



Photoelectric sensors  
MH15, Photoelectric retro-reflective sensor

MHL15-P2338



**Model Name** > [MHL15-P2338](#)  
**Part No.** > [1026136](#)



*Illustration may differ*

**At a glance**

- Long sensing distance up to 5.0 m with PL80A reflector
- Polarizing filter reliably detects shiny object surfaces
- Indicator LED shows active switching output and operating reserve
- Straight or right-angle housing designs available
- Mounting accessories (M18 nuts and snap ring) are included
- IP 69K-tested housing

**Your benefits**

- Shortest M18 body on the market, saving installation space
- Flush mounting via snap ring reduces setup time and prevents obstructions to material flow on conveyor systems
- Polarizing filter prevents false readings on reflective objects, reducing downtime
- Highly visible red light provides simple installation and time-saving alignment to the reflector
- MHL15 is compatible with competitor sensors for easy replacement that saves installation time and costs
- IP 69K-tested housing offers a long service life that withstands harsh environments, reducing maintenance time and costs



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor
Housing design (light emission):	Cylindrical, angled
Housing length:	49.3 mm
Thread diameter (housing):	M18 x 1
Optical axis:	radial
Sensing range max.:	0.035 m ... 4.5 m <sup>1)</sup>
Sensing range:	0.035 m ... 2.6 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	650 nm
Angle of dispersion:	Ca. 1.5 °
Light spot size (distance):	Ø 60 mm (2.6 m)

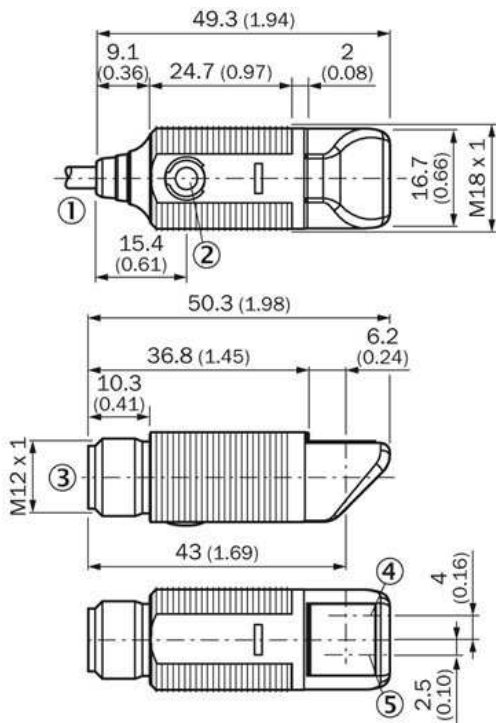
<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 <sup>1)</sup>
Ripple:	$\leq 5 \text{ Vpp}$ <sup>2)</sup>
Power consumption:	30 <sup>3)</sup>
Output type:	PNP
Switching mode:	Light switching
Signal voltage PNP HIGH/LOW:	$U_v - (< 2,9 \text{ V}) / \text{ca. } 0 \text{ V}$
Output current $I_{\text{max.}}$ :	100
Response time:	$\leq 1.25 \text{ ms}$ <sup>4)</sup>
Switching frequency:	400 <sup>5)</sup>
Connection type:	Cable, 3-wire, 2 m <sup>6)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Cable diameter:	3.7 mm
Circuit protection:::	A, C, D <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	91 g
Polarisation filter:	✓
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

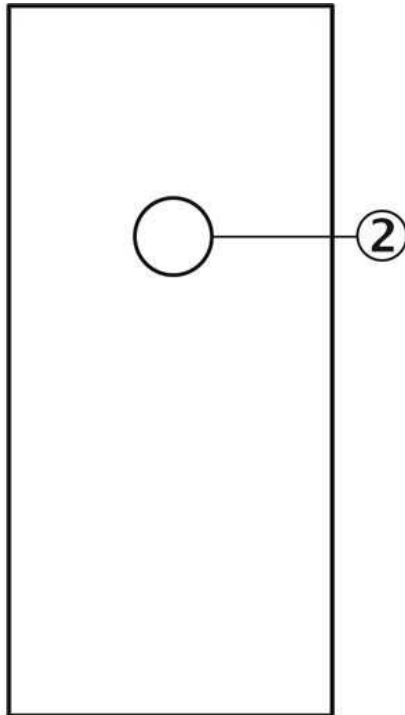
<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> Do not bend below 0 °C <sup>7)</sup> A =  $V_S$  connections reverse-polarity protected <sup>8)</sup> C = interference suppression <sup>9)</sup> D = outputs overcurrent and short-circuit protected

**Dimensional drawing**



- [1] Connection cable 2 m
- [2] Yellow LED indicator:- lights continuously:light reception> reserve factor 1  
 .5- blinks: light reception < reserve factor 1.5 but > swit

**Adjustments possible**

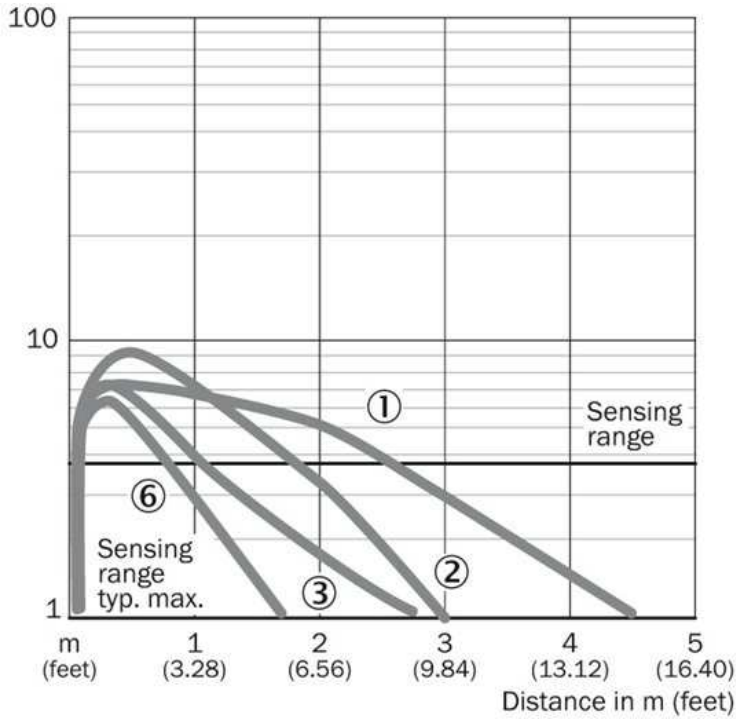


- [2] Yellow LED indicator,-lights continuously: Light reception> reserve factor 1,5-blinks: Light reception > reserve factor 1,5but light reception>switching thres

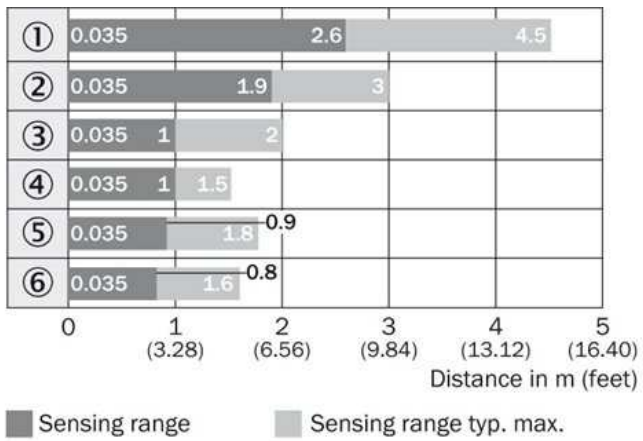
Connection diagram



Characteristic curve



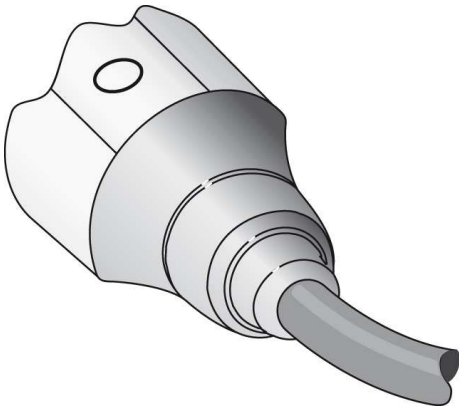
## Sensing range diagram



### Reflector type

- ① PL80A
- ② P250
- ③ PL50A/PL40A
- ④ C110
- ⑤ PL30A/PL31A
- ⑥ PL20A

### Connection type



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