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DATA SHEET

MHL15-P3336V

MH15V
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

MHL15-P3336V

ORDERING INFORMATION

Type	part no.
MHL15-P3336V	1043815

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

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Dual lens
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.	0.035 m ... 5 m ¹⁾
Sensing range	0.035 m ... 3.5 m ¹⁾
Focus	Approx. 1.5°
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 80 mm (3.5 m)
Angle of dispersion	Approx. 1.5°
Wave length	650 nm
Adjustment	None
Special applications	Hygienic and washdown zones

¹⁾ Reflector PL80A.

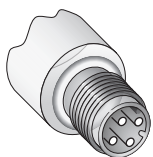
²⁾ Average service life: 100,000 h at T_u = +25 °C.

MECHANICS/ELECTRONICS

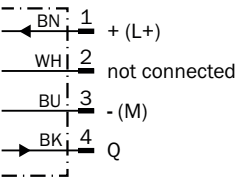
Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	30 mA ³⁾
Switching output	PNP
Switching mode	Light switching
Signal voltage PNP HIGH/LOW	U _v - (< 2,9 V) / ca. 0 V
Output current I _{max}	≤ 100 mA
Response time	≤ 1.25 ms ⁴⁾
Switching frequency	400 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	III
Weight	50 g
Polarisation filter	✓
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 ⁹⁾
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_v tolerances.³⁾ Without load.⁴⁾ Signal transit time with resistive load.⁵⁾ With light/dark ratio 1:1.⁶⁾ A = V_g connections reverse-polarity protected.⁷⁾ C = interference suppression.⁸⁾ D = outputs overcurrent and short-circuit protected.⁹⁾ Use at higher ambient temperatures reduce the sender LED lifetime .**SAFETY-RELATED PARAMETERS**

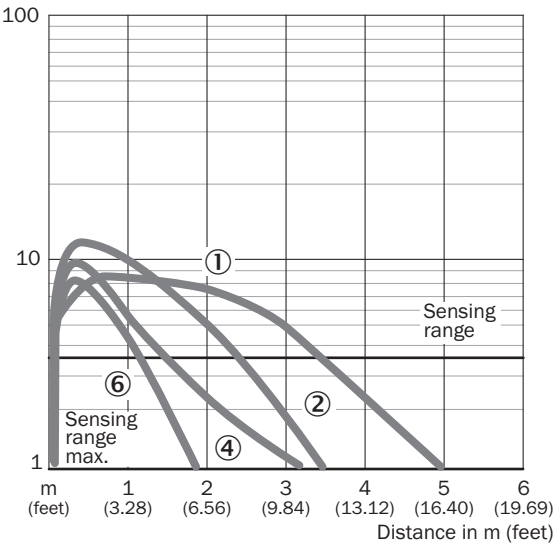
MTTF _D	3,036 years
DC _{avg}	0 %

CONNECTION TYPE

CONNECTION DIAGRAM CD-066

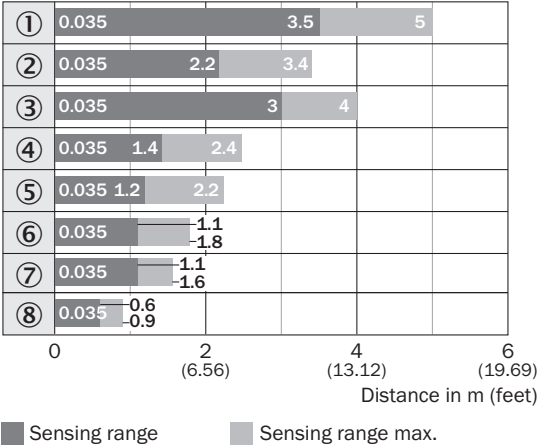


CHARACTERISTIC CURVE MHL15V



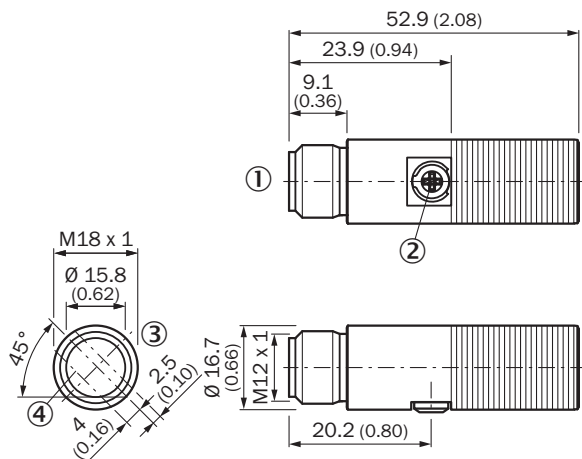
- ① Reflector PL80A
- ② Reflector P250
- ④ Reflector PL50A, PL40A
- ⑥ Reflector PL20A

SENSING RANGE DIAGRAM MHL15V



- ① Reflector PL80A
- ② Reflector P250
- ③ Reflector C110A
- ④ Reflector PL50A, PL40A
- ⑤ Reflector PL30A, PL31A
- ⑥ Reflector PL20A
- ⑦ Reflector P250 CHEM
- ⑧ Reflector PL20 CHEM

DIMENSIONAL DRAWING MHL15V



Dimensions in mm (inch)

- ① M12 male device connector, 4-pin
- ② Yellow LED indicator,
- ② -lights continuously: Light reception > reserve factor 1.5
- ② -blinks: Light reception, reserve factor > 1 ... < 1.5
- ③ Optical axis, sender
- ④ Optical axis, receiver

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/1043815



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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