



Photoelectric sensors
VL180, Photoelectric retro-reflective sensor

VL180-P162

Model Name > VL180-P162
Part No. > 6008783



At a glance

- Infrared light with a 3 m sensing distance or visible red light with a 1 m sensing distance
- Compact M18 metal housing
- M12 cable or 2 m cable
- Light/dark switching via control cable
- 90° deflector head accessory

Your benefits

- Compact M18 housing saves space on the machine
- Compatible with many competitor models, making it easy to install and commission
- Clearly visible LED indicators reduce setup time and simplify troubleshooting

The product has been discontinued. Please follow the "replacement product" link for information about alternative products.



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Housing design (light emission):	Cylindrical, straight
Housing length:	63.3 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Axial
Sensing range:	0.05 m ... 1 m ¹⁾
Type of light:	Visible red light
Light source:	LED ²⁾
Wave length:	680 nm
Light spot size (distance):	50 mm (1 m)

¹⁾ P250 ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 5 Vpp
Power consumption:	30 ²⁾
Output type:	PNP, open collector ³⁾

Switching mode:	Light/dark-switching ⁴⁾
Switching mode selector:	Selectable via L/D control wire
Signal voltage PNP HIGH/LOW:	Approx. VS - 1.0 V/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:	5 mm
Circuit protection:::	A, C, D ^{8) 9) 10)}
Protection class:	III
Weight:	125 g
Polarisation filter:	✓
Special device:	-
Housing material:	Nickel-plated brass, PBT/PC, Metal
Optics material:	PMMA
Enclosure rating:	IP 66
Items supplied:	Fastening nuts (2 x), Reflector P250
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRNT2.E128350 & NRNT8.E128350

¹⁾ Limit values ²⁾ Without load ^{3) 4)} Control wire open: dark-switching D.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

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