



Photoelectric sensors
VL180, Photoelectric retro-reflective sensor

VL180-P460

Model Name > [VL180-P460](#)
Part No. > [6008785](#)



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



Features

Sensing range max.:	0.05 m ... 1 m ¹⁾
Sensing range:	0.05 m ... 1 m
Housing desig (light emission):	Cylindrical, straight, straight
Light source:	LED ³⁾
Type of light:	visible red light
Wave length:	680 nm
Housing length:	69 mm
Thread diameter (housing):	M18 x 1
Sensor/detection principle:	Photoelectric retro-reflective sensor
Light spot (distance):	50 mm (1 m)
Optical axis:	axial

^{1) 2)} P250 ³⁾ Average service life 100,000 h at Ta = +25 °C

Mechanics/electronics

Enclosure rating:	IP 66
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	± 5 Vpp ²⁾
Power consumption:	30 ³⁾
Switching output:	NPN, light/dark-switching, Selectable via L/D control wire, open collector
Output current I _{max.} :	≤ 100 mA

Response time:	$\leq 1.5 \text{ ms}$ ⁵⁾
Switching frequency:	333 Hz ⁶⁾
Connection type:	Connector M12, 4-pin
Protection class:	III
Circuit protection:::	A C 7) 8) 9) D
Weight:	65 g
Housing material:	Nickel-plated brass, PBT/PC
Optics material:	PMMA
Ambient temperature, operation:	-25 °C ... 55 °C
Ambient temperature, storage:	-40 °C ... 70 °C
Polarisation filter:	✓
Items supplied:	fastening nuts (2 x), Reflector P250
Signal voltage PNP HIGH/LOW:	approx. VS - 1.0 V / 0 V
Special device:	-
UL File-No.:	UL No. NRNT2.E128350 & cUL No. NRNT8.E128350

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S ³⁾ Without load ⁴⁾ Control wire open: dark-switching D.ON ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ D = outputs overcurrent and short-circuit protected

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