MHL15-N3336V

MH15V

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
MHL15-N3336V	1043813

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

Illustration may differ

CE

ECOLAB

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
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]
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]
Power consumption	30 mA [3]
Switching output	NPN
Switching mode	Light switching
Signal voltage NPN HIGH/LOW	Uv / < 2,9 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 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] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] A = V_S 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 .
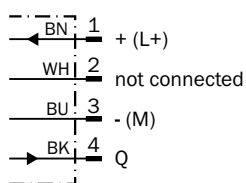
Safety-related parameters

$MTTF_D$	4,459 years
DC_{avg}	0%

Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902

ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-066

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

Characteristic curve

MHL15V

① Reflector PL80A
② Reflector P250
④ Reflector PL50A, PL40A
⑥ Reflector PL20A
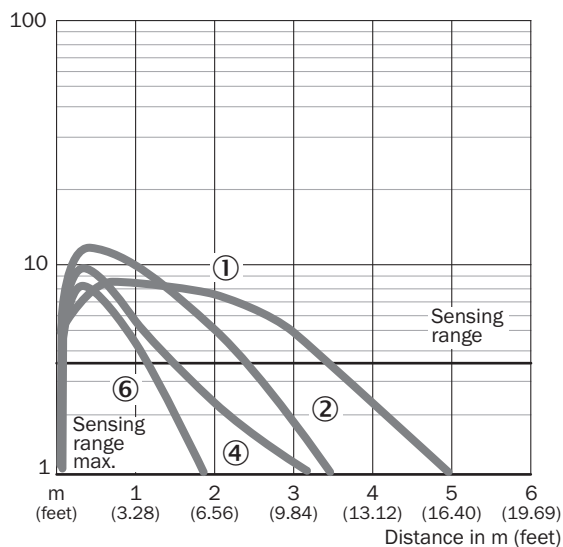
Sensing range diagram

MHL15V

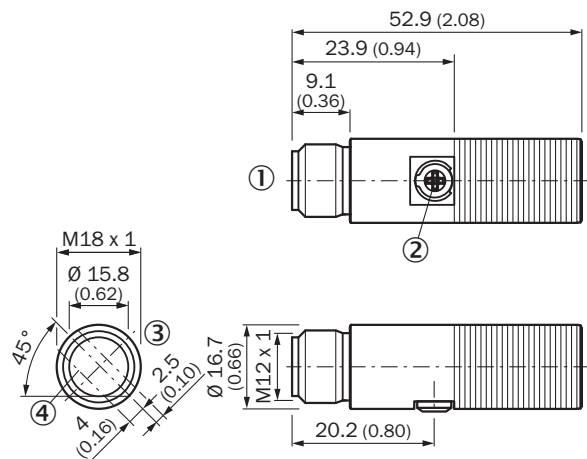|		
①	0.035	3.5	5
②	0.035	2.2	3.4
③	0.035	3	4
④	0.035	1.4	2.4
⑤	0.035	1.2	2.2
⑥	0.035	1.1	1.8
⑦	0.035	1.1	1.6
⑧	0.035	0.6	0.9

0   2 (6.56)   4 (13.12)   6 (19.69)

Distance in m (feet)
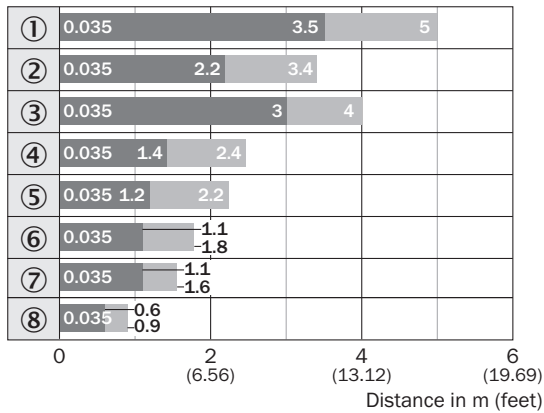
■ Sensing range   ■ Sensing range max.

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 (Dimensions in mm (inch))

MHL15V

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

①
②

M18 x 1
Ø 15.8 (0.62)
45°
③
④
2.5 (0.10)
4 (0.16)
Ø 16.7 (0.66)
M12 x 1
20.2 (0.80)

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

Recommended accessories

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

Brief description	Type	Part no.
Mounting brackets and plates		
Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
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
Reflectors		
Chemically resistant, screw connection, 47 mm x 47 mm, plastic, Screw-on, 2 hole mounting	P250 CHEM	5321097

SICK AT A GLANCE

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:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.