

Smooth Barrel Proximity Sensors

TL

*Cylindrical dia 8 mm  
all-metal housing with  
M8 plug connection  
or pre-wired*



Ordering information

Short barrel type

Versions			S <sub>n</sub> (mm)	Output			
Size	Type	Connector		NPN		PNP	
				NO	NC	NO	NC
8 mm	Shielded	Connector	1.5	TL-C1R5E1-M3-E1	TL-C1R5E2-M3-E1	TL-C1R5F1-M3-E1	TL-C1R5F2-M3-E1
		Pre-wired		TL-C1R5E1-E1	TL-C1R5E2-E1	TL-C1R5F1-E1	TL-C1R5F2-E1
	Non-shielded	Connector	2	TL-C2ME1-M3-E1	TL-C2ME2-M3-E1	TL-C2MF1-M3-E1	TL-C2MF2-M3-E1
		Pre-wired		TL-C2ME1-E1	TL-C2ME2-E1	TL-C2MF1-E1	TL-C2MF2-E1

Long barrel type

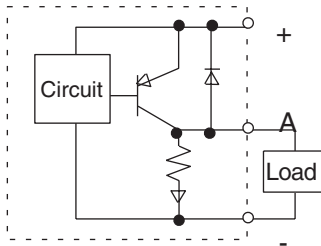
Versions			S <sub>n</sub> (mm)	Output			
Size	Type	Connector		NPN		PNP	
				NO	NC	NO	NC
8 mm	Shielded	Connector	1.5	TL-C1R5E1-M3-E2	TL-C1R5E2-M3-E2	TL-C1R5F1-M3-E2	TL-C1R5F2-M3-E2
		Pre-wired		TL-C1R5E1-E2	TL-C1R5E2-E2	TL-C1R5F1-E2	TL-C1R5F2-E2
	Non-shielded	Connector	2	TL-C2ME1-M3-E2	TL-C2ME2-M3-E2	TL-C2MF1-M3-E2	TL-C2MF2-M3-E2
		Pre-wired		TL-C2ME1-E2	TL-C2ME2-E2	TL-C2MF1-E2	TL-C2MF2-E2

Specifications

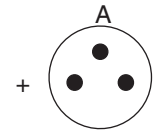
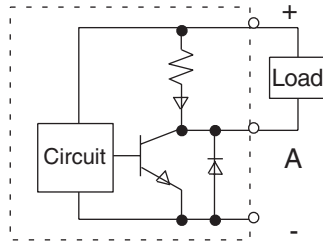
Type	8 mm Ø	
	TL-C1R5□□-E1 TL-C1R5□□-E2	TL-C2M□□-E1 TL-C2M□□-E2
Sensing distance (S <sub>n</sub> )	1.5 mm ± 10%	2 mm ± 10%
Power supply	10 to 35 V DC	
Power consumption	15 mA max.	
Object St 37	8 x 8 x 1 mm	
Switching hysteresis	1 to 15 %	
Switching frequency	5 kHz	
Temperature dependency	10% max.	
Ambient temperature	-25° to 70° C	
Switching output	300 mA max.	
Residual voltage	2.5 V max.	
Function display	1 LED	
Degree of protection	IP 65	
Housing material	Nickel-plated brass	

Output circuits

PNP output



NPN output

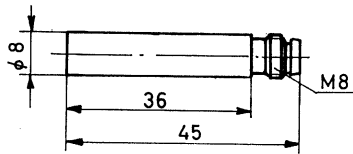


Reduction factors (typical values)

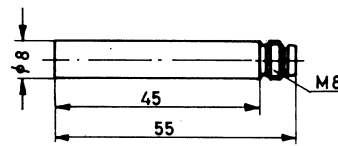
Chrome-nickel	Sn x 0.9
Brass	Sn x 0.5
Aluminium	Sn x 0.45
Copper	Sn x 0.4

Dimensions (mm)

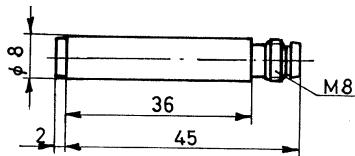
TL-C1R5□□-E1



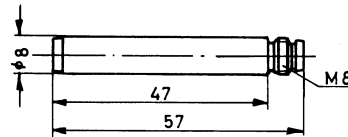
TL-C1R5□□-E2



TL-C2M□□-E1

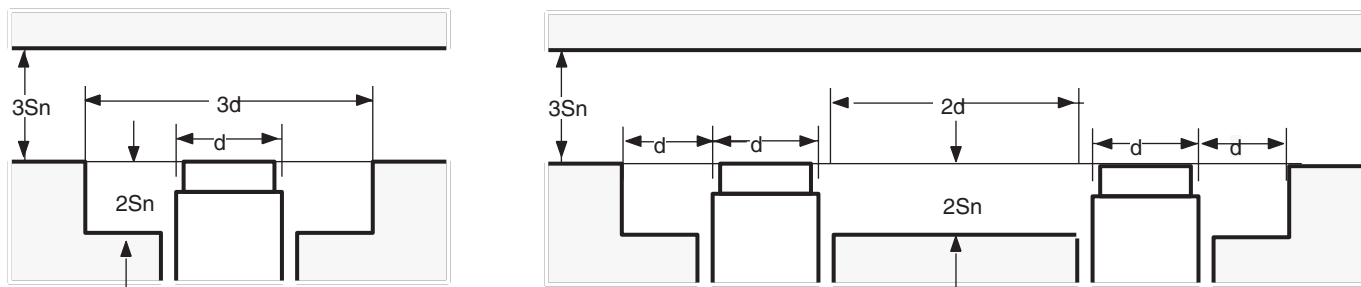


TL-C2M□□-E2



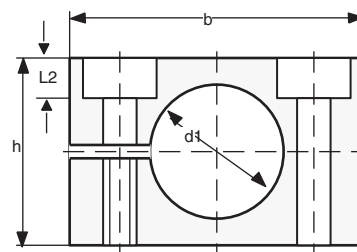
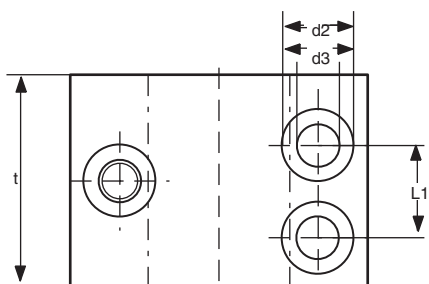
## Installation

The minimum clearances indicated below must always be maintained in the case of non-shielded mounted types.



### Installation accessories

Type	d1	d2	d3	L1	L2	w	h	d	Material
Y92E-B8-E1	8.0	6.0	3.2	7.5	3.3	20	12	16	Brass
Y92E-B8-E2	8.0	6.0	3.2	7.5	3.3	20	14	16	Plastic



TL

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.