

VL180-N162

V180

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
VL180-N162	6008784

Included in delivery: P250 (1)

Other models and accessories → www.sick.com/V180



Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor
Housing design (light emission)	Cylindrical
Housing length	63.3 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	0.05 m ... 1 m ¹⁾
Sensing range	0.05 m ... 1 m ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 50 mm (1 m)
Wave length	680 nm
Adjustment	None

¹⁾ Reflector P250.

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	± 5 V _{pp} ²⁾
Power consumption	30 ³⁾
Switching output	NPN ⁴⁾
Switching mode	Light/dark switching ⁴⁾

¹⁾ Limit values.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ Control wire open: light switching L.ON.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ Do not bend below 0 °C.

⁸⁾ A = V_S connections reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

Switching mode selector	Selectable via L/D control cable
Signal voltage NPN HIGH/LOW	Approx. V_S / < 1.0 V
Output current I_{max}	≤ 100 mA
Response time	≤ 1.5 ms ⁵⁾
Switching frequency	333 Hz ⁶⁾
Connection type	Cable, 4-wire, 2 m ⁷⁾
Cable material	PVC
Conductor cross-section	0.34 mm ²
Cable diameter	$\varnothing 5$ mm
Circuit protection	A ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	125 g
Polarisation filter	✓
Housing material	Metal, Nickel-plated brass, PBT/PC
Optics material	Plastic, PMMA
Enclosure rating	IP66
Items supplied	Reflector P250, fastening nuts (2 x)
Ambient operating temperature	-25 °C ... +55 °C
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

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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
ETIM 5.0	EC002717
ETIM 6.0	EC002717

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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