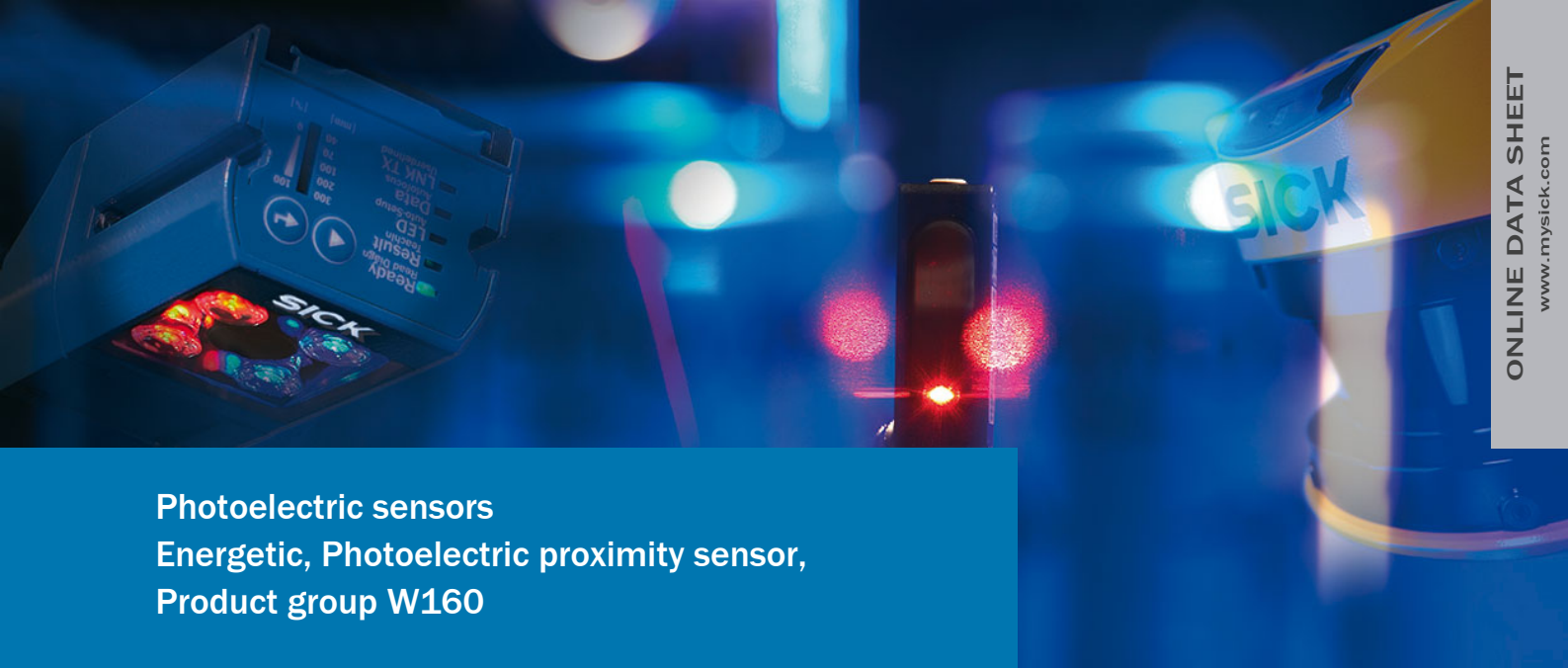


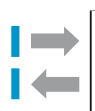


Photoelectric sensors  
Energetic, Photoelectric proximity sensor,  
Product group W160

WT160-F172



**Model Name** > [WT160-F172](#)  
**Part No.** > [6022815](#)



- Horizontal models
- Energetic proximity switch for standard applications
- Red light as alignment aid
- Switching point adjustable
- LED indicator: operating reserve



#### Product features

|                            |                                    |
|----------------------------|------------------------------------|
| Sensing range min ... max: | 0 mm ... 1,000 mm, 0 mm ... 800 mm |
| Light source:              | LED                                |
| Type of light:             | Red light                          |
| Light spot diameter:       | Approx. 90 mm at 500 mm distance   |
| Laser:                     | Red light                          |
| Sensing range max.:        | 0 mm ... 1,000 mm, 0 mm ... 800 mm |
| Adjustment.:               | Potentiometer, 2 rotations         |
| Wave length:               | 680 nm                             |

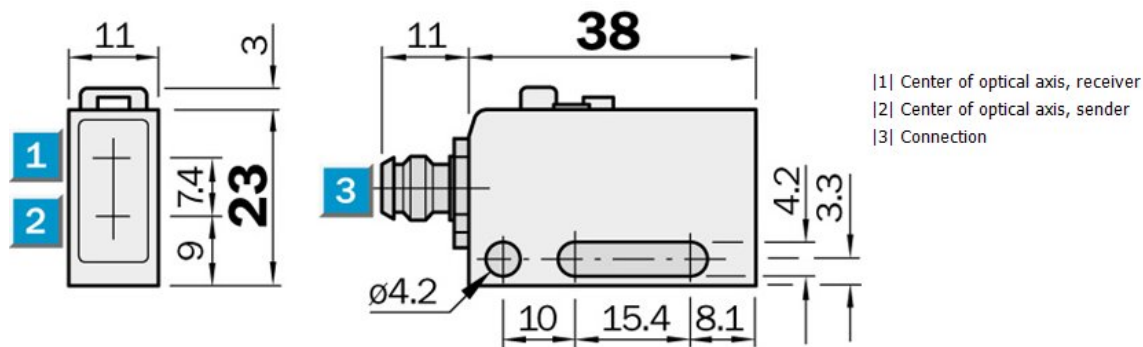
#### Technical data

|                                             |                                                                                                                                                       |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design:                                     | Rectangular                                                                                                                                           |
| Dimensions (W x H x D):                     | 11 mm x 23 mm x 38 mm                                                                                                                                 |
| Supply voltage min ... max:                 | DC 10 ... 30 V <sup>1)</sup>                                                                                                                          |
| Ripple:                                     | ± 10 %                                                                                                                                                |
| Power consumption:                          | ≤ 25 mA                                                                                                                                               |
| Switching output:                           | PNP: open collector: Q                                                                                                                                |
| Switching mode:                             | Light/dark switching via rotary switch                                                                                                                |
| Output current max.:                        | 100 mA                                                                                                                                                |
| Response time:                              | ≤ 0.5 ms                                                                                                                                              |
| Switching frequency:                        | 1,000 Hz                                                                                                                                              |
| Connection type:                            | Cable, 2 m                                                                                                                                            |
| Number of cores:                            | 3                                                                                                                                                     |
| Conductor size:                             | 0.2 mm <sup>2</sup>                                                                                                                                   |
| Circuit protection:                         | V connections reverse-polarity protected/In-/outputs short-circuit protected/Interference suppression/Outputs overcurrent and short-circuit protected |
| Enclosure rating:                           | IP 67: EN 60529, IP 69K: EN 40050                                                                                                                     |
| Ambient operation temperature, min ... max: | -25 °C ... +55 °C                                                                                                                                     |
| Ambient storage temperature, min ... max:   | -40 °C ... +70 °C                                                                                                                                     |
| Weight:                                     | Ca. 60 g                                                                                                                                              |

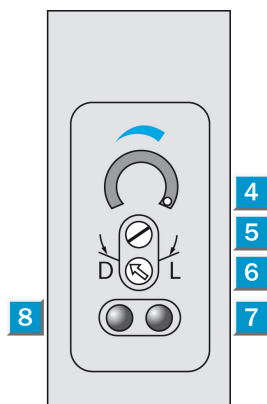
|                              |                          |
|------------------------------|--------------------------|
| Housing material:            | PBT                      |
| Signal voltage PNP HIGH/LOW: | Vs - 1.8 V / approx. 0 V |
| Cable material::             | PVC                      |
| Angle of dispersion:         | ca. 10 °                 |
| Series:                      | W160                     |
| Optics material:             | PMMA                     |
| Cable diameter:              | Ø 4.2 mm                 |
| Housing design:              | Horizontal               |

1) Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A

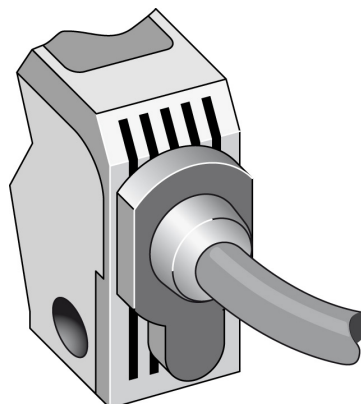
## Dimensional drawing



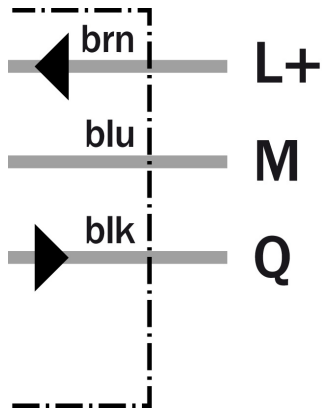
## Adjustment possible



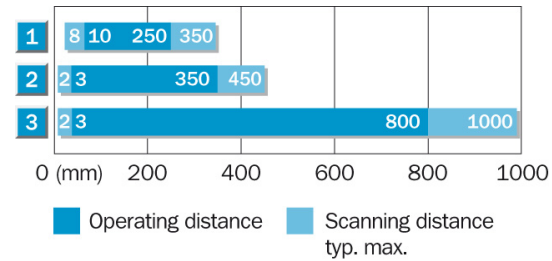
## Connection type



### Connection diagram

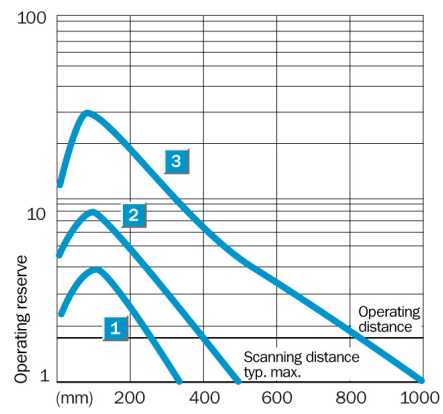


### Sensing range diagram



|   |                                         |
|---|-----------------------------------------|
| 1 | Scanning range on black, 6 % remission  |
| 2 | Scanning range on grey, 18 % remission  |
| 3 | Scanning range on white, 90 % remission |

### Characteristic curve



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