MHTB15-P3367V

MH15V

SICK
Sensor Intelligence.

CYLINDRICAL PHOTOELECTRIC SENSORS

MHTB15-P3367V | MH15V
CYLINDRICAL PHOTOELECTRIC SENSORS

Ordering information

Type	Part no.
MHTB15-P3367V	1046537

Other models and accessories ➜ www.sick.com/MH15V

Illustration may differ

CE

ECOLAB

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
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 % reflectance (referred to 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	$\leq 5\ V_{pp}$ [2]
Power consumption	30 mA [3]
Switching output	PNP
Switching mode	Light switching
Signal voltage PNP HIGH/LOW	Uv - (< 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 storage temperature	–25 °C ... +70 °C
UL File No.	NRKH.E189383 & NRKH7.E189383

[1] Limit values.

[2] May not exceed or fall below U_v tolerances.

[3] Without load.

[4] Reduced output current at ambient operating temperatures > 50 °C: IAmax = 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%

Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904

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ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

Cd-066

BN	1	+ (L+)
WH	2	not connected
BU	3	- (M)
BK	4	Q
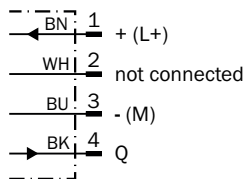
Characteristic curve

MHTB15V
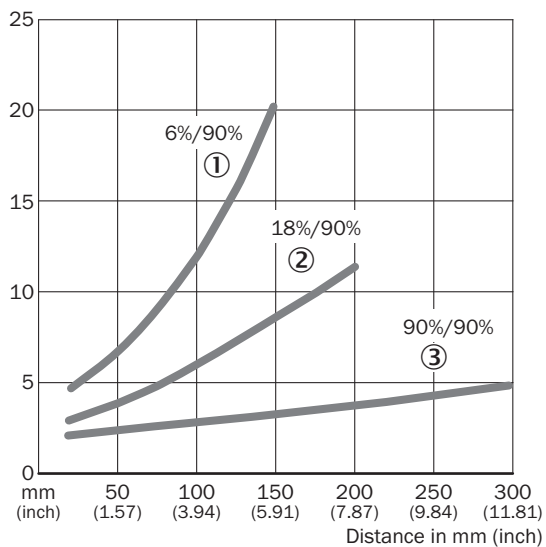
① 6%/90%
② 18%/90%
③ 90%/90%

Distance in mm (inch)
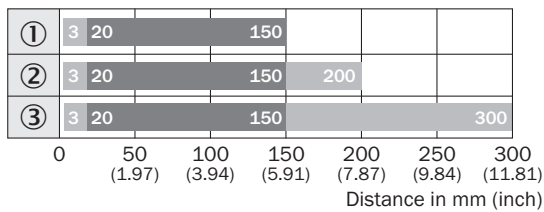
① Sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
③ Sensing range on white, 90% remission

Sensing range diagram

①	3 20 150	
②	3 20 150	200
③	3 20 150	300

0   50 (1.97)   100 (3.94)   150 (5.91)   200 (7.87)   250 (9.84)   300 (11.81)
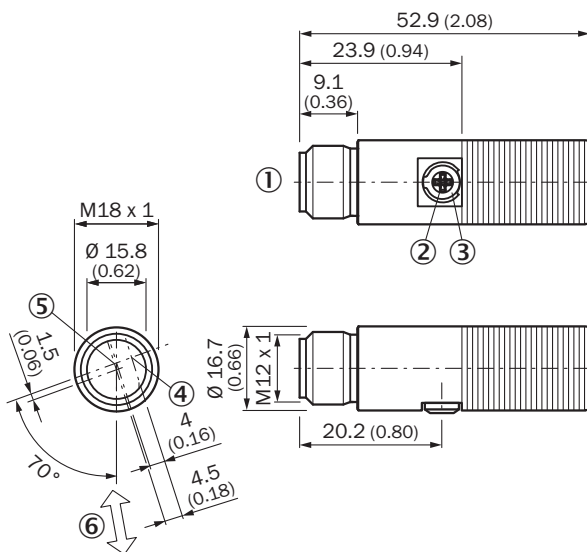
Distance in mm (inch)

■ 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 (Dimensions in mm (inch))

MHTB15V

52.9 (2.08)
23.9 (0.94)
9.1 (0.36)

M18 x 1
Ø 15.8 (0.62)
1.5 (0.06)
70°
Ø 16.7 (0.66)
4 (0.16)
4.5 (0.18)
M12 x 1
20.2 (0.80)

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

Recommended accessories

Other models and accessories ➜ www.sick.com/MH15V

Brief description	Type	Part no.
Plug connectors and cables		
Head A: female connector, M12, 4-pin, straight Head B: Flying leads Cable: PVC, unshielded, 5 m This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2)	DOL-1204-G05MNI	6052615

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SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

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