

The SICK logo is displayed in a bold, blue, sans-serif font. It is centered within a white rectangular box, which is itself centered on a light gray background.

DATA SHEET

VL180-N162

V180
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

VL180-N162

ORDERING INFORMATION

Type	part no.
VL180-N162	6008784

Further device versions and accessories at www.sick.com/V180

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor
Dimensions (W x H x D)	18 mm x 18 mm x 63.3 mm
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 U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	30 mA ³⁾
Switching output	NPN ⁴⁾
Switching mode	Light/dark switching ⁴⁾
Switching mode selector	Selectable via L/D control cable
Signal voltage NPN HIGH/LOW	Approx. VS / < 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	Plastic, PVC
Conductor cross section	0.34 mm ²
Cable diameter	Ø 5 mm
Circuit protection	A ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	125 g
Polarizing 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 temperature, storage	-40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

¹⁾ Limit values.²⁾ May not fall below or exceed U_V tolerances.³⁾ Without load.⁴⁾ Control wire open: light switching LON.⁵⁾ Signal transit time with resistive load.⁶⁾ With light/dark ratio 1:1.⁷⁾ Do not bend below 0 °C.⁸⁾ A = V_B connections reverse-polarity protected.⁹⁾ C = interference suppression.¹⁰⁾ D = outputs overcurrent and short-circuit protected.

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/6008784



SICK AG
WALDKIRCH
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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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