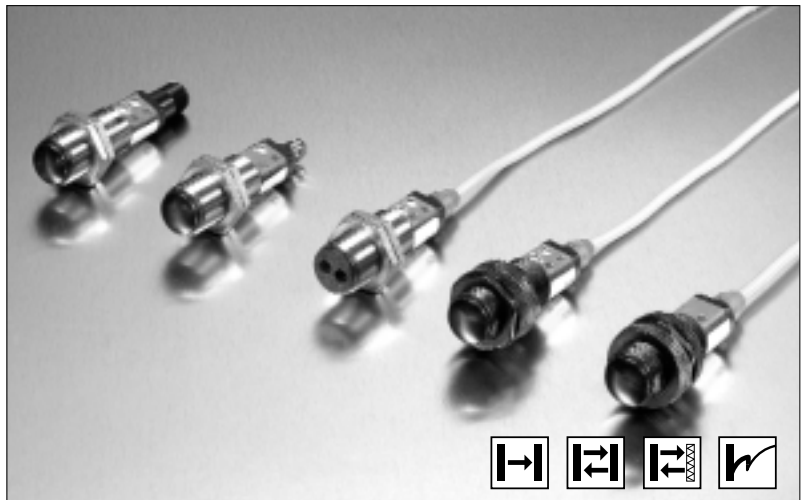


Description

- Operation mode and max sensing range:
Thru beam: 0-20 m
Diffuse proximity: 0-50 cm
Retro reflective: 0-3 m
Fibre: Dependent on fibre optic
- Cable or plug connection
- 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 or 4 wire, ambivalent PNP/PNP transistor output
- Test input



The 7000 series consists of a self-contained transmitter SMT, and a receiver SMR which are to be used in thru beam mode, an SMP for diffuse proximity, SMRR for retro reflective and an SMPF for use with fibre optic cables. All are offered with sensitivity adjustment via integral potentiometer with either cable or plug connection.

The complete series is available either as 4 wire, NPN/PNP transistor output or 4 wire ambivalent PNP/PNP output with a 10-30 V dc supply voltage, both offering switch selectable light or dark function. The SMR

is available with either a 0.5 ms response time and a 7 metre range or with a 2 ms response time with a 20 metre range. The control input in the SMT is intended to be used for disabling or enabling the transmitting power temporarily for test purpose or for multiplexing applications.

The complete 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

	SMT	SMR		SMP/SMPF	SMRR
		7x07	7x20		
Supply voltage		10 – 30 V dc			
Voltage ripple		15 %			
Reverse polarity protected		Yes			
Short circuit protected	-	Yes			
Power consumption	25 mA	20 mA			
Maximum output load	-	120 mA / 30 V dc			
Maximum residual voltage	-	2 V		1,5 V	
Maximum operation frequency	-	1000 Hz		250 Hz	
Response time t_{ON} / t_{OFF}	-	0,5 ms / 0,5 ms		2 ms / 2 ms	
Power on indicator		Green LED			
Output indicator	-	Yellow LED			
Hysteresis	-	Approx. 15 – 20 %		Approx. 3 – 10 %	
Transmitter diode	Ga Al As (880 nm)	-			
Opening angle	-	+/- 5°		+/- 4°	
Emission angle	+/- 4°	-			

Environmental Data					
	SMT	SMR		SMP	SMRR/SMPF
		7x07	7x20		
Vibration	10 – 55 Hz, 0,5 mm				
Shock	30 g				
Light immunity, @ 5° incidence	-	> 20 000 lux		> 10 000 lux	
Temperature, operation	- 20 to +60 °C				
Temperature, storage	- 40 to +80 °C				
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 Size				
Transmitter	7000	10-30 V dc	Test input		Polycarbonate	M18 x 1	SMT 7000 TP 5	SMT 7000 TP T4	SMT 7000 TP J	20 metres
					Stainless Steel		SMT 7000 TS 5	SMT 7000 TS T4	SMT 7000 TS J	

Receiver	7607	10-30 V dc	Sensitivity pot. and light/dark switch	NPN/PNP	Polycarbonate	M18 x 1	SMR 7607 TP 5	SMR 7607 TP T4	SMR 7607 TP J	0-7 metres		
					Stainless Steel		SMR 7607 TS 5	SMR 7607 TS T4	SMR 7607 TS J			
	7620			Polycarbonate	Stainless Steel		PNP/PNP	Polycarbonate	SMR 7620 TP 5	SMR 7620 TP T4	SMR 7620 TP J	0-20 metres
								Stainless Steel	SMR 7620 TS 5	SMR 7620 TS T4	SMR 7620 TS J	
	7707		Polycarbonate	Stainless Steel	PNP/PNP		Polycarbonate	SMR 7707 TP 5	SMR 7707 TP T4	SMR 7707 TP J	0-7 metres	
							Stainless Steel	SMR 7707 TS 5	SMR 7707 TS T4	SMR 7707 TS J		
	7720		Polycarbonate	Stainless Steel	PNP/PNP		Polycarbonate	SMR 7720 TP 5	SMR 7720 TP T4	SMR 7720 TP J	0-20 metres	
							Stainless Steel	SMR 7720 TS 5	SMR 7720 TS T4	SMR 7720 TS J		

Proximity	7600	10-30 V dc	Sensitivity pot. and light/dark switch	NPN/PNP	Polycarbonate	M18 x 1	SMP 7600 TP 5	SMP 7600 TP T4	SMP 7600 TP J	0-50 cm
					Stainless Steel		SMP 7600 TS 5	SMP 7600 TS T4	SMP 7600 TS J	

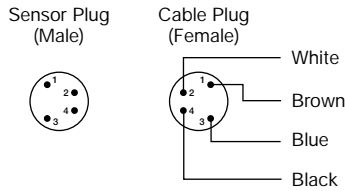
Fibre Sensors	7600	10-30 V dc	Sensitivity pot. and light/dark switch	NPN/PNP	Polycarbonate	M18 x 1	SMPF 7600 TP 5	SMPF 7600 TP T4	SMPF 7600 TP J	For ranges refer to page 44
					Stainless Steel		SMPF 7600 TS 5	SMPF 7600 TS T4	SMPF 7600 TS J	

Retro Reflective	7600	10-30 V dc	Sensitivity pot. and light/dark switch	NPN/PNP	Polycarbonate	M18 x 1	SMRR 7600 TP 5	SMRR 7600 TP T4	SMRR 7600 TP J	0-3 metres
					Stainless Steel		SMRR 7600 TS 5	SMRR 7600 TS T4	SMRR 7600 TS J	

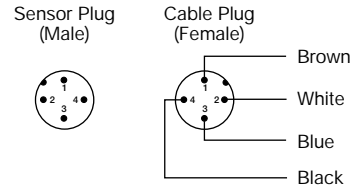
Connections

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

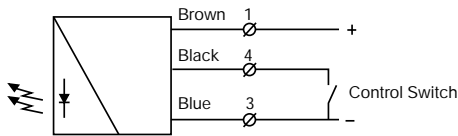
4 pin, M8



4 pin, M12

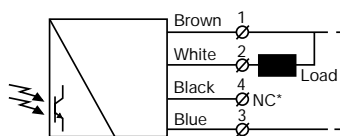


Wiring Diagrams



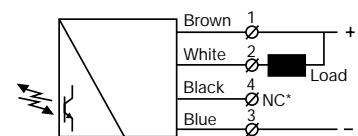
On/Off switch for transmitter power

SMT 7000



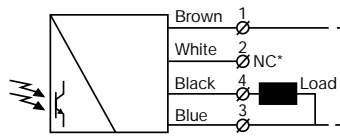
*Do not connect black wire

SMR 76XX (load as NPN)



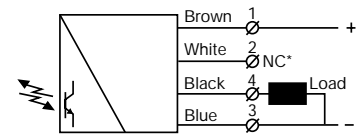
*Do not connect black wire

SMP/SMPF/SMRR 7600 (load as NPN)



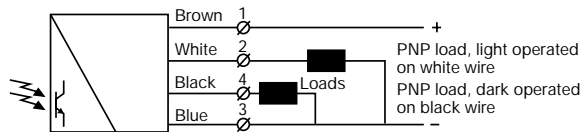
*Do not connect white wire

SMR 76XX (load as PNP)



*Do not connect white wire

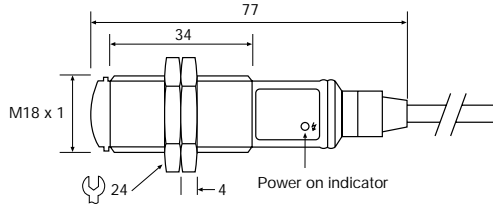
SMP/SMPF/SMRR 7600 (load as PNP)



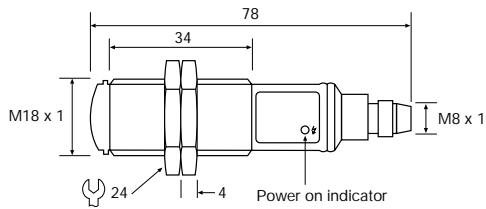
SMR 77XX

Dimensions and Descriptions

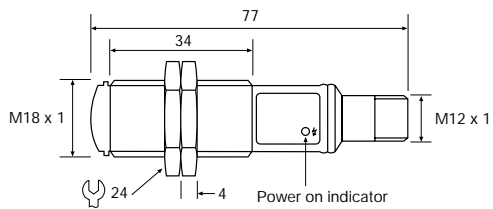
Transmitter Models



SMT 7000 TP/TS 5

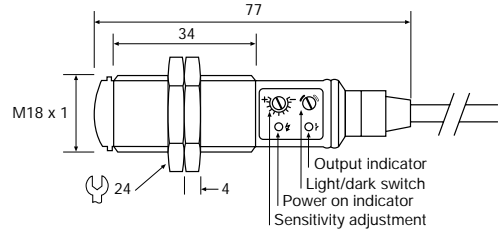


SMT 7000 TP/TS T4

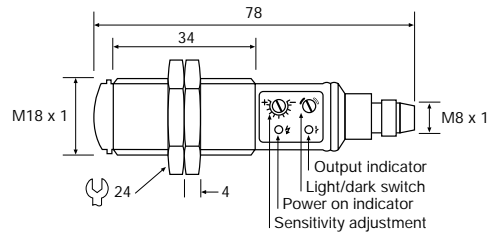


SMT 7000 TP/TS J

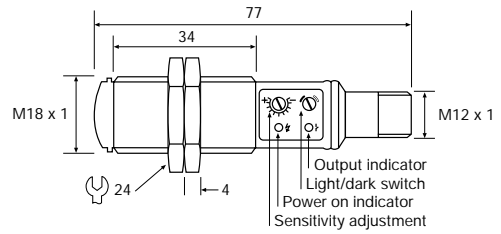
Receiver Models



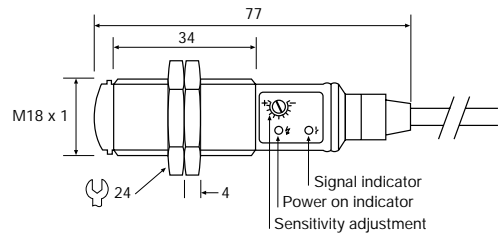
SMR/SMP/SMPF/SMRR 76XX TP/TS 5



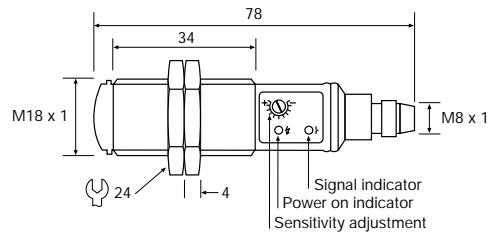
SMR/SMP/SMPF/SMRR 76XX TP/TS T4



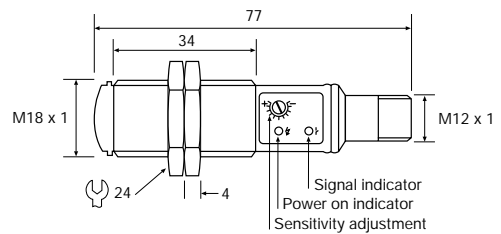
SMR/SMP/SMPF/SMRR 76XX TP/TS J



SMR 77XX TP/TS 5



SMR 77XX TP/TS T4



SMR 77XX TP/TS J

(Units in mm)

(Units in mm)