



Photoelectric sensors
V18V, Photoelectric proximity sensor,
Background suppression

VTB18-4N1240V



Model Name > [VTB18-4N1240V](#)
Part No. > [6035494](#)



Illustration may differ

At a glance

- IP 69K-rated cylindrical photoelectric sensor with background suppression in M18 stainless steel housing with 140 mm sensing distance
- Resistant to all common cleaning agents and certified by independent institutes
- 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

Your benefits

- Simple, time-saving design and easy mounting, alignment and replacement
- Precise background suppression ensures reliable detection of objects regardless of color
- 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:	Photoelectric proximity sensor, Background suppression
Housing design (light emission):	Cylindrical, straight, straight
Housing length:	83 mm
Thread diameter (housing):	M18 x 1
Sensing range max.:	0 mm ... 140 mm ¹⁾
Sensing range:	0 mm ... 130 mm
Type of light:	Visible red light
Light source:	LED ²⁾
Light spot (distance):	15 mm (130 mm)
Wave length:	660 nm
Adjustment of operating distance:	Manual, via Touch-Teach-in

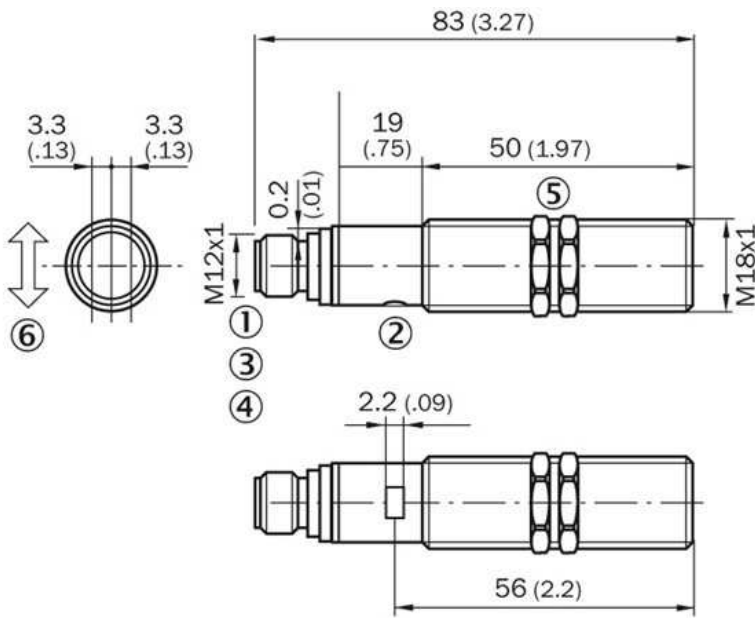
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 10 % ²⁾
Power consumption:	≤ 50 mA ³⁾
Output type:	NPN, Light/dark-switching, Selectable via L/D control wire, open collector
Signal voltage NPN HIGH/LOW:	Approx. $V_S / < 2.0$ V
Output current I _{max} :	≤ 100 mA ⁴⁾
Response time:	≤ 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Electrical connection:	Connector M12, 4-pin ⁶⁾
Cable material:	PPS (Griamid)
Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	120 g
Housing material:	Stainless steel V4A (1.4404, 316L)
Optics material:	Plan, PPS (Grilamid)
Enclosure rating:	IP 67 IP 68 ¹¹⁾ IP 69K ¹¹⁾
Ambient temperature operation:	-25 °C ... 80 °C ¹²⁾
Ambient storage temperature:	-40 °C ... 80 °C
UL File-No.:	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

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

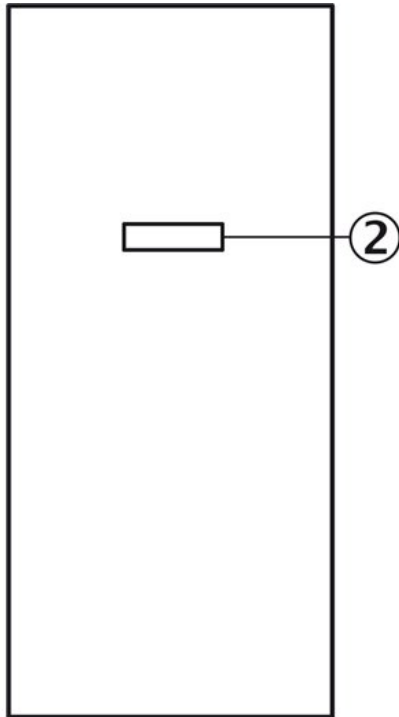
Dimensional drawing



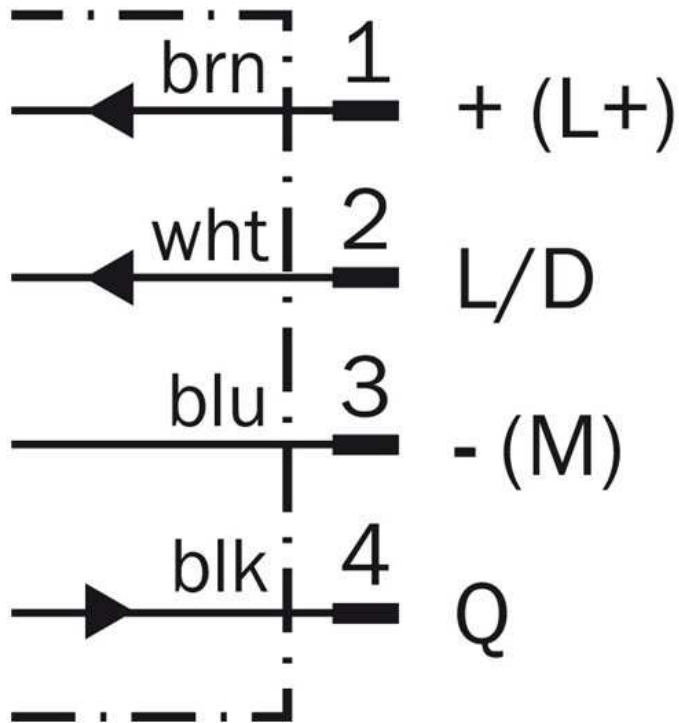
- |1| Connector M12, 4-pin
- |2| Sensing range adjustment: Touch-Teach-In
- |3| Status indicator LED, green: signaling Touch-Teach-in
- |4| Status indicator LED,
yellow: Status of received light beam
- |5| fastening nuts (2 x); width across 24, stainless steel
- |6| Standard direction of the material being scanned

All dimensions in mm (inch)

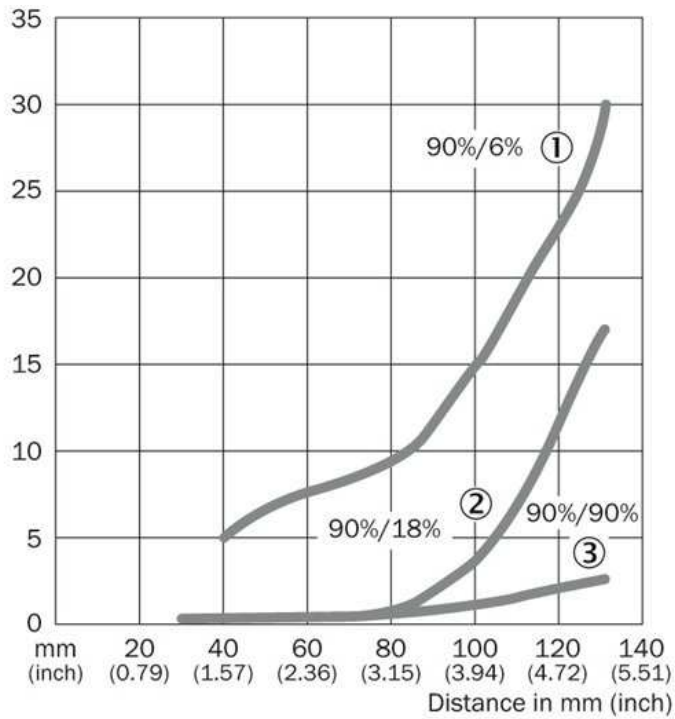
Adjustments possible



Connection diagram



Characteristic curve



Connection type



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