## Description

- Operation mode and max sensing range: **Diffuse proximity:** 0-35 cm
- Cable or plug connection
- Visible red light source
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Power and output indicators
- High tolerance to hostile environments
- 10-30 V dc supply voltage
- 4 wire, NPN/PNP transistor output
- Available with optional Ex ATEX approval



The visible red light SMP 7000R series consists of a self-contained diffuse proximity sensor with a sensing range of up to 35 cm. The series is offered with sensitivity adjustment via integral potentiometer available with either cable or plug connection.

The series is available with a 4 wire, NPN/PNP transistor output with a 10-30 V dc supply voltage. Both include a switch selectable light or dark function.

The series is protected against reverse polarity of power supplies, control input and output signals. The output is protected against short circuit and inductive loads.

| Technical Data | | |
|---|---|---|
| | | SMP |
| Supply voltage | | 10-30 V dc |
| Voltage ripple | | Max. 15 % |
| Reverse polarity protected | | Yes |
| Short circuit protected | | Yes |
| Current consumption | | 20 mA |
| Maximum output load | | 120 mA @ 30 V dc |
| Maximum residual voltage | | 2 V |
| Max. operation frequency | | 250 Hz |
| Response time $t_{ON}$ / $t_{OFF}$ | | 2 ms / 2 ms |
| Power on indicator | | Green LED |
| Output indicator | | Yellow LED |
| Hysteresis | | Approx. 3-10 % |
| Light source | | Visible red light (620 nm) |
| Spot size | | 4x4 cm @ 35 cm range |
| Housing material | Sensor housing | Stainless Steel (AISI 316 / 1.4401) or Polycarbonate |
| | Front lens | Polycarbonate |
| Cable, PVC | | Ø 4,0 mm, 4 x 0,14 mm² |

| Environmental Data | | |
|---|---|---|
| Vibration | | 10-55 Hz, 0,5 mm |
| Shock | | 30 g |
| Light immunity | @ 15° incidence | 20 000 lux |
| Temperature, operation | | –20 to +60 °C |
| Temperature, storage | | –40 to +80 °C |
| Sealing class | | IP 67 |
| Approvals | | CE UKCA cULus |

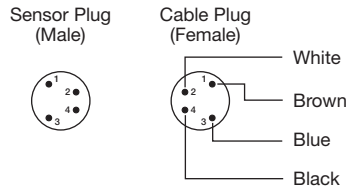
## Available Types

| | Type | Power Supply | Control Feature | Output | Connection | | 5 m cable | 4 pin, M8 plug | 4 pin, M12 plug | Range |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Housing Material | Housing Type | Order Reference | | | |
| Diffuse Proximity | **7600R** | 10-30 V dc | Sensitivity pot. and light/dark switch | NPN/PNP | Polycarbonate | M18 x 1 | **SMP 7600R TP 5** | **SMP 7600R TP T4** | **SMP 7600R TP J** | 0-35 cm |
| | | | | | Stainless Steel | | **SMP 7600R TS 5** | **SMP 7600R TS T4** | **SMP 7600R TS J** | |

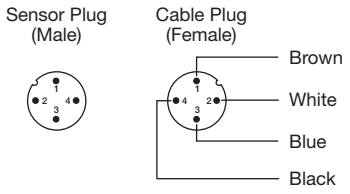
## Connections

| | Cable | M8 Plug / Cable | M12 Plug / Cable |
|---|---|---|---|
| Supply + | Brown | Pin 1 / Brown | Pin 1 / Brown |
| Supply – | Blue | Pin 3 / Blue | Pin 3 / Blue |
| Output | Black | Pin 4 / Black | Pin 4 / Black |
| Output | White | Pin 2 / White | Pin 2 / White |

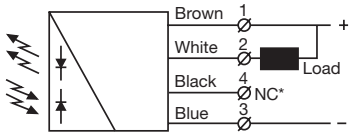
**4 pin, M8**




**4 pin, M12**

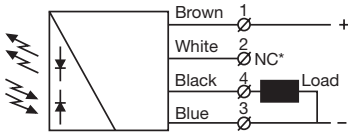



## Wiring Diagrams




*Do not connect black wire

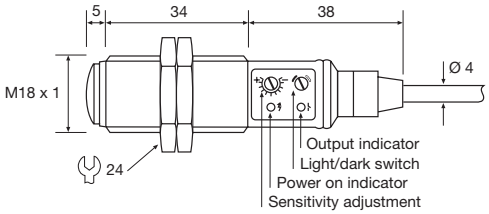
**SMP 7600R**
Load as NPN



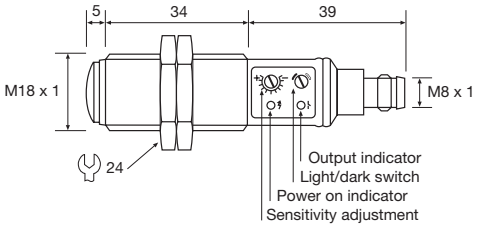

*Do not connect white wire

**SMP 7600R**
Load as PNP

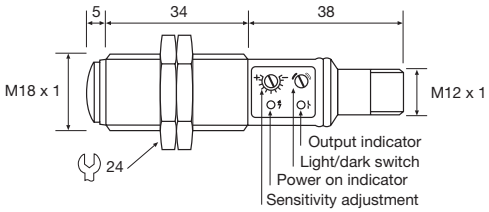
## Dimensions and Descriptions




**SMP TP/TS 5**




**SMP TP/TS T4**




**SMP TP/TS J**

(Units in mm)

Telco reserves the right to change specifications without notice.