



Photoelectric sensors  
V18V, Through-beam photoelectric sensor

VS/VE18-4N3140V



**Model Name** > VS/VE18-4N3140V  
**Part No.** > 6035500



*Illustration may differ*

**At a glance**

- IP 69K-rated cylindrical through-beam photoelectric sensor in M18 stainless steel housing with 20 m sensing distance
- Extended temperature range: +85° C (long-term), +100° C / 15 min. (short-term)
- Touch (smart) 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



**Features**

Sensor/detection principle:	Through-beam photoelectric sensor
Housing design (light emission):	Cylindrical, straight, straight
Housing length:	83 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Axial
Sensing range max.:	0 m ... 20 m
Sensing range:	0 m ... 18 m
Type of light:	Infrared light
Light source:	LED <sup>1)</sup>
Wave length:	880 nm
Light spot diameter (distance):	600 mm (15 m)
Angle of dispersion:	2.5 °

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

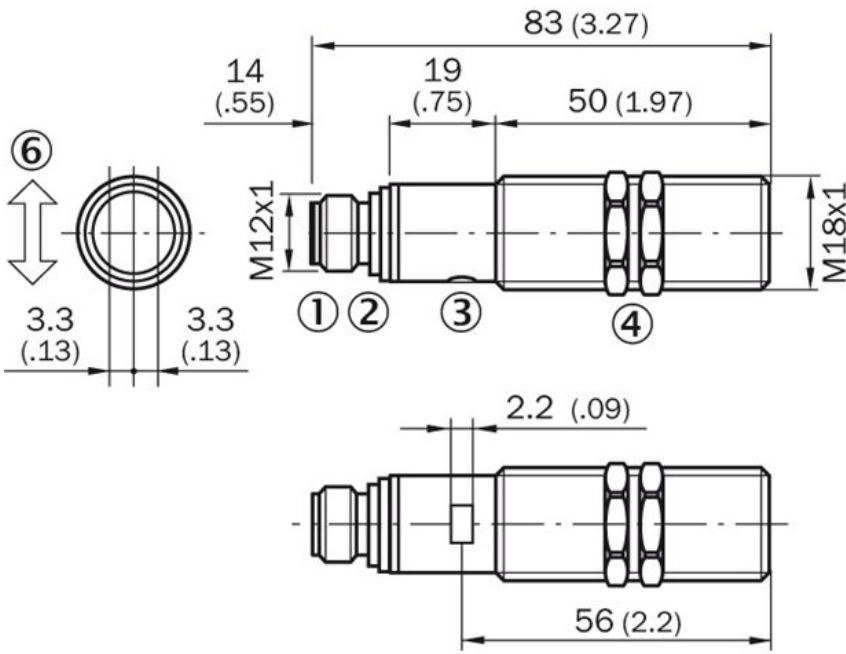
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	≤ 10 % <sup>2)</sup>
Power consumption, sender:	35 mA <sup>3)</sup>
Power consumption, receiver:	40 mA <sup>4)</sup>
Output type:	NPN, Light/dark-switching, Selectable via L/D control wire, open collector
Switching mode selector:	Selectable via L/D control wire
Signal voltage NPN HIGH/LOW:	Approx. VS / < 2.0 V
Output current I <sub>max</sub> :	≤ 100 mA
Response time:	≤ 2 ms <sup>5)</sup>
Switching frequency:	250 Hz <sup>6)</sup>
Angle of reception:	8 °
Attenuation along light beam:	≥ 20 %
Attenuation difference of object:	≥ 7.5 %
Connection type:	Connector M12, 4-pin <sup>7)</sup>
Cable material:	PPS (Griamid)
Circuit protection:::	A, B, C, D <sup>8) 9) 10) 11)</sup>
Protection class:	III
Weight:	240 g
Housing material:	Stainless steel V4A (1.4404, 316L)
Optics material:	Plan, PPS (Griamid)
Enclosure rating:	IP 67 IP 68 <sup>12)</sup> IP 69K
Test input sender off:	TE to 0 V
Ambient operating temperature:	-25 °C ... 80 °C <sup>13)</sup>
Ambient storage temperature:	-40 °C ... 80 °C
UL File-No.:	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493
Switching mode characteristic:	Open collector

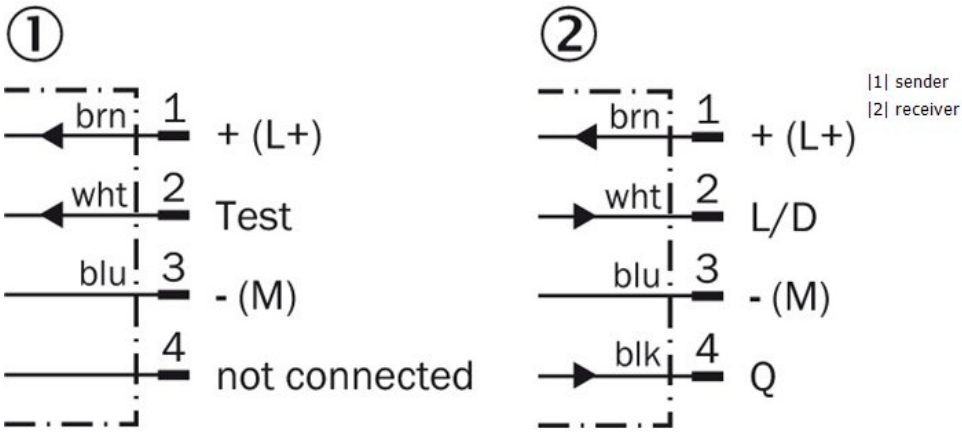
<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances <sup>3) 4)</sup> Without load, at VS 30 V DC <sup>5)</sup> Signal transit time with resistive load <sup>6)</sup> With light/dark ratio 1:1  
<sup>7)</sup> With gold plated contact pins, PPS with FDA certificate <sup>8)</sup> A = V<sub>S</sub> connections reverse-polarity protected <sup>9)</sup> B = interference suppression <sup>10)</sup> D = outputs overcurrent and short-circuit protected <sup>11)</sup> D = inputs and output reverse-polarity protected <sup>12)</sup> With correct mounted IP 69K connector <sup>13)</sup> +100 °C at max 15 minutes

**Dimensional drawing**

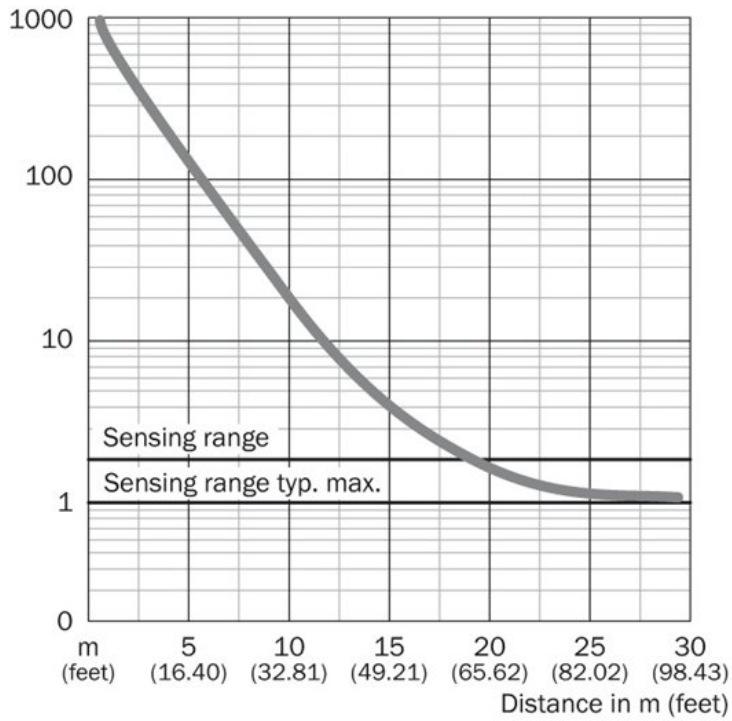


- [1] Connector M12, 4-pin
- [2] Yellow LED indicator:- lights continuously:reception signal> reserve factor 2- b links: Reception signal< reserve factor 2 but > switching
- [3] fastening nuts (2 x); width across 24, stainless steel

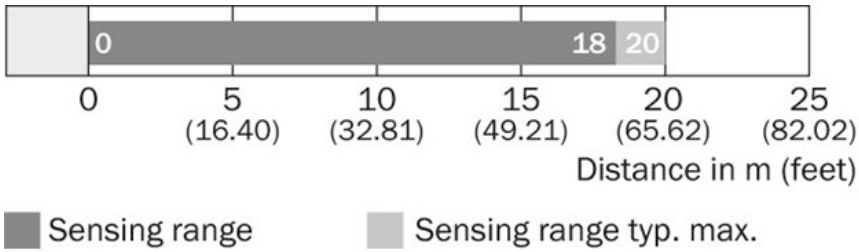
**Connection diagram**



### Characteristic curve

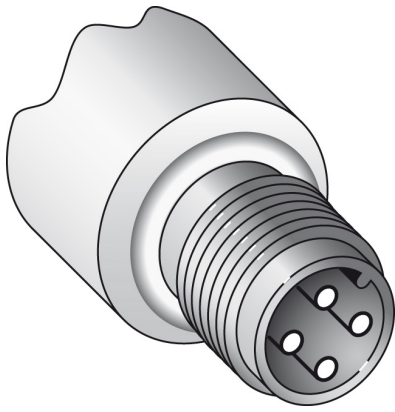


### Sensing range diagram



Connection type

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