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DATA SHEET

MHTB15-P3367V

MH15V
Photoelectric sensors

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Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

MHTB15-P3367V

ORDERING INFORMATION

Type	part no.
MHTB15-P3367V	1046537

Further device versions and accessories at www.sick.com/MH15V

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	18 mm x 18 mm x 52.9 mm
Housing design (light emission)	Cylindrical
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⁾
Light spot size (distance)	Ø 7 mm (100 mm)
Wave length	650 nm
Adjustment	Potentiometer, 270° (Sensing range) Potentiometer, 270°
Special applications	Hygienic and washdown zones

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

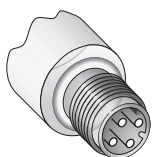
²⁾ Average service life: 100,000 h at T_u = +25 °C.

MECHANICS/ELECTRONICS

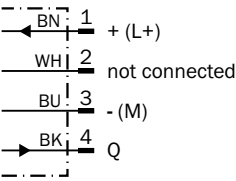
Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	30 mA ³⁾
Switching output	PNP
Switching mode	Light switching
Signal voltage PNP HIGH/LOW	U _v - (< 2,9 V) / ca. 0 V
Output current I _{max}	≤ 100 mA ⁴⁾
Response time	≤ 0.72 ms ⁵⁾
Switching frequency	700 Hz ⁶⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	50 g
Housing material	Stainless steel, Stainless steel V4A (1.4404, 316L)
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP68 IP69K
Ambient operating temperature	-25 °C ... +55 °C ¹⁰⁾
Ambient temperature, storage	-25 °C ... +70 °C
UL File No.	NRKH.E189383 & NRKH7.E189383

¹⁾ Limit values.²⁾ May not exceed or fall below U_i 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⁾ A = V_s connections reverse-polarity protected.⁸⁾ C = interference suppression.⁹⁾ D = outputs overcurrent and short-circuit protected.¹⁰⁾ Use at higher ambient temperatures reduce the sender LED lifetime .**SAFETY-RELATED PARAMETERS**

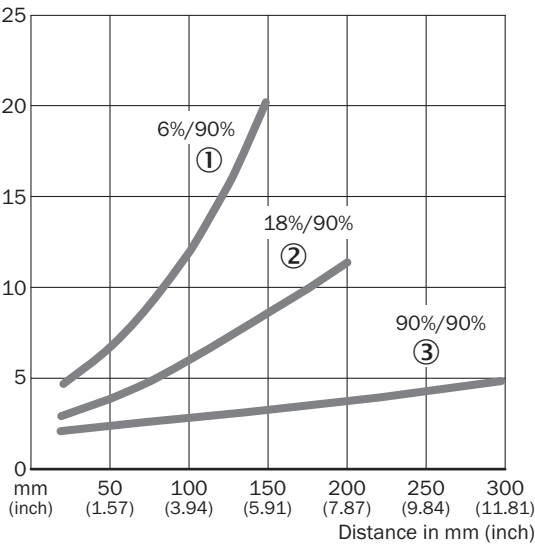
MTTF _D	1,242 years
DC _{avg}	0 %

CONNECTION TYPE

CONNECTION DIAGRAM CD-066

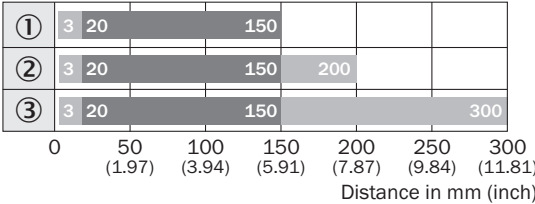


CHARACTERISTIC CURVE MHTB15V



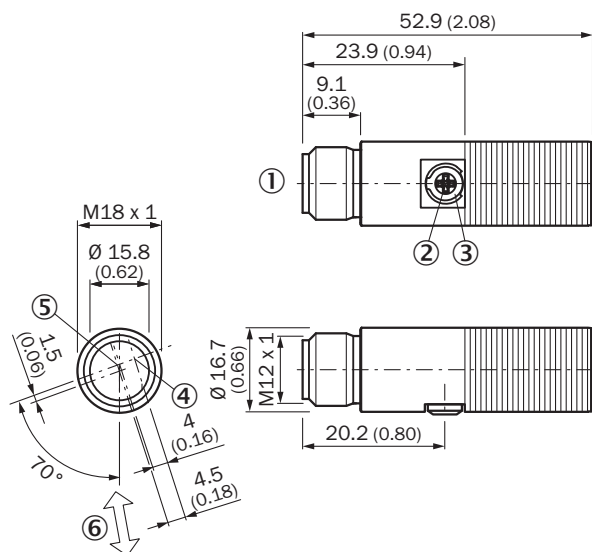
- ① sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ sensing range on white, 90% remission

SENSING RANGE DIAGRAM



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

DIMENSIONAL DRAWING MHTB15V



Dimensions in mm (inch)

- ① M12 male device connector, 4-pin
- ② Sensing range adjustment: potentiometer, 270°
- ③ LED indicator yellow: Status of received light beam
- ④ Optical axis, sender
- ⑤ Optical axis, receiver
- ⑥ Standard direction of the material being detected

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1046537



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SICK AT A GLANCE

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