 A @ 250 V AC, general use / 4 A @ 250 V AC, resistive (NO) / 3 A @ 250 V AC, resistive (NC) / 4 A @ 24 V DC, NO, general use / 3 A @ 24 V DC, NC, general use / R300 / B300 (NO contacts only)
Response time	≤ 10 ms
Switching frequency	10 Hz [2]
Connection type	Terminal connection with M16 gland
Circuit protection	A [3] C [4]
Protection class	II [5]
Weight	140 g
Polarizing filter	✓
Housing material	Plastic, ABS
Enclosure rating	IP67
Usage category	AC-15, DC-13 According to EN 60947-1
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Provide suitable spark suppression for inductive or capacitive loads.

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

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

[4] C = interference suppression.

[5] Rated voltage: 250 V AC/DC.

SAFETY-RELATED PARAMETERS

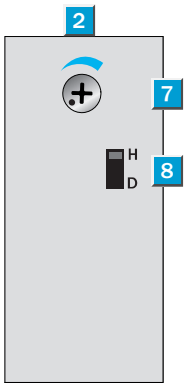
$MTTF_D$	478 years
DC_{avg}	0 %
T_M (mission time)	20 years
B_{10D}	59,123 Switching cycles [1]

[1] Only for devices containing electro-mechanical components. In this case, the $MTTF_D$ value of the entire device must be calculated from the given B_{10D} value, the number of switching cycles and the given $MTTF_D$ value.

CERTIFICATES

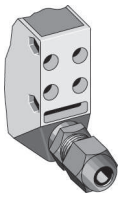
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
CCC certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

ADJUSTMENTS

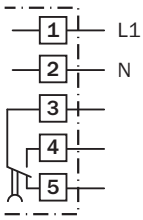


② Receive indicator
⑦ sensitivity control
⑧ Light/dark selector

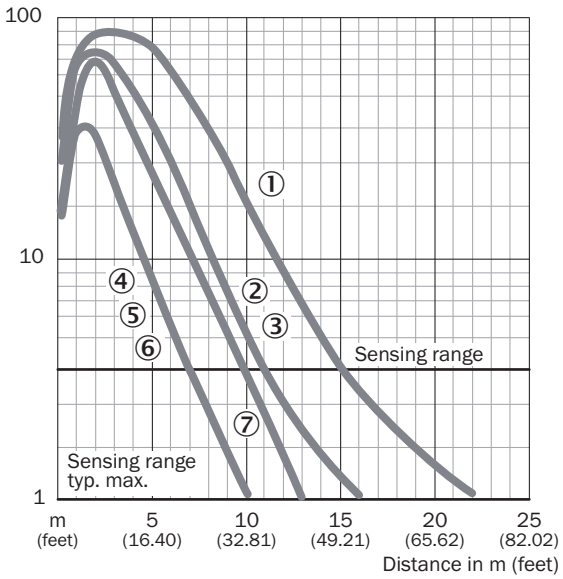
CONNECTION TYPE



CONNECTION DIAGRAM CD-167

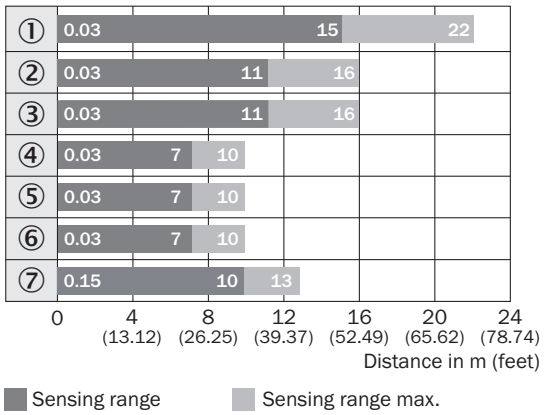


CHARACTERISTIC CURVE



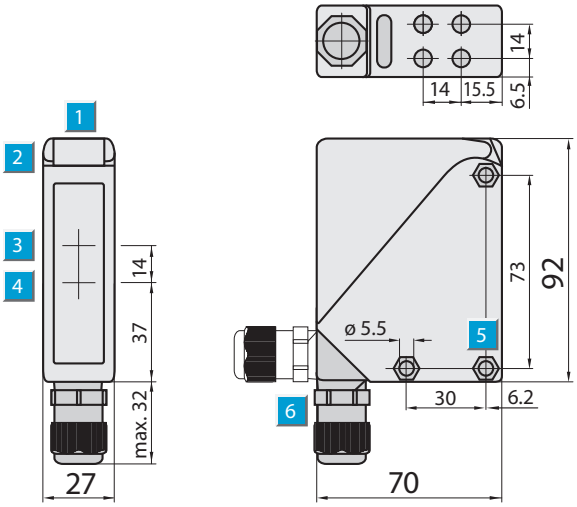
① Reflector PL80A
② Reflector PL50A
③ Reflector PL40A
④ Reflector PL30A
⑤ Reflector PL20A
⑥ Reflective tape Diamond Grade
⑦ Reflector C110A

SENSING RANGE DIAGRAM



① 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°

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/1019249

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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

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