

# TM18RP6LPQ5

## Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter

### Technical data

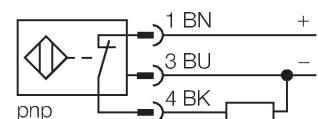
|                                |                                            |
|--------------------------------|--------------------------------------------|
| Type                           | TM18RP6LPQ5                                |
| ID                             | 3042052                                    |
| <b>Optical data</b>            |                                            |
| Function                       | Retroreflective Sensor                     |
| Operating mode                 | Polarized                                  |
| Reflector included in delivery | no                                         |
| Light type                     | Red polarized                              |
| Wavelength                     | 624 nm                                     |
| Range                          | 0...5500 mm                                |
| <b>Electrical data</b>         |                                            |
| Operating voltage              | 10...30 VDC                                |
| No-load current                | ≤ 25 mA                                    |
| Short-circuit protection       | yes / Cyclic                               |
| Reverse polarity protection    | yes                                        |
| Output function                | NO contact, dark operation, PNP            |
| Switching frequency            | ≤ 500 Hz                                   |
| Readiness delay                | ≤ 100 ms                                   |
| Response time typical          | < 3 ms                                     |
| <b>Mechanical data</b>         |                                            |
| Design                         | Tube, TM18                                 |
| Dimensions                     | Ø 18 x 30 x 30 x 41 mm                     |
| Housing material               | Metal, Zinc Die-Cast with Nickel-Plating   |
| Lens                           | plastic, Acrylic                           |
| Electrical connection          | Cable with connector, M12 × 1, 0.15 m, PVC |
| Number of cores                | 4                                          |
| Core cross-section             | 0.5 mm <sup>2</sup>                        |
| Ambient temperature            | -40...+70 °C                               |
| Protection class               | IP67<br>IP69                               |
| Special features               | Encapsulated<br>Wash down                  |
| Power-on indication            | LED, Green                                 |
| Switching state                | LED, Yellow                                |
| Error indication               | LED, green, Flashing                       |
| Excess gain indication         | LED                                        |
| Alarm display                  | LED yellow Flashing                        |



### Features

- Cable with male end M12 × 1, 4-pin, PUR, 150 mm
- Protection class IP67
- Ambient temperature: -40 °C...+70 °C
- Metal housing
- Operating voltage: 10...30 VDC
- PNP switching output, dark operation

### Wiring diagram



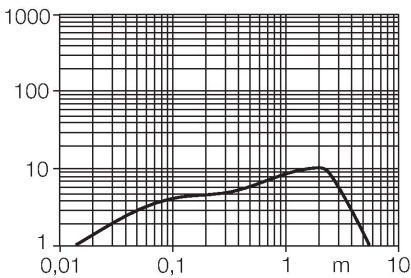
### Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors have a high function gain and good contrast performance. Further it is merely required to install and wire a single device.

Excess gain curve  
Excess gain in relation to the distance

Technical data

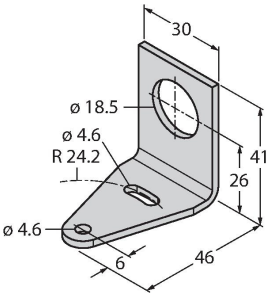
| Tests/approvals |        |
|-----------------|--------|
| Approvals       | CE, UL |



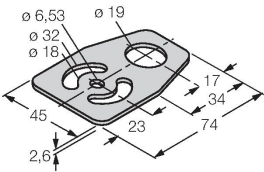
Accessories

|                                                                                                         |         |
|---------------------------------------------------------------------------------------------------------|---------|
| SMBT18Y                                                                                                 | 3069554 |
| mounting bracket, rectangular, for sensors with 18 mm thread, 15.3 mm cable feedthrough or M12 x 1 male |         |

|                                                                               |         |
|-------------------------------------------------------------------------------|---------|
| SMB18A                                                                        | 3033200 |
| Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread |         |



|                                                                  |         |
|------------------------------------------------------------------|---------|
| SMBAMS18P                                                        | 3073134 |
| Mounting bracket, stainless steel, for sensors with 18 mm thread |         |



Accessories

| Dimension drawing | Type          | ID      |                                                                                                                                                                                                                  |
|-------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | RKC4.4T-2/TEL | 6625013 | Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |
|                   | WKC4.4T-2/TEL | 6625025 | Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>   |

Accessories

| Dimension drawing | Type   | ID      |                                                                                                   |
|-------------------|--------|---------|---------------------------------------------------------------------------------------------------|
|                   | BRT-84 | 3058979 | Round reflector, reflection coefficient 1.4, material acrylic, ambient temperature -20 ... +60 °C |

