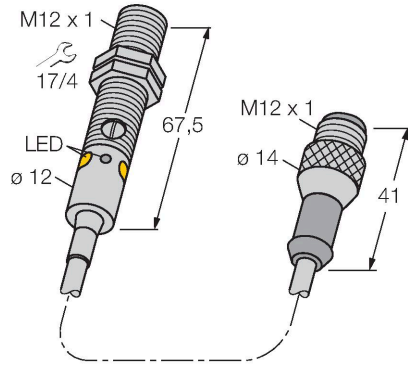


# M12PDQ5

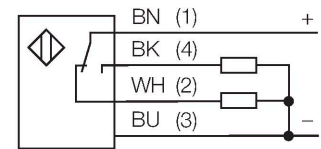
## Photoelectric Sensor – Diffuse Mode Sensor



### Features

- Cable with male end M12 × 1, 4-pin, PVC, 150 mm
- Protection classes IP67 / IP68
- Metal housing
- LED all-round visible
- Indication of insufficient excess gain
- Sensitivity adjustable via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, complementary contact

### Wiring diagram



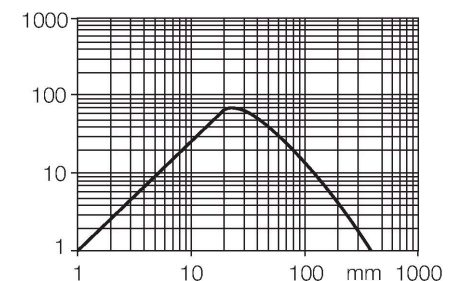
### Technical data

|                              |                                            |
|------------------------------|--------------------------------------------|
| Type                         | M12PDQ5                                    |
| ID                           | 3078236                                    |
| <b>Optical data</b>          |                                            |
| Function                     | Proximity switch                           |
| Operating mode               | Diffuse                                    |
| Light type                   | Red                                        |
| Wavelength                   | 660 nm                                     |
| Range                        | 0...400 mm                                 |
| <b>Electrical data</b>       |                                            |
| Operating voltage            | 10...30 VDC                                |
| Residual ripple              | < 10 % U <sub>ss</sub>                     |
| DC rated operational current | ≤ 100 mA                                   |
| No-load current              | ≤ 20 mA                                    |
| Short-circuit protection     | yes                                        |
| Reverse polarity protection  | yes                                        |
| Output function              | Complementary contact, PNP                 |
| Switching frequency          | ≤ 1000 Hz                                  |
| Readiness delay              | ≤ 100 ms                                   |
| Response time typical        | < 0.5 ms                                   |
| Setting option               | Potentiometer                              |
| <b>Mechanical data</b>       |                                            |
| Design                       | Tube, M12                                  |
| Dimensions                   | Ø 12 x 67.5 mm                             |
| Housing material             | Metal, Nickel-plated brass, Nickel Plated  |
| Lens                         | plastic, PMMA                              |
| Electrical connection        | Cable with connector, M12 × 1, 0.15 m, PVC |

### Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects a sufficient amount of light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target.

### Excess Gain Curve





| Dimension drawing                                                                 | Type          | ID      |                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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> |