



Photoelectric sensors  
V18V, Photoelectric retro-reflective sensor,  
Standard optics

VL18-4N3140V



**Model Name** > VL18-4N3140V  
**Part No.** > 6035496



*Illustration may differ*

**At a glance**

- IP 69K-rated cylindrical retro-reflective photoelectric sensor in M18 stainless steel housing with 5 m sensing distance
- Available for clear material detection up to 4.5 m
- Extended temperature range: +85° C (long-term), +100°C / 15 min. (short-term)
- Touch teach-in adjustment
- All sensor materials, including the housing, LED and lens are resistant to chemicals
- IP 69K and IP 68 according to DIN 40050
- Laser-etched part numbers
- Ecolab & JohnsonDiversey certified for chemical resistance
- Resistant to all common cleaning agents and certified by independent institutes

**Your benefits**

- Simple, time-saving design ensures easy mounting, alignment and replacement
- IP 69K-rated stainless steel housing has a long service life that withstands hygienic and wash down environments, reducing maintenance time and costs
- Unique touch-teach feature and lock/ unlock functionality allow users to control who can change the sensor setting, which reduces the chances of disturbing a proven process and saves commissioning and maintenance time
- Laser-etched part numbers ensure the part numbers will not be washed off, saving maintenance time
- Polarizing filter prevents false readings on reflective objects, reducing downtime



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Housing design (light emission):	Cylindrical, straight, straight
Housing length:	83 mm
Thread diameter (housing):	M18 x 1
Optical axis:	axial
Sensing range max.:	0.1 m ... 5 m <sup>1)</sup>
Sensing range:	0.1 m ... 4.5 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Light spot (distance):	200 mm (4.5 m)
Wave length:	660 nm
Angle of dispersion:	2.5 °

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

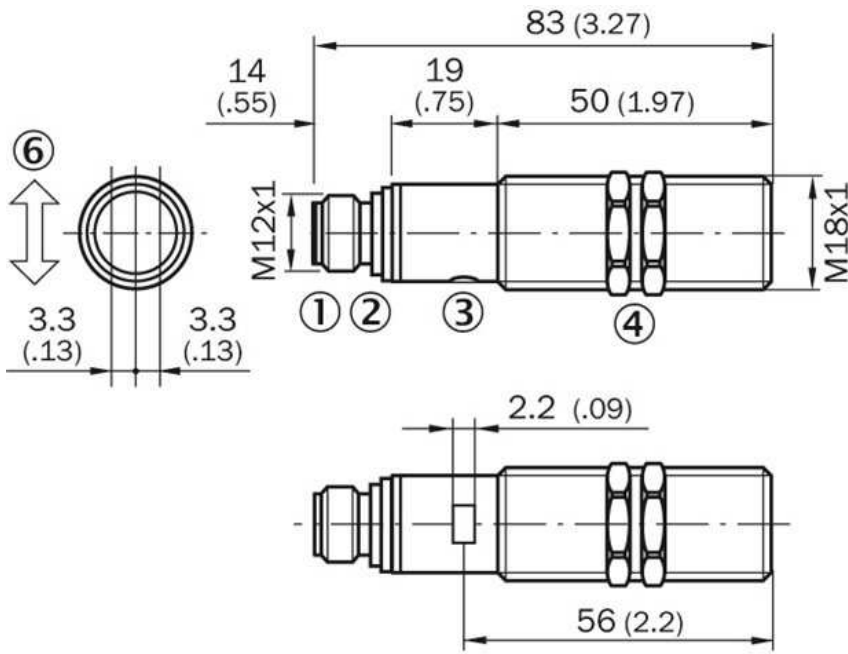
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Residual ripple:	$\leq 10\%$ <sup>2)</sup>
Power consumption:	$\leq 35\text{ mA}$ <sup>3)</sup>
Output type:	NPN, Light/dark-switching, Selectable via L/D control wire, open collector
Signal voltage NPN HIGH/LOW:	Approx. $V_S / < 2.0\text{ V}$
Output current $I_{max.}$ :	$\leq 100\text{ mA}$
Response time:	$\leq 1\text{ ms}$ <sup>4)</sup>
Switching frequency:	500 Hz <sup>5)</sup>
Electrical connection:	Connector M12, 4-pin <sup>6)</sup>
Cable material:	PPS (Griamid)
Circuit protection:::	A, B, C, D <sup>7) 8) 9) 10)</sup>
Protection class:	III
Weight:	120 g
Polarisation filter:	✓
Housing material:	Stainless steel V4A (1.4404, 316L)
Optics material:	Plan, PPS (Griamid)
Enclosure rating:	IP 67 IP 68 <sup>11)</sup> IP 69K
Ambient temperature operation:	-25 °C ... 80 °C
Ambient storage temperature:	-40 °C ... 80 °C
UL File-No.:	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

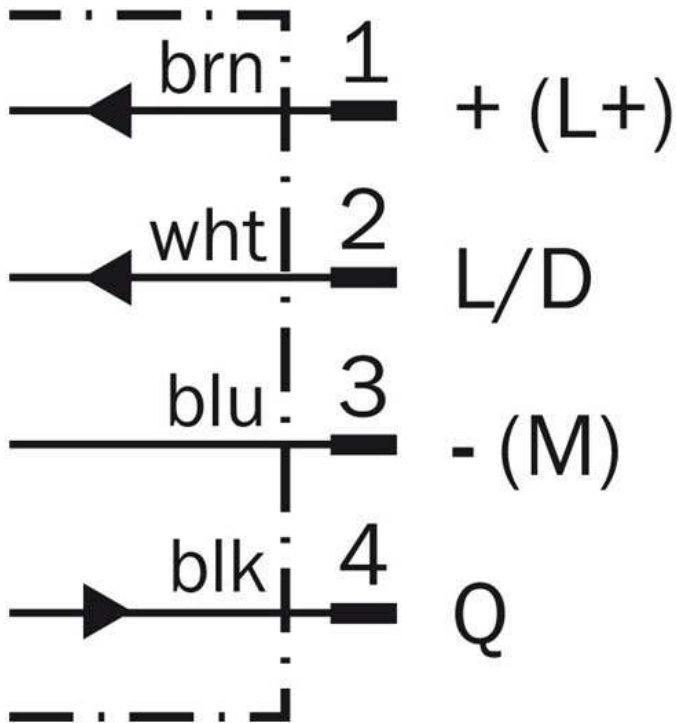
<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load, at  $V_S 30\text{ V DC}$  <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> With gold plated contact pins, PPS with FDA certificate <sup>7)</sup> A =  $V_S$  connections reverse-polarity protected <sup>8)</sup> B = interference suppression <sup>9)</sup> D = outputs overcurrent and short-circuit protected <sup>10)</sup> D = inputs and output reverse-polarity protected <sup>11)</sup> With correct mounted IP 69K connector

**Dimensional drawing**

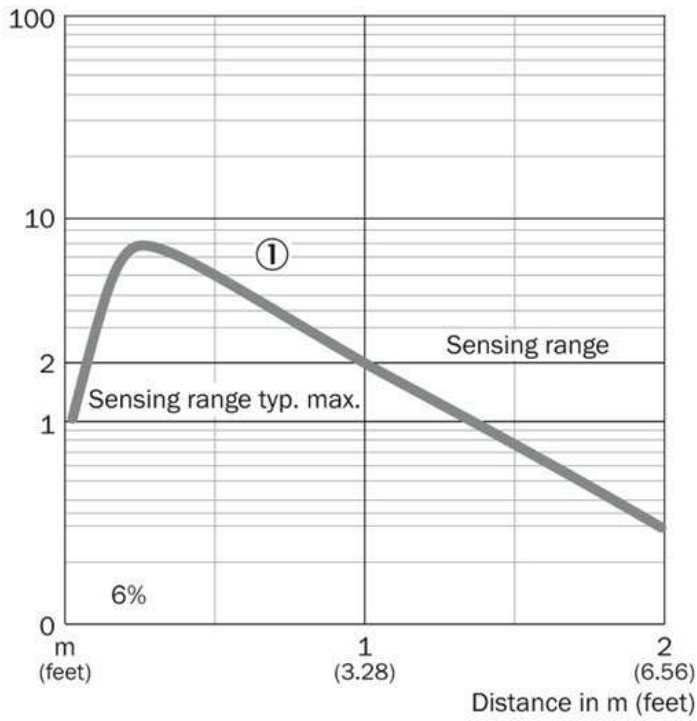


- [1] Connector M12, 4-pin
- [2] Yellow LED indicator: - lights continuously: reception signal > reserve factor 2 - b links: Reception signal < reserve factor 2 but > switching
- [3] fastening nuts (2 x); width across 24, stainless steel

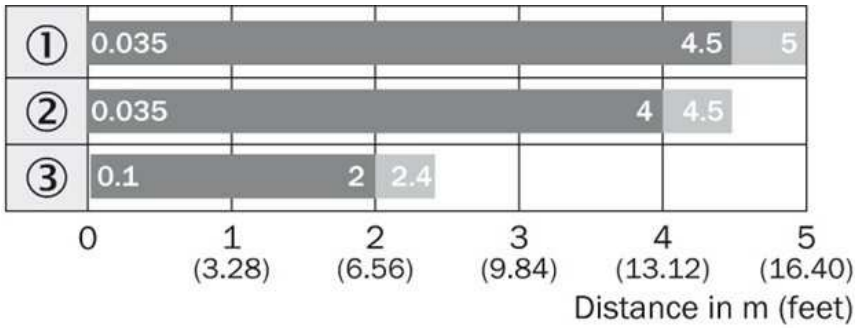
**Connection diagram**



**Characteristic curve**



**Sensing range diagram**



■ Sensing range      ■ Sensing range typ. max.

**Reflector type**

- ① PL80A
- ② C110
- ③ Reflective tape  
Diamond Grade

Connection type

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