



Photoelectric sensors
W34, Photoelectric retro-reflective sensor,
Standard optics

WL34-V240



Model Name > [WL34-V240](#)
Part No. > [1019244](#)



Illustration may differ

At a glance

- High operating reserve at a long range
- Switch selectable PNP or NPN output
- and light/dark switching
- Versions with DC voltage (10...30V) or universal AC/DC voltage (12 ... 240 V DC / 24 ... 240 V AC)
- Optional test input, adjustable ON and OFF time delays, alarm output
- M12 or terminal chamber connection: 90° rotatable
- UL approval

Your benefits

- High operating reserve at a long range minimizes downtime
- Alarm output provides early warning that maintenance may be needed
- Test input allows users to validate that the sensor is operating as expected
- The sensor cover protects configuration components against environmental hazards
- Adjustable time delay, alarm output, test input, and universal AC/DC voltage provide additional flexibility and reduce the number of part numbers needed



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
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 ... 22 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	660 nm
Time type:	Time delay off, Switch on delay, Adjustable
Delay time:	Adjustable via time delay selector switch: 0.5 ... 10 s
Adjustment:	Potentiometer
Light spot size (distance):	Ø 250 mm (15 m)

^{1) 2)} PL80A ³⁾ Average service life of 100,000 h at T_A = +25 °C

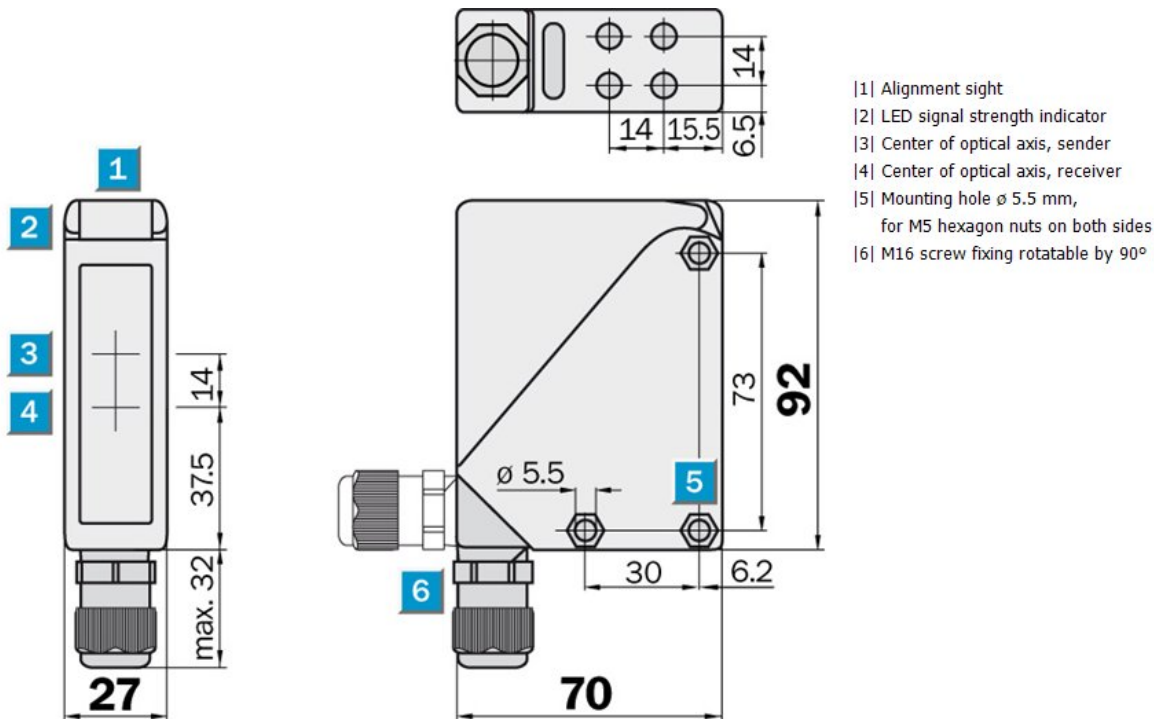
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
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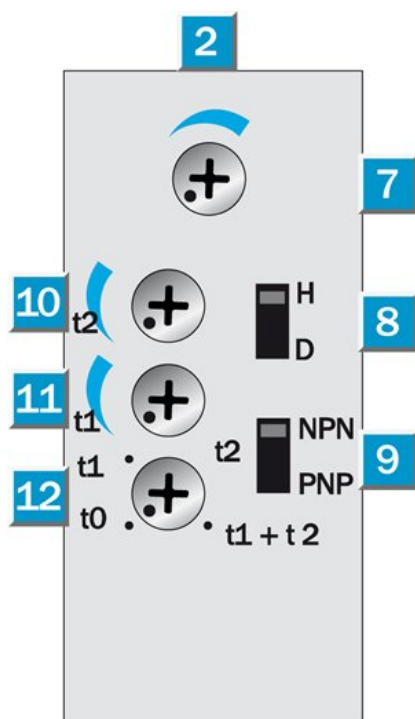
Ripple:	$< 5 \text{ Vpp}$ ²⁾
Current consumption:	$\leq 50 \text{ mA}$
Switching output:	NPN, PNP
Switching mode:	Dark-switching, Light switching
Switching mode selector:	Selectable via light/dark selector, Selectable via PNP/NPN selector
Output current I _{max} ..:	100 mA
Response time:	$\leq 500 \mu\text{s}$ ³⁾
Switching frequency:	1,000 Hz ⁴⁾
Connection type:	Terminal connection with M16 gland ⁵⁾
Circuit protection:::	A, C, D ⁶⁾ ⁷⁾ ⁸⁾
Protection class:	II ⁹⁾
Weight:	140 g
Polarisation filter:	✓
Housing material:	ABS, Plastic
Enclosure rating:	IP 67
Test input sender off:	TE to 0 V
Ambient temperature operation:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ Connection rotatable by 90° ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected ⁹⁾ Reference voltage: 50 V DC

Dimensional drawing

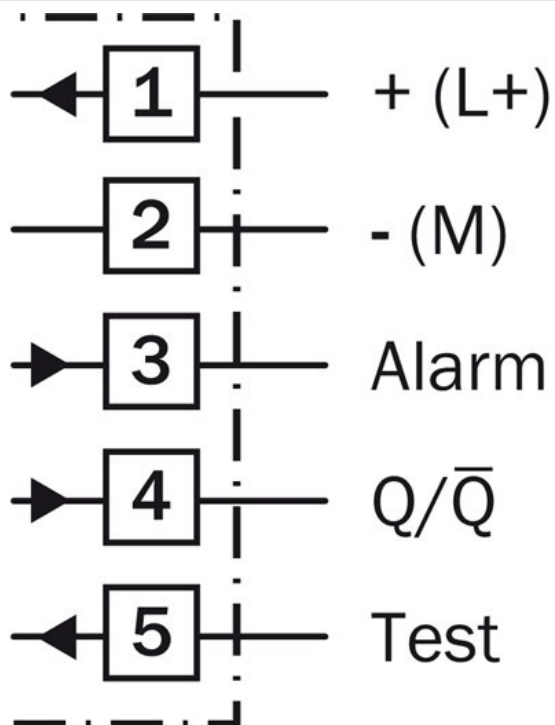


Adjustments possible

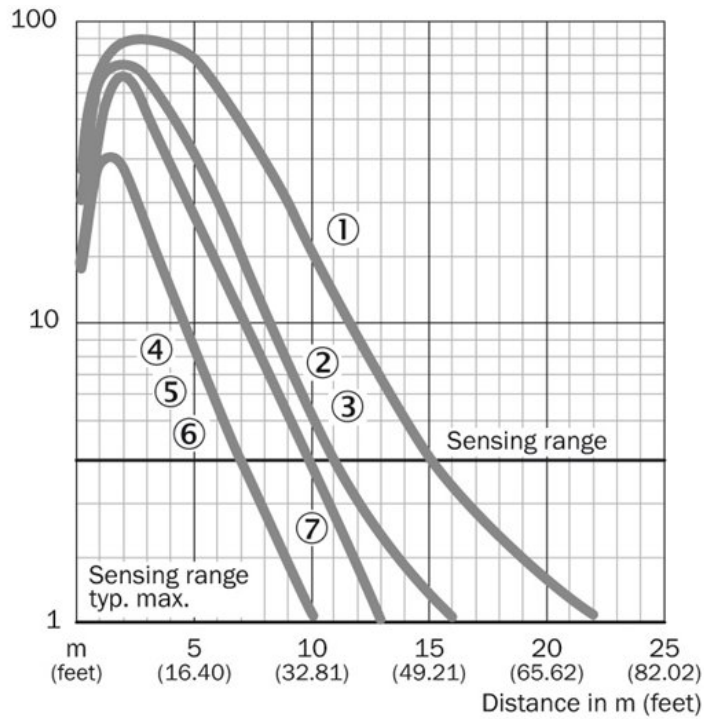


- |2| LED signal strength indicator
- |7| Sensitivity adjustment
- |8| Light/dark selector
- |9| NPN/ PNP selector
- |10| Time control t2=OFF-delay
- |11| Time control t1=ON-delay
- |12| time delay selector switch

Connection diagram

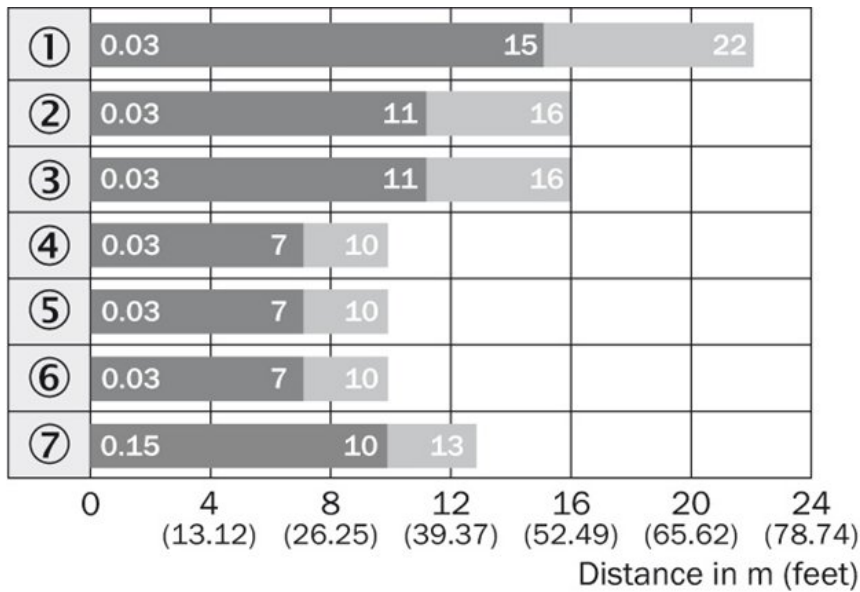


Characteristic curve



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

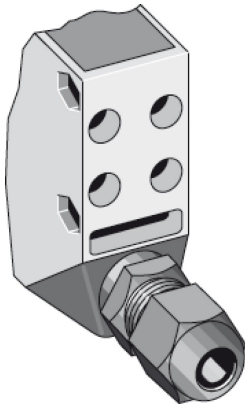
Sensing range diagram



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

■ Sensing range ■ Sensing range max.

Connection type



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