



Photoelectric sensors
MH15, Photoelectric proximity sensor,
Background suppression

MHTB15-N2267



SICK
Sensor Intelligence.

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 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)

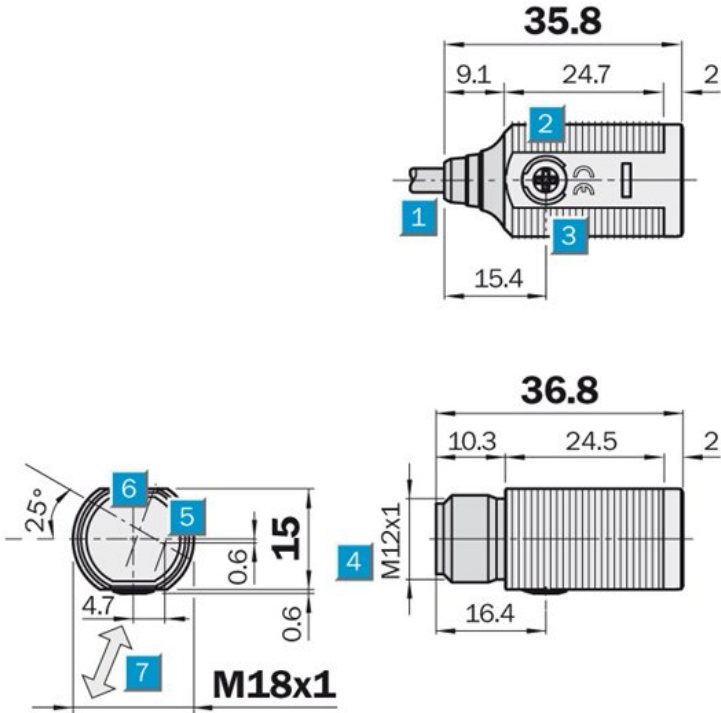
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 ¹⁾
Ripple:	$\leq 5 V_{pp}$ ²⁾
Power consumption:	30 ³⁾
Output type:	NPN
Switching mode:	Dark-switching
Signal voltage NPN HIGH/LOW:	$U_v / < 2,9 V$
Output current I _{max} :	100 ⁴⁾
Response time:	$\leq 0.72 ms$ ⁵⁾
Switching frequency:	700 ⁶⁾
Connection type:	Cable, 3-wire, 2 m ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Cable diameter:	3.7 mm
Circuit protection:::	A, C, D ⁸⁾ ⁹⁾ ¹⁰⁾
Protection class:	III
Weight:	90 g
Polarisation filter:	-
Front screen heating:	-
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

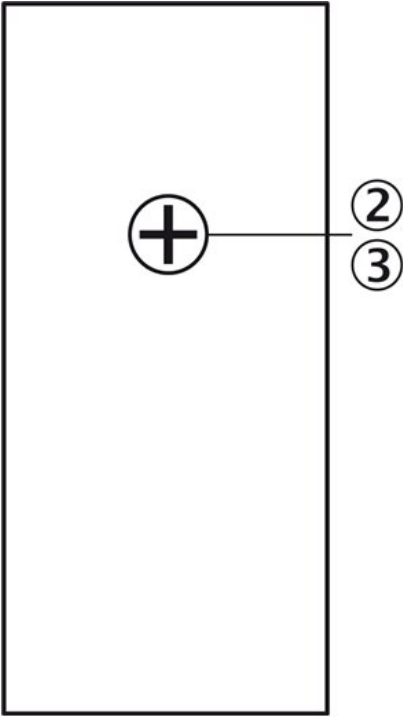
- ¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Reduced output current at ambient operating temperatures > 50 °C: I_{Amax} = 50 mA
⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ Do not bend below 0 °C ⁸⁾ $A = V_S$ connections reverse-polarity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

Dimensional drawing



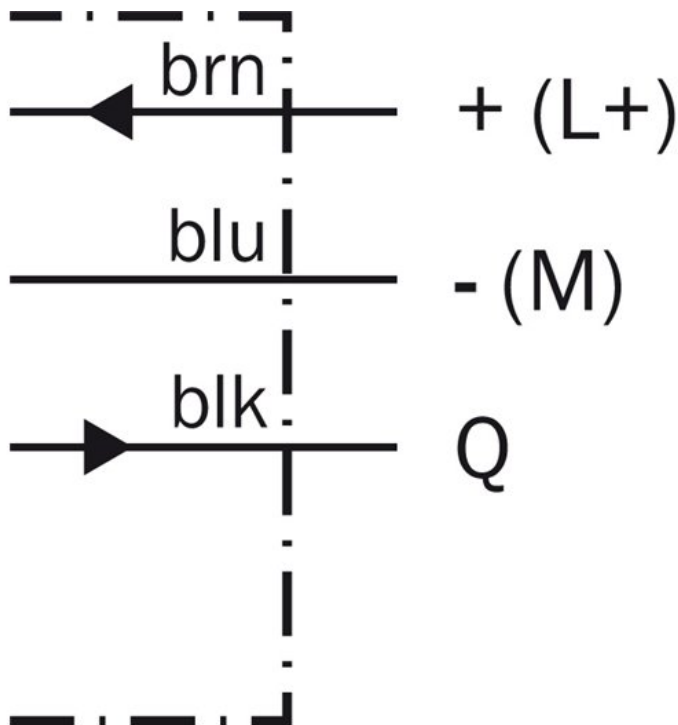
- |1| Connection cable 2 m
- |2| Status indicator LED,
yellow: Status of received light beam
- |3| Sensing range adjustment: potentiometer, 270°
- |5| Optical axis sender
- |6| Standard direction of the material being scanned

Adjustments possible

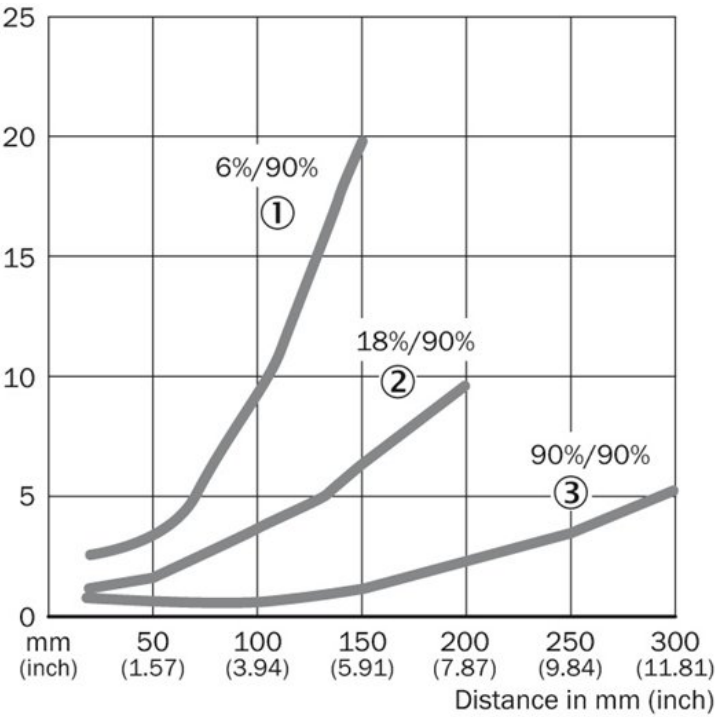


- |2| Sensitivity adjustment 270°
- |3| Yellow LED indicator,-lights continuously: Light
reception> reserve factor 1,3-blinks: Light recepti
on >reserve factor 1,3but light reception>switching thres

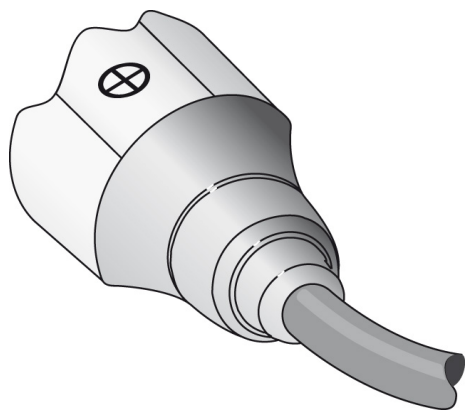
Connection diagram



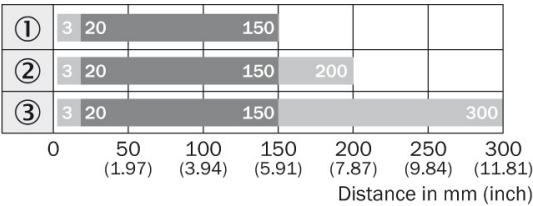
Characteristic curve



Connection type



Sensing range diagram



■ 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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