



## Photoelectric sensors MH15, Photoelectric proximity sensor, energetic

MHT15-N2249



**Model Name** > [MHT15-N2249](#)  
**Part No.** > [1026114](#)



*Illustration may differ*

#### At a glance

- Energetic variant with a long sensing distance
- Sensitivity control via 270° potentiometer
- Indicator LED with an active switching output and operating reserve
- Straight or right-angle housing designs available
- 100 mm or 350 mm sensing distances for straight housing; 90 mm or 250 mm (each with 90% remission) for right-angle housings
- Mounting accessories (M18 nuts and snap ring) are included
- IP 69K-tested housing offers a long service life that withstands harsh environments

#### Your benefits

- Reliably detects and positions parts without a reflector, saving installation time and costs
- 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
- MHT15 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 proximity sensor, energetic |
| Housing design (light emission): | Cylindrical, angled                       |
| Housing length:                  | 49.3 mm                                   |
| Thread diameter (housing):       | M18 x 1                                   |
| Optical axis:                    | Radial                                    |
| Sensing range max.:              | 15 mm ... 250 mm <sup>1)</sup>            |
| Sensing range:                   | 15 mm ... 180 mm                          |
| Type of light:                   | Infrared light                            |
| Light source:                    | LED <sup>2)</sup>                         |
| Wave length:                     | 950 nm                                    |
| Angle of dispersion:             | Ca. 4.5 °                                 |
| Adjustment:                      | Potentiometer, 270°                       |
| Light spot size (distance):      | Ø 40 mm (250 mm)                          |

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

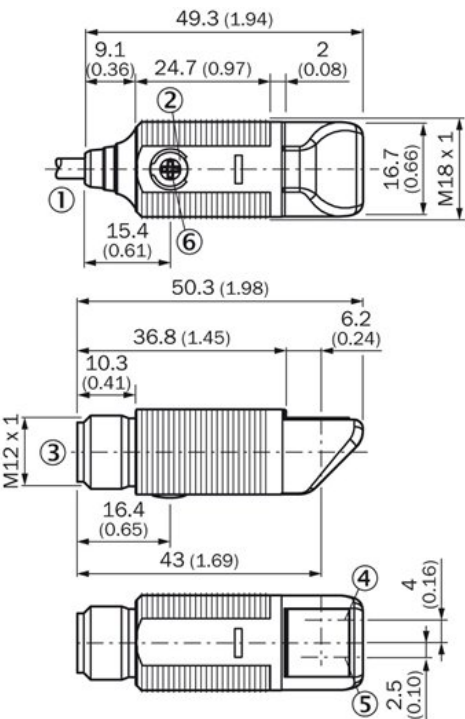
## Mechanics/electronics

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|                                    |                                                   |
|------------------------------------|---------------------------------------------------|
| Supply voltage:                    | 10 V DC ... 30 <sup>1)</sup>                      |
| Ripple:                            | $\leq 5 V_{pp}$ <sup>2)</sup>                     |
| Power consumption:                 | 30 <sup>3)</sup>                                  |
| Output type:                       | NPN                                               |
| Switching mode:                    | Dark-switching                                    |
| Signal voltage NPN HIGH/LOW:       | $U_v / < 2,9 V$                                   |
| Output current I <sub>max.</sub> : | 100                                               |
| Response time:                     | $\leq 1.25 ms$ <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)</sup> <sup>8)</sup> <sup>9)</sup> |
| Protection class:                  | III                                               |
| Weight:                            | 91 g                                              |
| Polarisation filter:               | -                                                 |
| Front screen heating:              | -                                                 |
| Special device:                    | -                                                 |
| Housing material:                  | ABS, Plastic                                      |
| Optics material:                   | PMMA                                              |
| Enclosure rating:                  | IP 67<br>IP 69K                                   |
| Ambient operating temperature:     | -25 ... 55 °C                                     |
| Ambient storage temperature:       | -25 ... 70 °C                                     |
| UL File No.:                       | NRKH.E189383 & NRKH7.E189383                      |

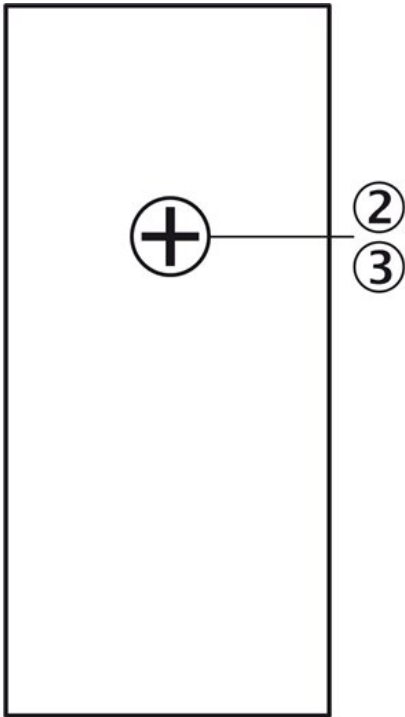
<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> Do not bend below 0 °C <sup>7)</sup> A =  $V_S$  connections reverse-polarity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

Dimensional drawing



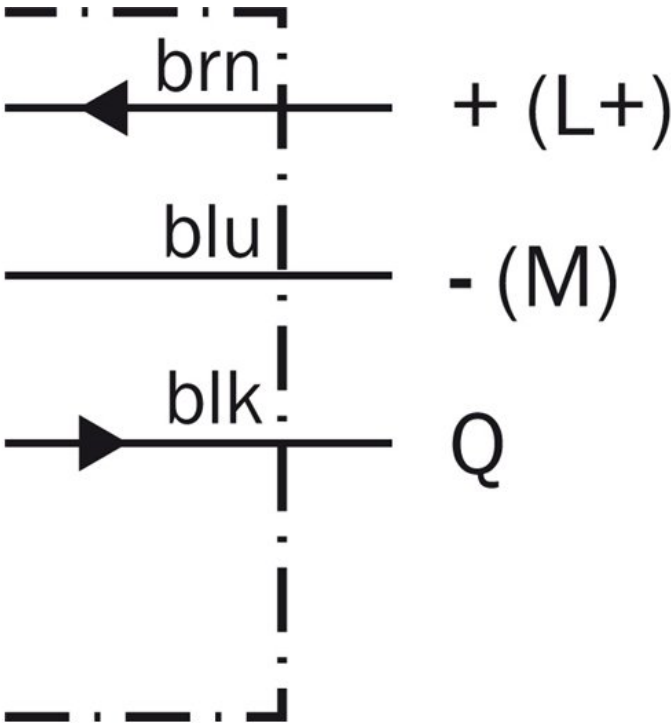
- |1| Connection cable 2 m
- |2| Sensitivity adjustment 270°
- |3| Yellow LED indicator:- lights continuously:light reception> reserve factor 1  
.3- blinks: light reception < reserve factor 1.3 but > swit

Adjustments possible

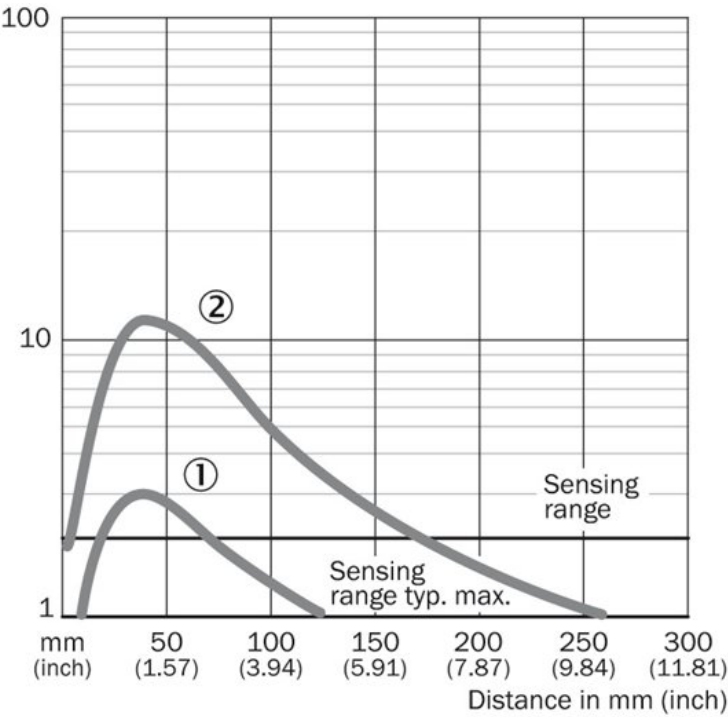


- |2| Sensitivity adjustment 270°
- |3| Yellow LED indicator,-lights continuously: Light reception> reserve factor 1,3-blinks: Light recepti on >reserve factor 1,3but light reception>switching thres

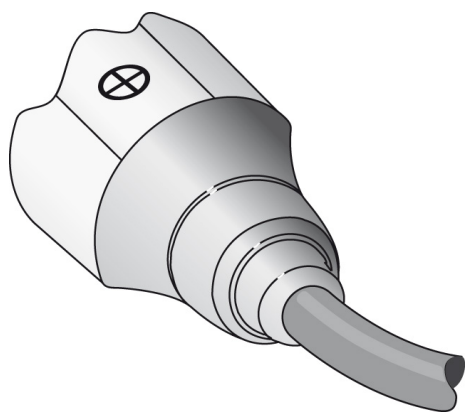
Connection diagram



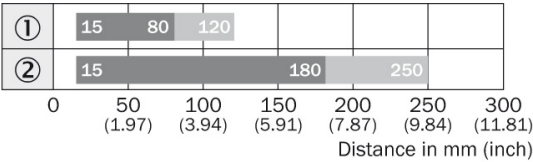
Characteristic curve



Connection type



Sensing range diagram



■ Sensing range      ■ Sensing range typ. max.

- ① Sensing range on gray, 18 % remission
- ② Sensing range on white, 90 % remission

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