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 ℃
Temperature, storage	−40 to +80 ℃
Sealing class	IP 67
Approvals	CE

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

Sensor Plug (Male)   Cable Plug (Female)

— White
— Brown
— Blue
— Black

4 pin, M12

Sensor Plug (Male)   Cable Plug (Female)

— Brown
— White
— Blue
— Black

Wiring Diagrams

Brown 1 +
White 2
Black 4 Load
Blue 3 NC* —
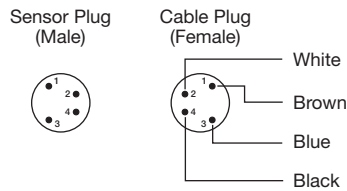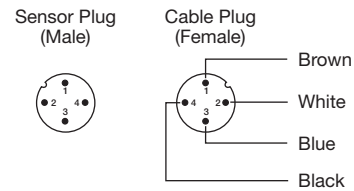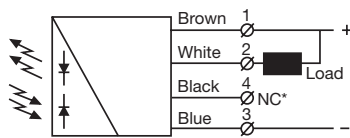
*Do not connect black wire

SMP 7600R
Load as NPN

Brown 1 +
White 2 NC*
Black 4 Load
Blue 3 —
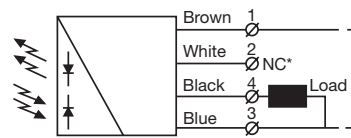
*Do not connect white wire

SMP 7600R
Load as PNP

Dimensions and Descriptions

5 | 34 | 38

M18 x 1

Ø 4

24

Output indicator
Light/dark switch
Power on indicator
Sensitivity adjustment

SMP TP/TS 5

5 | 34 | 39

M18 x 1

M8 x 1

24

Output indicator
Light/dark switch
Power on indicator
Sensitivity adjustment

SMP TP/TS T4

5 | 34 | 38

M18 x 1

M12 x 1

24

Output indicator
Light/dark switch
Power on indicator
Sensitivity adjustment
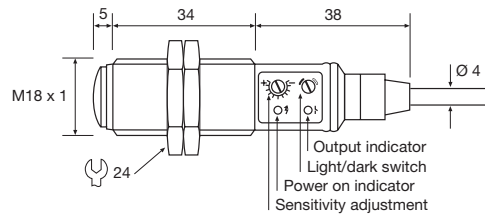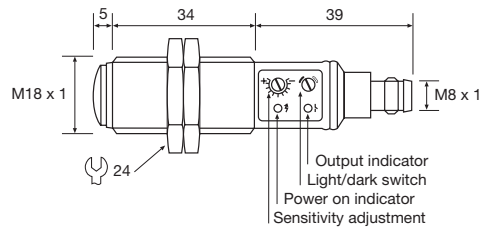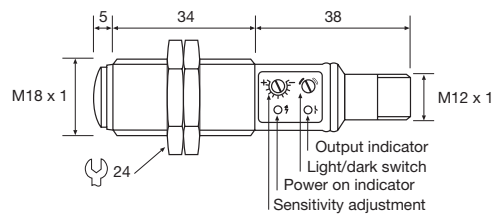
SMP TP/TS J

(Units in mm)

Telco reserves the right to change specifications without notice.