

Description

- Operation mode and max sensing range:
Thru-beam: 12 m
- Cable or plug connection
- Sensitivity adjustment via control input
- Wide variety of housings
- Power and output indicator
- High tolerance to hostile environments
- 10-30 V dc supply voltage
- 3 wire, NPN or PNP transistor output
- Test input
- UL 325 approved



The 3000 U series consists of a self-contained transmitter SMT, and a receiver SMR, which are to be used in thru-beam mode. The complete series is available in a wide range of housings with cable or plug connection.

The SMR is supplied with a 10-30 V dc supply voltage with a 3 wire, NPN or PNP transistor output with a choice between light or dark function.

The control input in the SMT may be used for either disabling or enabling the transmitting power temporarily for test purpose, multiplexing applications or as a gradual regulation of the transmitting power level.

Both the transmitter and receiver are protected against reverse polarity of power supplies, control input and output signals. The output is also protected against short circuit and inductive loads.

Technical Data

	SMT			SMR	
	3000C	3000HC	3012C	3x06	3x12
Supply voltage	10-30 V dc				
Voltage ripple	Max. 15 %				
Reverse polarity protected	Yes				
Short circuit protected	–			Yes	
Current consumption	Max. 30 mA			Max. 8 mA	
Maximum output load	–			100 mA	
Maximum residual voltage	–			2,5 V	
Maximum operation frequency	–			> 90 Hz	
Response time t _{ON} / t _{OFF}	–			< 4 ms / < 6 ms	
Power on indicator	Green LED			–	
Output indicator	–			Yellow LED	
Hysteresis	–			Approx. 25 %	
Light source	Infrared (880 nm)			–	
Opening angle	–			+/- 7°	+/- 3°
Emission angle	+/- 10°	+/- 12°	+/- 5°	–	
Housing material	Sensor housing	Nickel Plated Brass or Plastic			
	Front lens	Polycarbonate			
Cable, PVC Ø 3,4 mm	3 x 0,14 mm²				

Environmental Data

Vibration	10-55 Hz, 0,5 mm		
Shock	30 g		
Light immunity, @ 5° incidence	–	35 000 lux	12 000 lux
Temperature, operation	–20 to +50 °C		
Temperature, storage	–40 to +80 °C		
Sealing class	IP 67		
Approvals	 		

Available Types

Available types									
	Type	Control Feature	Output	Connection		5 m cable	3 pin, M8 plug	4 pin, M12 plug	Range
				Housing Material	Housing Type	Order Reference			
	Transmitter	3000C	Adjustable range and test input	-	Polycarbonate	Ø10	SMT 3000C AP 5 U	SMT 3000C AP T3 U	-
Nickel Plated Brass					M12 x 1	SMT 3000C TP 5 U	SMT 3000C TP T3 U	-	
						SMT 3000C TB 5 U	SMT 3000C TB T3 U	SMT 3000C TB J U	
Polyester					□ 9,5 x 11,5	SMT 3000C SG 5 U ¹	SMT 3000C SG T3 U	-	
Polycarbonate					Ø12,7 Snap	SMT 3000C S30 5 U ¹	-	-	
					M18 x 1	SMT 3000C TP18 5 U	-	SMT 3000C TP18 J U	
3000HC			-	Polycarbonate	Ø10	SMT 3000HC AP 5 U	SMT 3000HC AP T3 U	-	*1-9 m
				Nickel Plated Brass	M12 x 1	SMT 3000HC TP 5 U	SMT 3000HC TP T3 U	-	
						SMT 3000HC TB 5 U	SMT 3000HC TB T3 U	SMT 3000HC TB J U	
				Polyester	□ 9,5 x 11,5	SMT 3000HC SG 5 U ¹	SMT 3000HC SG T3 U	-	
				Polycarbonate	Ø12,7 Snap	SMT 3000HC S30 5 U ¹	-	-	
					M18 x 1	SMT 3000HC TP18 5 U	-	SMT 3000HC TP18 J U	

Receiver	-	-	3006	NPN LO (NC)	Polycarbonate	Ø10	SMR 3006 AP 5 U	SMR 3006 AP T3 U	-	6 m (*9 m)
						M12 x 1	SMR 3006 TP 5 U	SMR 3006 TP T3 U	-	
					Nickel Plated Brass		□ 9,5 x 11,5	SMR 3006 TB 5 U	SMR 3006 TB T3 U	
					Polyester	Ø12,7 Snap		SMR 3006 S30 5 U ¹	-	
					Polycarbonate	M18 x 1	SMR 3006 TP18 5 U	-	SMR 3006 TP18 J U	
						3106	NPN DO (NO)	Polycarbonate	Ø10	
			M12 x 1	SMR 3106 TP 5 U	SMR 3106 TP T3 U				-	
				Nickel Plated Brass	□ 9,5 x 11,5			SMR 3106 TB 5 U	SMR 3106 TB T3 U	
			Polyester	Ø12,7 Snap				SMR 3106 S30 5 U ¹	-	
			Polycarbonate	M18 x 1	SMR 3106 TP18 5 U			-	SMR 3106 TP18 J U	
				3206	PNP LO (NC)			Polycarbonate	Ø10	
			M12 x 1			SMR 3206 TP 5 U	SMR 3206 TP T3 U		-	
						Nickel Plated Brass	□ 9,5 x 11,5	SMR 3206 TB 5 U	SMR 3206 TB T3 U	
			Polyester			Ø12,7 Snap		SMR 3206 S30 5 U ¹	-	
			Polycarbonate			M18 x 1	SMR 3206 TP18 5 U	-	SMR 3206 TP18 J U	
						3306	PNP DO (NO)	Polycarbonate	Ø10	
			M12 x 1	SMR 3306 TP 5 U	SMR 3306 TP T3 U				-	
				Nickel Plated Brass	□ 9,5 x 11,5			SMR 3306 TB 5 U	SMR 3306 TB T3 U	
			Polyester	Ø12,7 Snap				SMR 3306 S30 5 U ¹	-	
			Polycarbonate	M18 x 1	SMR 3306 TP18 5 U			-	SMR 3306 TP18 J U	

Note: Sensors marked ¹ do not have power on or output indicators incorporated.

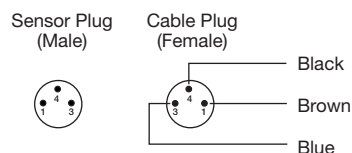
Transmitter	3012C	Adjustable range and test input	-	Polycarbonate	Ø10	SMT 3012C AP 5 U	SMT 3012C AP T3 U	-	2-12 m
				Nickel Plated Brass	M12 x 1	SMT 3012C TP 5 U	SMT 3012C TP T3 U	-	
						SMT 3012C TB 5 U	SMT 3012C TB T3 U	SMT 3012C TB J U	

Receiver	-		3012	NPN LO (NC)	Polycarbonate	Ø10	SMR 3012 AP 5 U	SMR 3012 AP T3 U	-	12 m
					Nickel Plated Brass	M12 x 1	SMR 3012 TP 5 U	SMR 3012 TP T3 U	-	
							SMR 3012 TB 5 U	SMR 3012 TB T3 U	SMR 3012 TB J U	
			3112	NPN DO (NO)	Polycarbonate	Ø10	SMR 3112 AP 5 U	SMR 3112 AP T3 U	-	
					Nickel Plated Brass	M12 x 1	SMR 3112 TP 5 U	SMR 3112 TP T3 U	-	
							SMR 3112 TB 5 U	SMR 3112 TB T3 U	SMR 3112 TB J U	
			3212	PNP LO (NC)	Polycarbonate	Ø10	SMR 3212 AP 5 U	SMR 3212 AP T3 U	-	
					Nickel Plated Brass	M12 x 1	SMR 3212 TP 5 U	SMR 3212 TP T3 U	-	
							SMR 3212 TB 5 U	SMR 3212 TB T3 U	SMR 3212 TB J U	
			3312	PNP DO (NO)	Polycarbonate	Ø10	SMR 3312 AP 5 U	SMR 3312 AP T3 U	-	
					Nickel Plated Brass	M12 x 1	SMR 3312 TP 5 U	SMR 3312 TP T3 U	-	
							SMR 3312 TB 5 U	SMR 3312 TB T3 U	SMT 3312 TB J U	

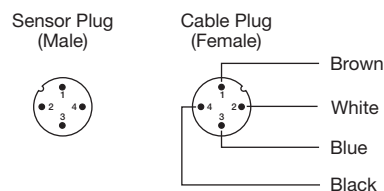
Connections

	Cable	M8 Plug / Cable	M12 Plug / Cable
Supply +	Brown	Pin 1 / Brown	Pin 1 / Brown
Supply -	Blue	Pin 3 / Blue	Pin 3 / Blue
SMT control input	Black	Pin 4 / Black	Pin 4 / Black
SMR output	Black	Pin 4 / Black	Pin 4 / Black

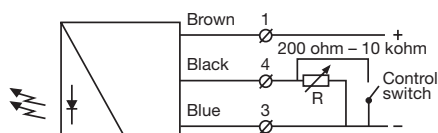
3 pin, M8



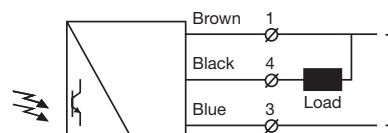
4 pin, M12



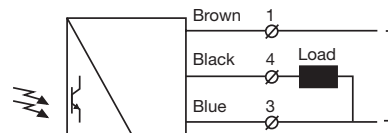
Wiring Diagrams



SMT 30xxxC
Variable range and ON/OFF switch
for transmitting power

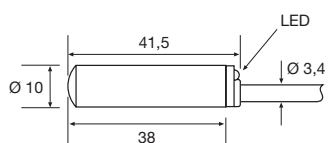


SMR 30xx / 31xx

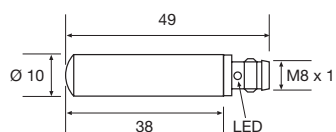


SMR 32xx / 33xx

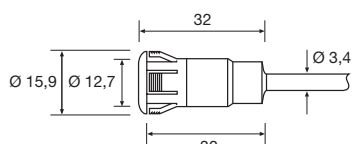
Dimensions and Descriptions



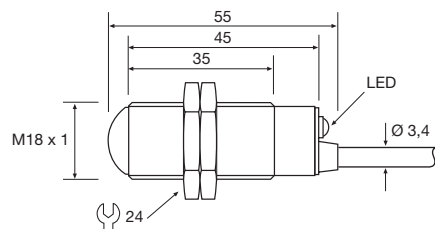
AP 5



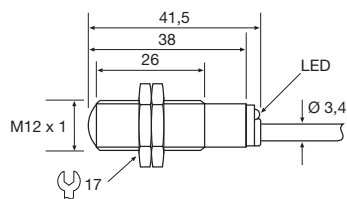
AP T3



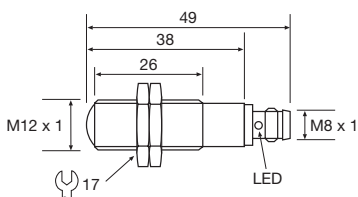
S30 5



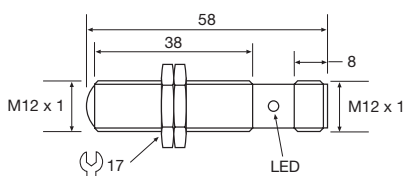
TP18 5



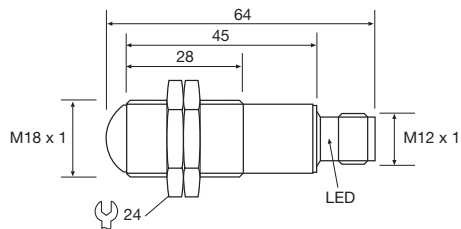
TP/TB 5



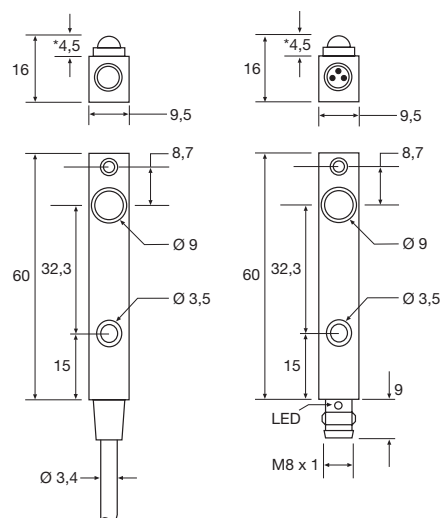
TP/TB T3



TB J



TP18 J



SG 5

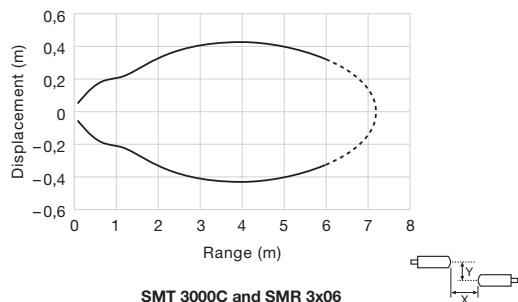
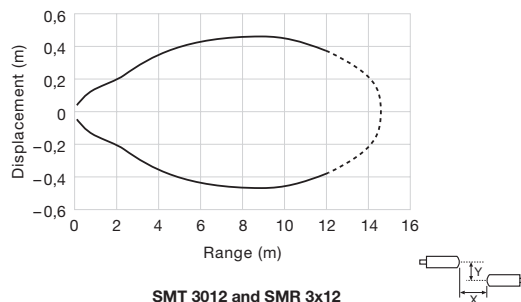
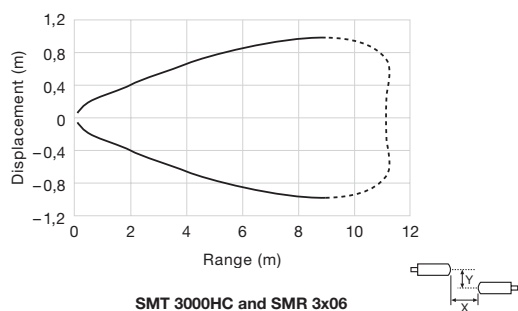
SG T3

* SMT 3000C: 2,7

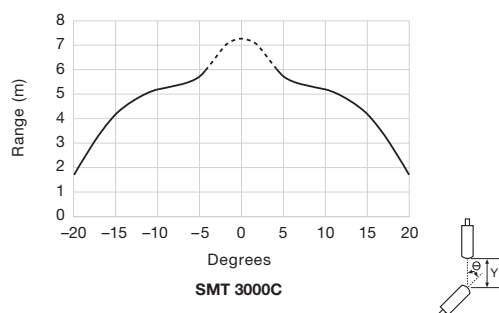
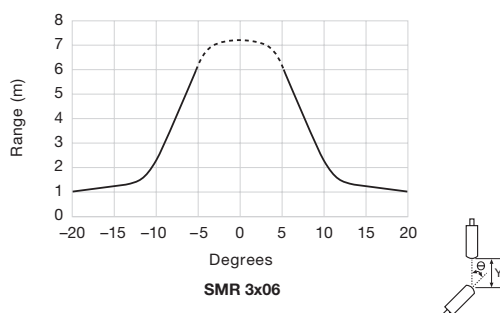
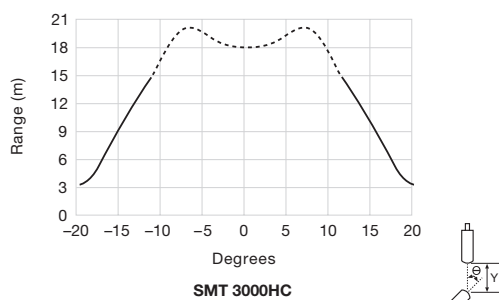
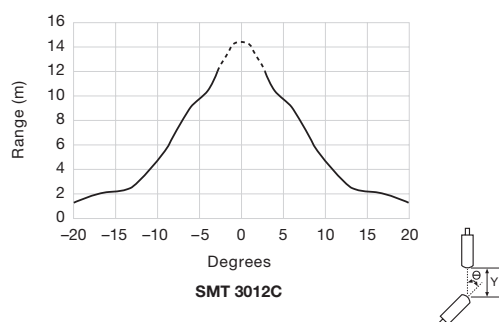
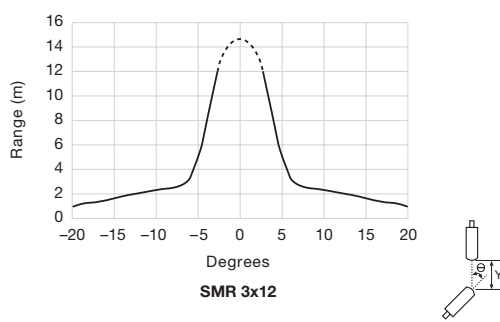
(Units in mm)

Sensing Characteristics

Parallel Displacement



Angular Displacement



Telco reserves the right to change specifications without notice.