



## Photoelectric sensors MH15, Photoelectric proximity sensor, energetic

MHT15-N3217



**Model Name** > [MHT15-N3217](#)  
**Part No.** > [1026091](#)



*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, straight                     |
| Housing length:                  | 36.8 mm                                   |
| Thread diameter (housing):       | M18 x 1                                   |
| Optical axis:                    | Axial                                     |
| Sensing range max.:              | 10 mm ... 100 mm <sup>1)</sup>            |
| Sensing range:                   | 10 mm ... 90 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 20 mm (100 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

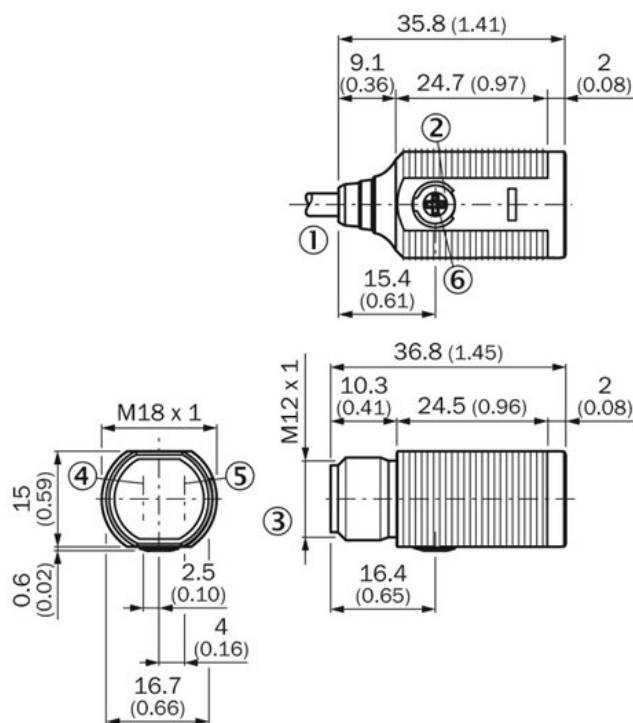
## Mechanics/electronics

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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 $I_{max.}$ :    | 100                                               |
| Response time:                 | $\leq 1.25 ms$ <sup>4)</sup>                      |
| Switching frequency:           | 400 <sup>5)</sup>                                 |
| Connection type:               | Connector M12, 3-pin                              |
| Circuit protection:::          | A, C, D <sup>6)</sup> <sup>7)</sup> <sup>8)</sup> |
| Protection class:              | III                                               |
| Weight:                        | 7 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                      |

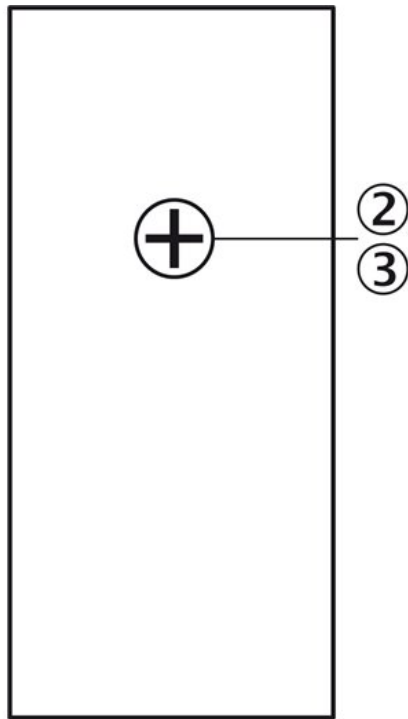
<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  tolerances <sup>3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> A =  $V_S$   
connections reverse-polarity protected <sup>7)</sup> C = interference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

Dimensional drawing



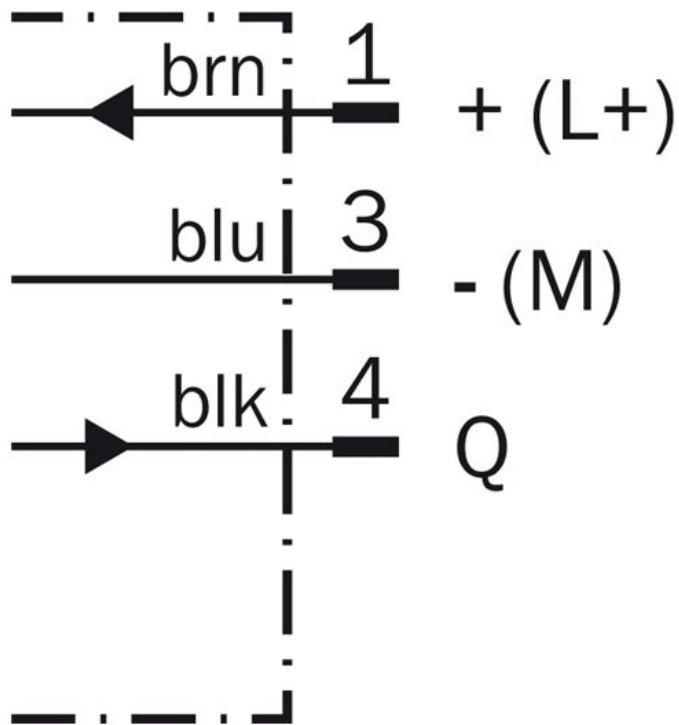
- [1] Connection cable 2 m
- [2] Sensitivity adjustment 270°
- [3] Yellow LED indicator:- lights continuously:light reception> reserve factor 1  
.3- blinks: light reception < reserve factor 1.3 but > swit

Adjustments possible

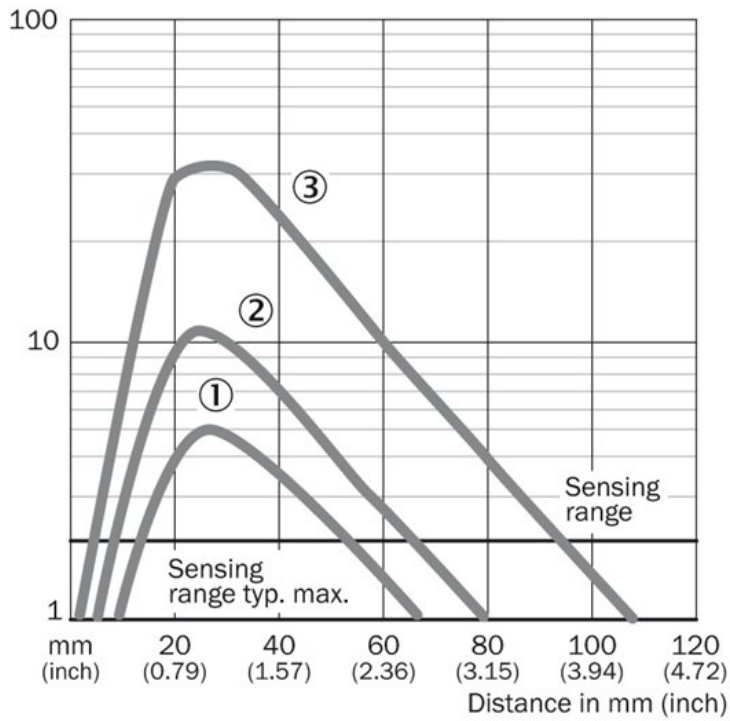


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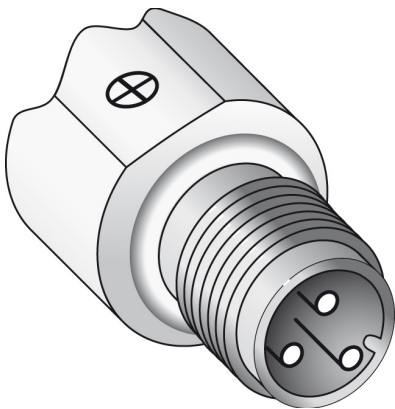
Connection diagram



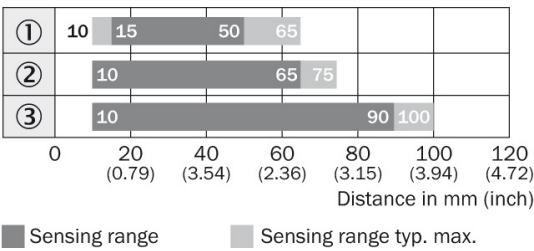
Characteristic curve



Connection type



Sensing range diagram



- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

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