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Photoelectric sensors
V18V, Through-beam photoelectric sensor

VS/VE18-4P3140V

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Model Name > VS/VE18-4P3140V
Part No. > 6035499

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
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 [1)]
Angle of dispersion:	2.5 °
Light spot size (distance):	Ø 600 mm (15 m)

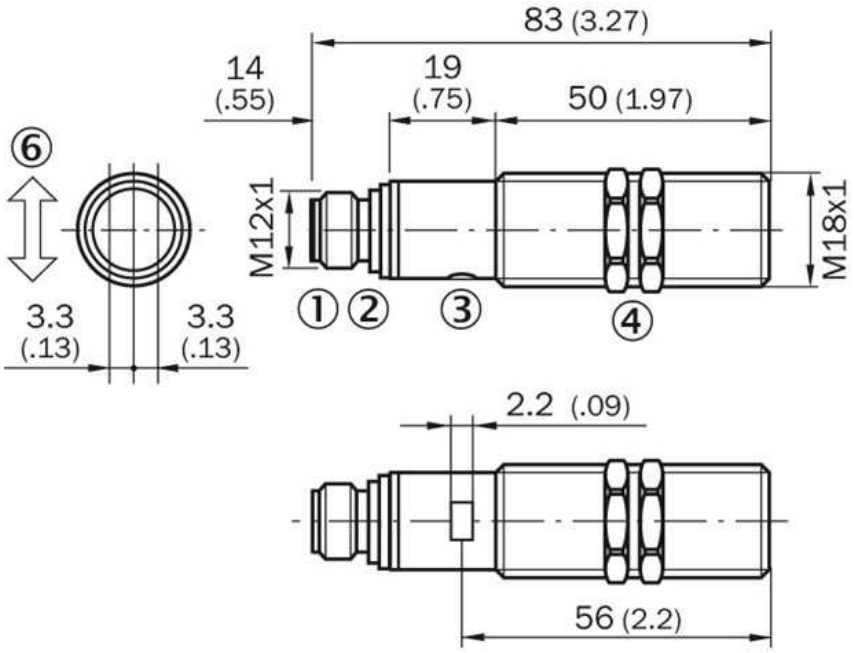
[1)] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

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

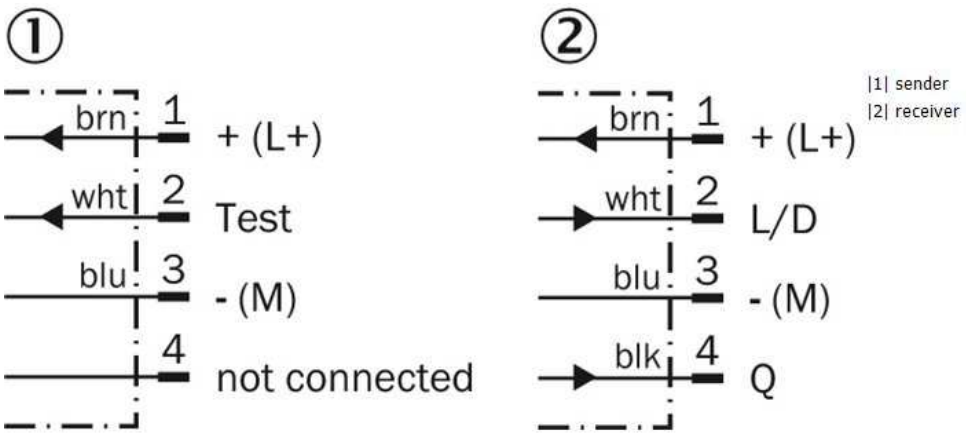
[1] Limit values [2] May not exceed or fall short of V_S tolerances [3] [4] Without load, at VS 30 V DC [5] Signal transit time with resistive load [6] With light/dark ratio 1:1 [7] With gold plated contact pins, PPS with FDA certificate [8] A = V_S connections reverse-polarity protected [9] B = interference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

Dimensional drawing



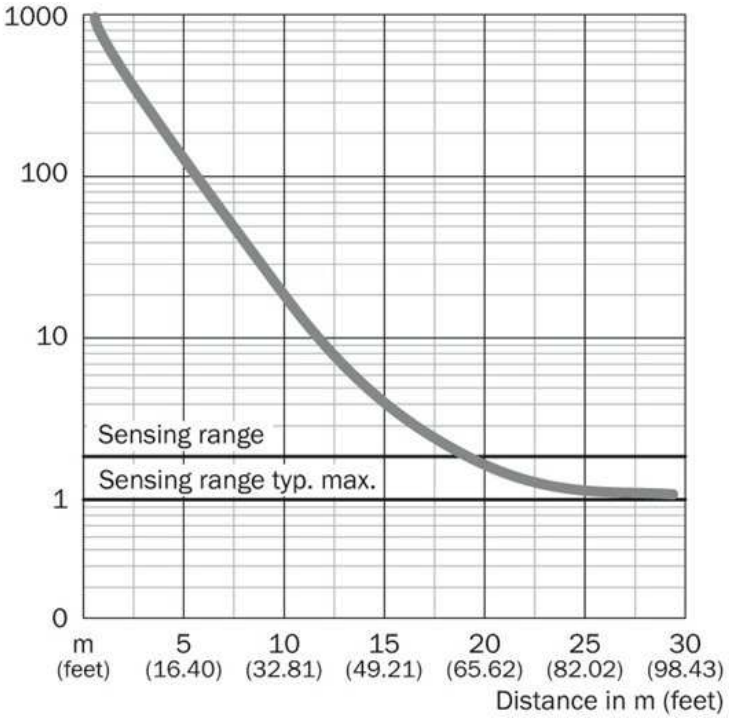
|1| Connector M12, 4-pin
|2| Yellow LED indicator:- lights
continuously:reception signal> reserve factor 2- b
links: Reception signal< reserve factor 2 but > switching
|3| fastening nuts (2 x); width across 24, stainless steel

Connection diagram

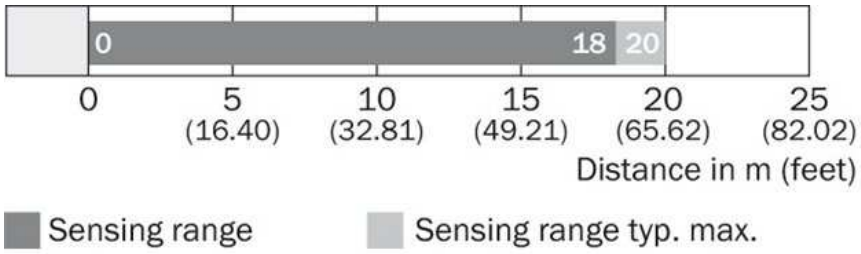


|1| sender
|2| receiver

Characteristic curve



Sensing range diagram



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