



Photoelectric sensors  
MH15, Photoelectric proximity sensor,  
Background suppression

MHTB15-N2267



**Model Name** > [MHTB15-N2267](#)  
**Part No.** > [1047155](#)



*Illustration may differ*

**At a glance**

- Long sensing distance up to 300 mm
- Shortest M18 sensor housing on the market
- Superior background suppression technology based on OES3 ASIC technology, with second LED emitter
- Indicator LED shows active switching output and operating reserve
- Simple adjustment via potentiometer
- Mounting accessories are included

**Your benefits**

- Photoelectric proximity sensor with best-in-class background suppression, reducing product loss and increasing throughput
- Shortest M18 housing on the market enables installation in tight spaces and reduces manufacturing costs
- Light spot visibility and light spot geometry via PinPoint LED technology simplifies alignment
- Reliable object detection, even in difficult environments reduces miscount and increases machine throughput
- Compatible with many competitor models, making it easy to install and commission
- 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:	35.8 mm
Thread diameter (housing):	M18 x 1
Optical axis:	axial
Sensing range max.:	3 mm ... 300 mm <sup>1)</sup>
Sensing range:	3 mm ... 300 mm
Type of light:	Visible red light
Light source:	PinPoint LED <sup>2)</sup>
Wave length:	650 nm
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 7 mm (100 mm)

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

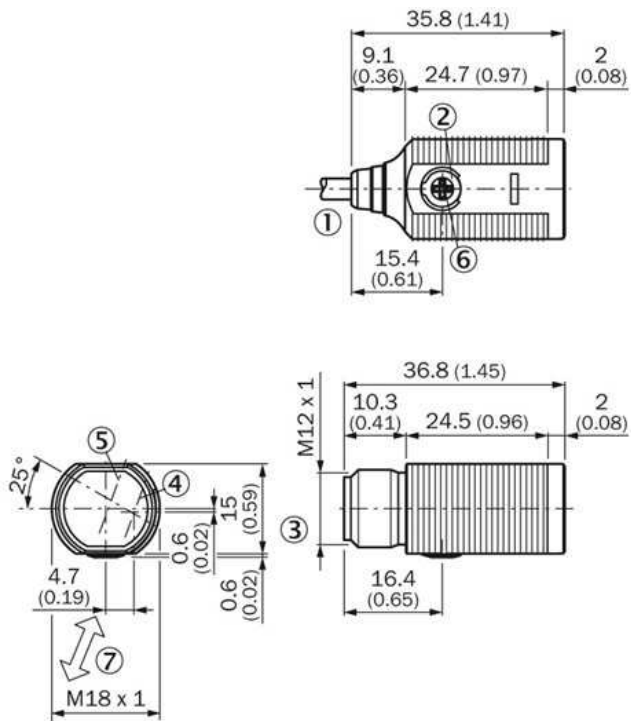
## Mechanics/electronics

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Supply voltage:	10 V DC ... 30 <sup>1)</sup>
Ripple:	$\leq 5 V_{pp}$ <sup>2)</sup>
Power consumption:	30 <sup>3)</sup>
Output type:	NPN
Switching mode:	Dark switching
Signal voltage NPN HIGH/LOW:	$U_V < 2,9 V$
Output current I <sub>max.</sub> :	100 <sup>4)</sup>
Response time:	$\leq 0.72 ms$ <sup>5)</sup>
Switching frequency:	700 <sup>6)</sup>
Connection type:	Cable, 3-wire, 2 m <sup>7)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Cable diameter:	3.7 mm
Circuit protection:::	A, C, D <sup>8) 9) 10)</sup>
Protection class:	III
Weight:	90 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67 IP 69K
Ambient operating temperature:	-25 ... 55 °C
Ambient storage temperature:	-25 ... 70 °C
UL File No.:	NRKH.E189383 & NRKH7.E189383

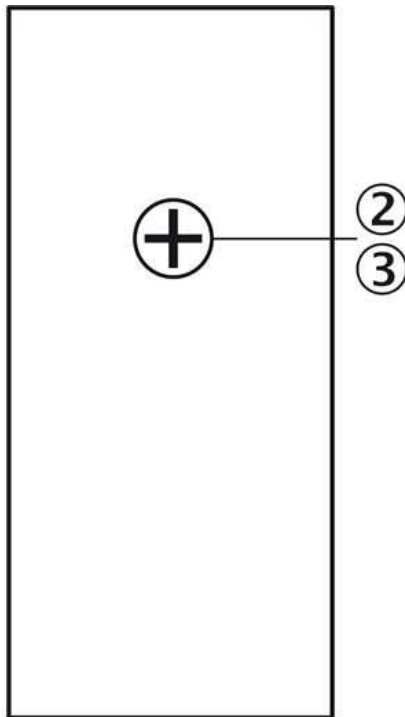
- <sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Reduced output current at ambient operating temperatures > 50 °C: I<sub>Amax</sub> = 50 mA  
<sup>5)</sup> Signal transit time with resistive load <sup>6)</sup> With light/dark ratio 1:1 <sup>7)</sup> Do not bend below 0 °C <sup>8)</sup> A =  $V_S$  connections reverse-polarity protected <sup>9)</sup> C = interference suppression <sup>10)</sup> D = outputs overcurrent and short-circuit protected

**Dimensional drawing**



- |1| Connection cable 2 m
- |2| Status indicator LED,  
yellow: Status of received light beam
- |3| Sensing range adjustment: potentiometer, 270°
- |5| Optical axis sender
- |6| Standard direction of the material being scanned

**Adjustments possible**

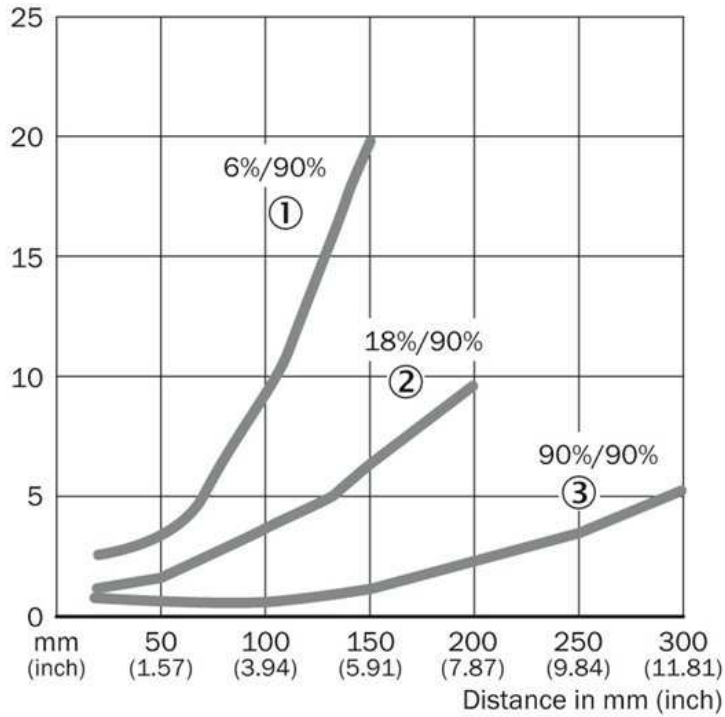


- |2| Sensitivity adjustment 270°
- |3| Yellow LED indicator,-lights continuously: Light  
reception> reserve factor 1,3-blinks: Light recepti  
on >reserve factor 1,3but light reception>switching thres

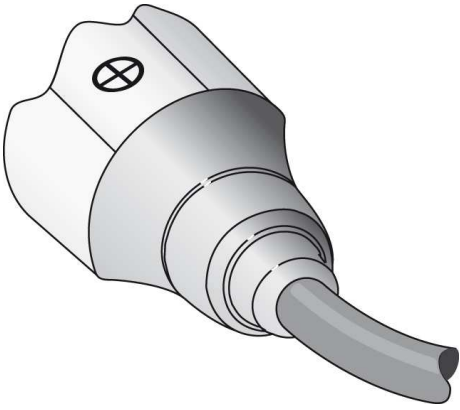
Connection diagram



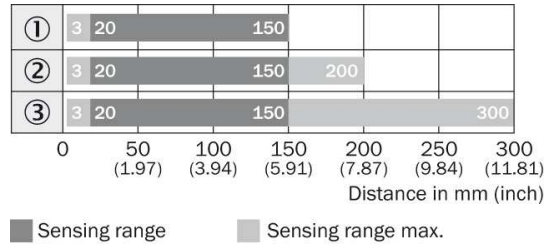
Characteristic curve



## Connection type



## Sensing range diagram



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