



Photoelectric sensors V18V, Photoelectric proximity sensor, energetic

VTF18-4P1240V



Model Name > VTF18-4P1240V
Part No. > 6035487



Illustration may differ

At a glance

- IP 69K-rated cylindrical fixed-focus photoelectric sensor in M18 stainless steel housing with 100 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 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:	Photoelectric proximity sensor, energetic
Housing design (light emission):	Cylindrical, straight, straight
Housing length:	83 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Axial
Sensing range max.:	0 mm ... 110 mm ¹⁾
Sensing range:	5 mm ... 100 mm
Type of light:	Visible red light
Light source:	LED ²⁾
Light spot (distance):	15 mm (100 mm)
Wave length:	660 nm
Adjustment of operating distance:	Manual, via Touch-Teach-in
Angle of dispersion:	4.5 °

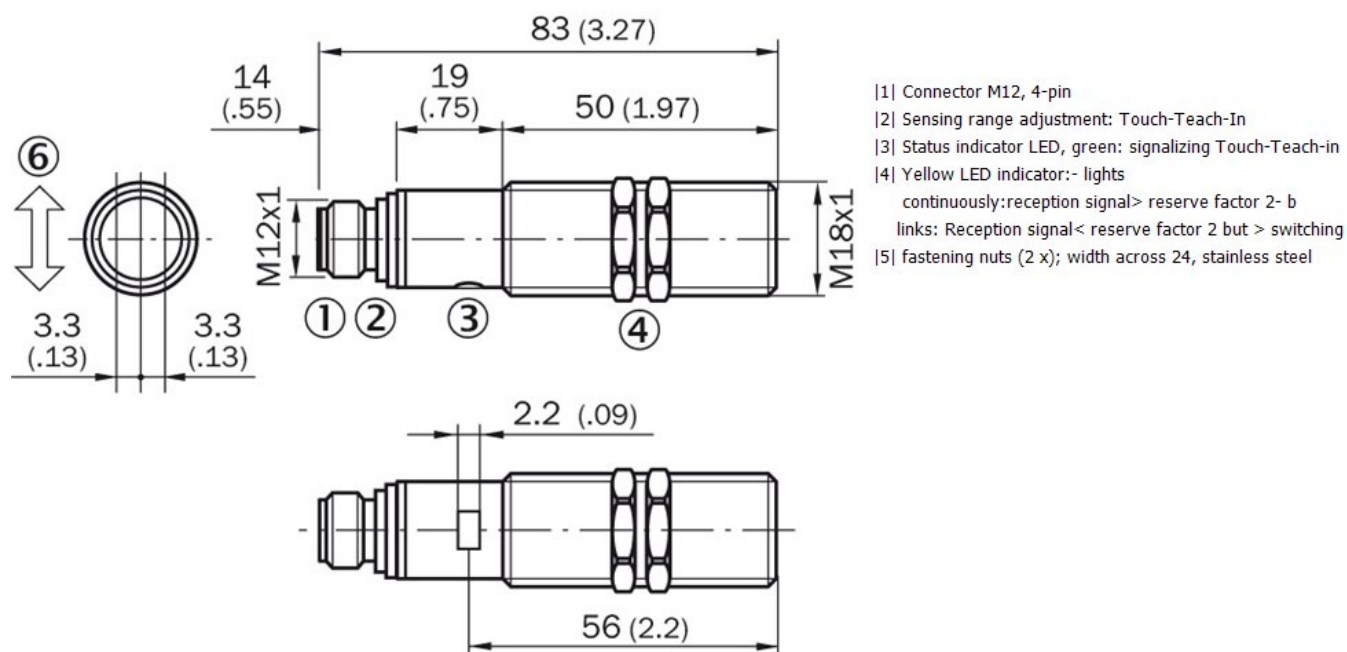
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

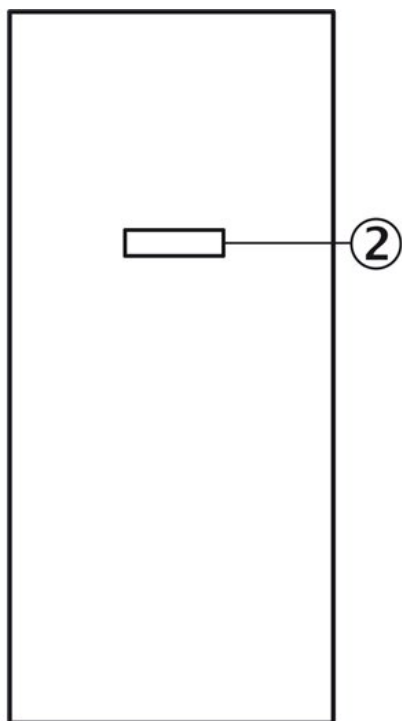
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 10\%$ ²⁾
Power consumption:	$\leq 35\text{ mA}$ ³⁾
Output type:	PNP, Light/dark-switching, Selectable via L/D control wire, open collector
Signal voltage PNP HIGH/LOW:	Approx. VS - 2.0 V / 0 V
Output current I _{max} :	$\leq 100\text{ mA}$ ⁴⁾
Response time:	$\leq 1\text{ ms}$ ⁴⁾
Switching frequency:	500 Hz ⁵⁾
Connection type:	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 IP 69K ¹¹⁾
Ambient operating temperature:	-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 VS 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

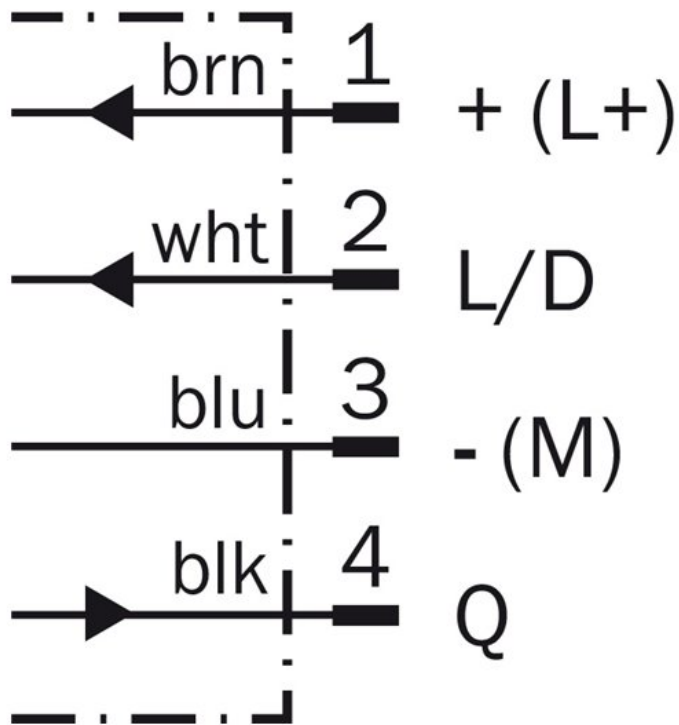
Dimensional drawing



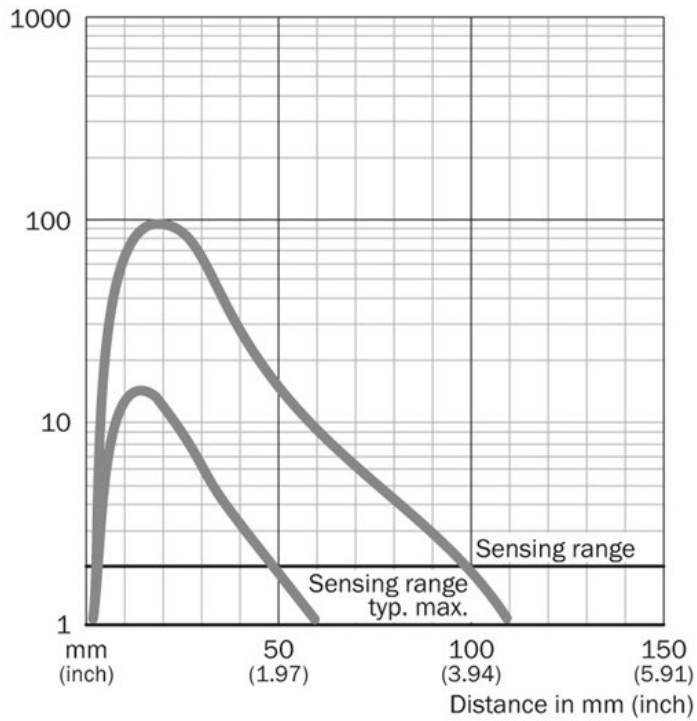
Adjustments possible



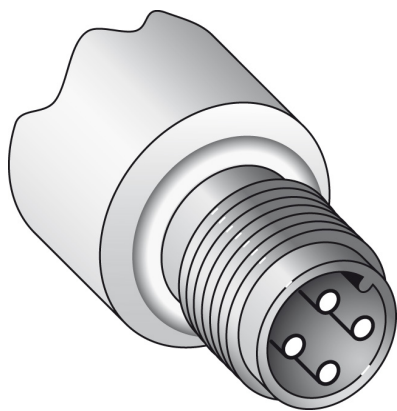
Connection diagram



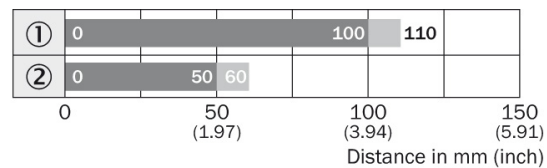
Characteristic curve



Connection type



Sensing range diagram



■ Sensing range ■ Sensing range typ. max.

- ① Sensing range on white, 90 % remission
- ② Sensing range on gray, 18 % remission

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