



Photoelectric sensors
MH15V, Photoelectric proximity sensor,
Background suppression

MHTB15-P3367V



Model Name > [MHTB15-P3367V](#)
Part No. > [1046537](#)



Illustration may differ

At a glance

- Long sensing distance as 300 mm
- Stainless steel housing (316L/1.4404) with IP 69K, IP 67 enclosure rating
- Resistant to cleaning agents according to ECOLAB and JohnsonDiversey
- Superior background suppression technology based on OES3 ASIC technology, with second LED emitter
- PinPoint LED with short, highly visible light spot
- Indicator LED shows active switching output and operating reserve
- Simple adjustment via potentiometer

Your benefits

- Field-tested, compact, stainless steel IP 69K design of the MH15V reduces downtime and replacement costs
- Photoelectric proximity sensor with best-in-class background suppression reduces product loss and increases throughput
- Shortest M18 housing on the market enables installation in tight spaces, which reduces manufacturing costs
- Light spot visibility and light spot geometry via PinPoint LED technology simplify alignment
- Reliable object detection, even in difficult environments reduces miscount and increases machine throughput
- Flush mounting reduces setup time and prevents obstructions to material flow on conveyor sections



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Housing design (light emission):	Cylindrical, straight
Housing length:	52.9 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Axial
Sensing range max.:	3 mm ... 300 mm ¹⁾
Sensing range:	3 mm ... 300 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Wave length:	650 nm
Adjustment:	Potentiometer, 270°
Light spot size (distance):	Ø 7 mm (100 mm)

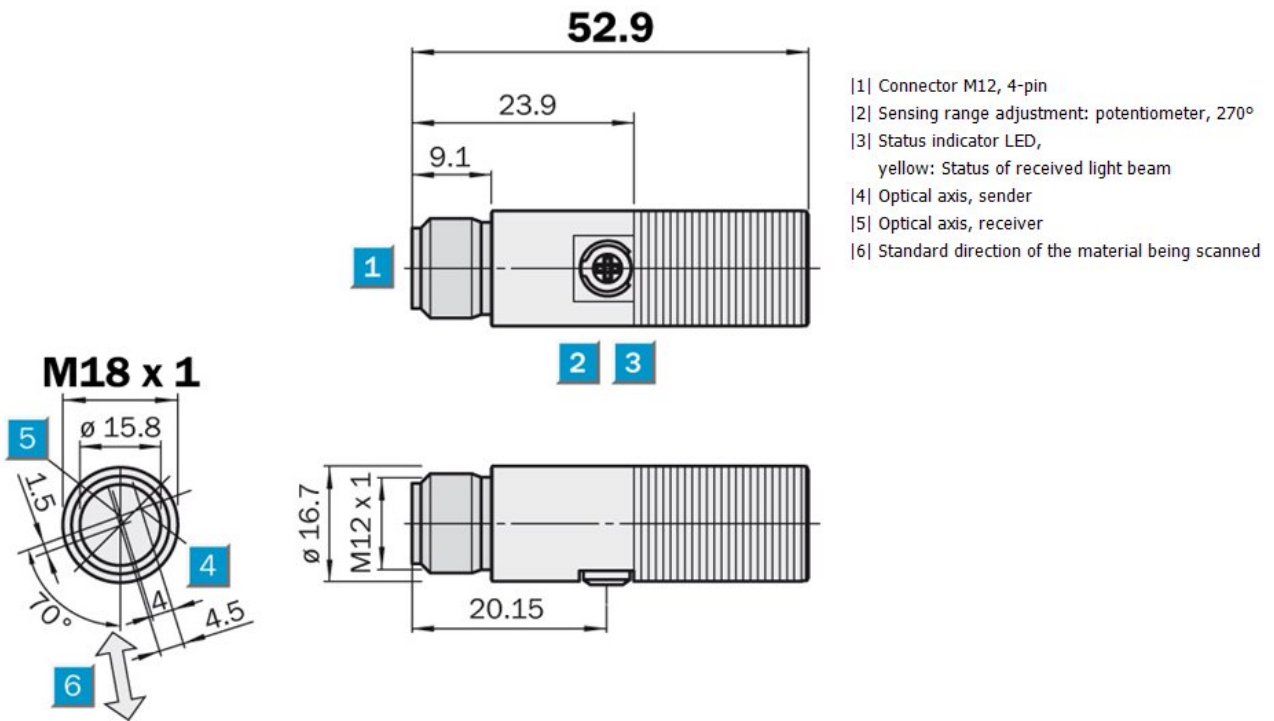
1) Object with 90 % reflectance (referred to standard white DIN 5033) 2) Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

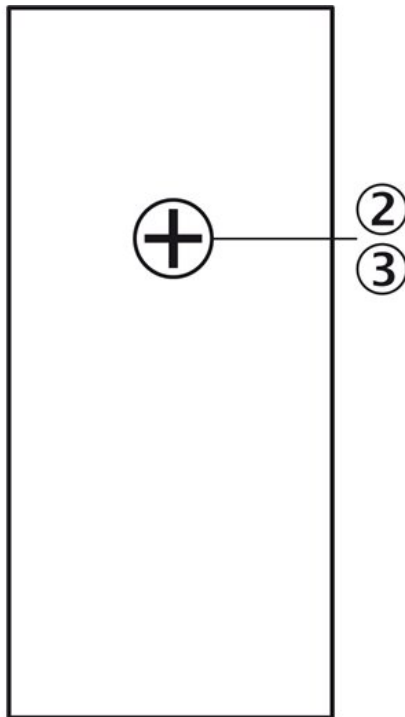
Supply voltage:	10 V DC ... 30 V ¹⁾
Ripple:	$\leq 5\text{ Vpp}$ ²⁾
Power consumption:	$\leq 30\text{ mA}$ ³⁾
Output type:	PNP
Switching mode:	Light switching
Signal voltage PNP HIGH/LOW:	$U_v - (< 2,9\text{ V}) / \text{ca. } 0\text{ V}$
Output current I_{max} :	$\leq 100\text{ mA}$ ⁴⁾
Response time:	$\leq 0.72\text{ ms}$ ⁵⁾
Switching frequency:	700 Hz ⁶⁾
Connection type:	Connector M12, 4-pin ⁷⁾
Circuit protection:::	A, C, D ^{8) 9) 10)}
Protection class:	III
Weight:	50 g
Front screen heating:	-
Housing material:	Stainless steel, Stainless steel V4A (1.4404, 316L)
Optics material:	PMMA
Enclosure rating:	IP 67 IP 68 IP 69K
Ambient operating temperature::	$-25\text{ °C} \dots 55\text{ °C}$ ^{11) 12)}
Ambient storage temperature:	$-25\text{ °C} \dots 70\text{ °C}$
UL File No.:	NRKH.E189383 & NRKH7.E189383

1) Limit values 2) May not exceed or fall short of V_S tolerances 3) Without load 4) Reduced output current at ambient operating temperatures $> 50\text{ °C}$: $I_{\text{Amax}} = 50\text{ mA}$
5) Signal transit time with resistive load 6) With light/dark ratio 1:1 7) With gold plated contact pins 8) $A = V_S$ connections reverse-polarity protected 9) C = interference suppression 10) D = outputs overcurrent and short-circuit protected 11) Use at higher ambient temperatures reduce the sender LED lifetime 12) $+100\text{ °C}$ for 15 minutes

Dimensional drawing

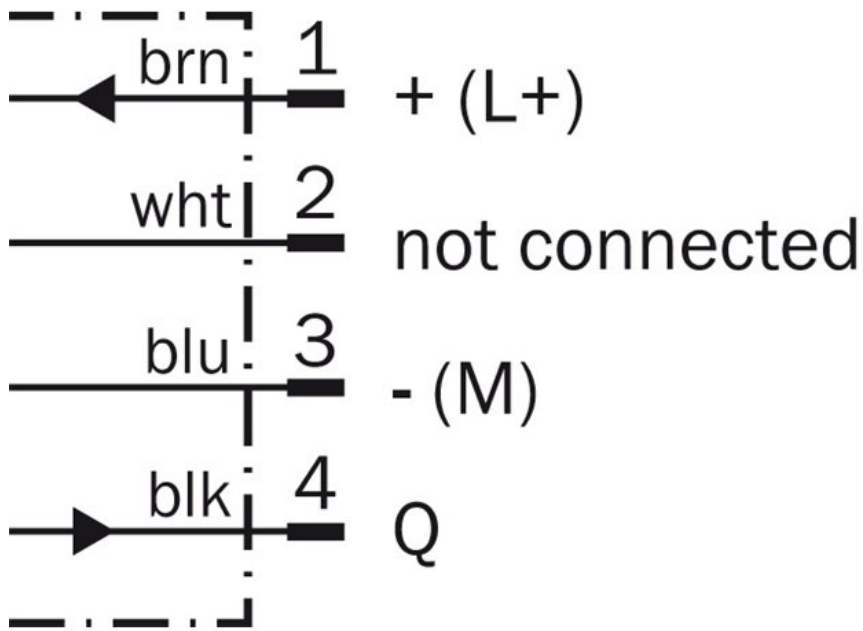


Adjustments possible

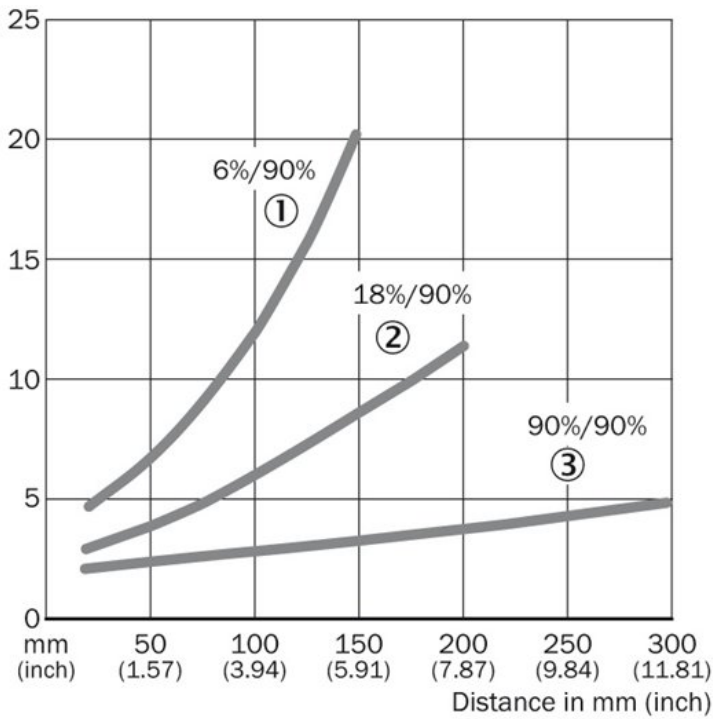


- [2] Sensitivity adjustment 270°
- [3] Yellow LED indicator, -lights continuously: Light reception > reserve factor 1,3 -blinks: Light reception > reserve factor 1,3 but light reception > switching threshold

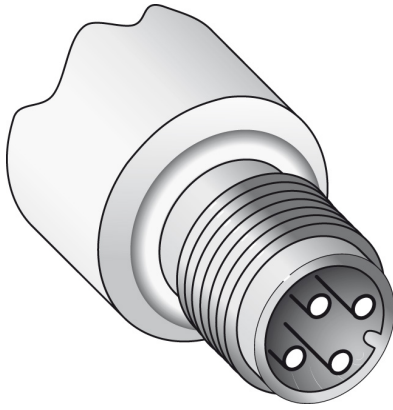
Connection diagram



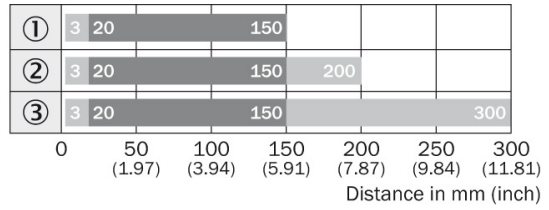
Characteristic curve



Connection type



Sensing range diagram



■ Sensing range ■ Sensing range typ. max.

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

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