

# Short-body

## Ultra Short Housing



Appearance		
Mounting	Shielded	
Housing size	φ 6.5	φ 6.5Y
Sensing distance	1mm/2mm ± 10%	
Housing material	Stainless steel	
Operating voltage	10~30V DC(Ripple < 10%)	
Voltage drop	< 1.5V	
Load Current , Max	150mA	
Current consumption	< 10mA	
Leakage current	< 0.01mA	
Switch frequency	2KHz	
Repeat accuracy	< 1.0% (Sr)	
Hysteresis	< 15% (Sr)	
Sensing surface material	PBT	
Operating Temperature	-25°C~+75°C	
Protective circuit	Short circuit	
Degree of protection	IP67	
Model No.	NPN Normally open	TSSF6.5-01[NIO]/TSSF6.5-02[NIC]
	NPN Normally closed	TSSF6.5Y-01[NIC]/TSSF6.5-02[NIC]
	PNP Normally open	TSSF6.5Y-01[PIO]/TSSF6.5-02[PIO]
Others	[NIC]:NPN Normally open [NIC]:NPN Normally closed [PIO]:PNP Normally open [PIO]:PNP Normally closed	



Appearance		
Mounting	Shielded	
Housing size	M8	M12
Sensing distance	1mm/2mm ± 10%	2mm/4mm ± 10%
Housing material	Stainless steel	
Operating voltage	10~30V DC(Ripple < 10%)	
Voltage drop	< 1.5V	
Load Current , Max	150mA	
Current consumption	< 10mA	
Leakage current	< 0.01mA	
Switch frequency	2KHz	
Repeat accuracy	< 1.0% (Sr)	
Hysteresis	< 15% (Sr)	
Sensing surface material	PBT	
Operating Temperature	-25°C~+75°C	
Protective circuit	Short circuit, except TSSF08-02[NIC]	
Degree of protection	IP67	
Model No.	NPN Normally open	TSSF08-01[NIO]/TSSF08-02[NIC]
	NPN Normally closed	TSSF12-02[NIC]/TSSF12-04[NIC]
	PNP Normally open	TSSF12-02[PIO]/TSSF12-04[PIO]
Others	[NIC]:NPN Normally open [NIC]:NPN Normally closed [PIO]:PNP Normally open [PIO]:PNP Normally closed	

# Short-body

## General Shot Housing



Appearance					
Mounting	Shielded				
Housing size	M8	M12	M18	M30	
Sensing distance	1mm/2mm ± 10%	2mm/4mm ± 10%	5mm/8mm ± 10%	10mm/16mm ± 10%	
Housing material	Stainless steel				
Operating voltage	10~30V DC(Ripple < 10%)				
Voltage drop	< 1.5V				
Load Current, Max	150mA				
Current consumption	< 10mA				
Leakage current	< 0.01mA				
Switch frequency	2KHz	2KHz/1Hz	1KHz/500Hz	300Hz/150Hz	
Repeat accuracy	< 1.0% (Sr)				
Hysteresis	< 15% (Sr)				
Sensing surface material	PBT				
Operating Temperature	-25°C~+75°C				
Protective circuit	Short circuit				
Degree of protection	IP67				
Model No.	NPN Normally open	TSF08-01  / TSF08-02	TSF12-02  / TSF12-04	TSF18-05  / TSF18-08	TSF30-10  / TSF30-16
	Others	:NPN Normally open	:NPN Normally closed	:PNP Normally open	:PNP Normally closed



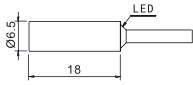
Appearance					
Mounting	Unshielded				
Housing size	M8	M12	M18	M30	
Sensing distance	2mm/4mm ± 10%	4mm/8mm ± 10%	8mm/16mm ± 10%	15mm/25mm ± 10%	
Housing material	Stainless steel	Nickle plated brass			
Operating voltage	10~30V DC(Ripple < 10%)				
Voltage drop	< 1.5V				
Load Current, Max	150mA				
Current consumption	< 10mA			< 20mA	
Leakage current	< 0.01mA				
Switch frequency	2KHz/1KHz	1KHz/500Hz	500Hz/150Hz	150Hz/100Hz	
Repeat accuracy	< 1.0% (Sr)				
Hysteresis	< 15% (Sr)				
Sensing surface material	PBT				
Operating Temperature	-25°C~+75°C				
Protective circuit	Short circuit				
Degree of protection	IP67				
Model No.	NPN Normally open	TSN08-02  / TSN08-04	TSN12-04  / TSN12-08	TSN18-08  / TSN18-16	TSN30-15  / TSN30-25
	Others	:NPN Normally open	:NPN Normally closed	:PNP Normally open	:PNP Normally closed

# Short-body

## Extra Shot Outer Casing-Dimensions (Unit:mm)

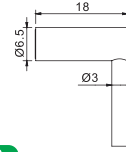
M6.5

TSSF6.5-01/02/03 □ □



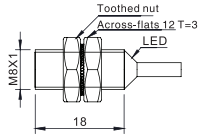
M6.5Y

TSSF6.5Y-01/02/03 □ □



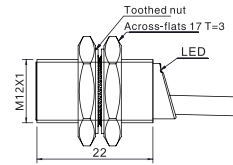
M8

TSSF08-01/02/03 □ □



M12

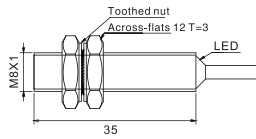
TSSF12-02/04/06 □ □



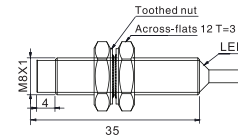
## General-Dimensions (Unit:mm)

M8

TSF08-01/02 □ □

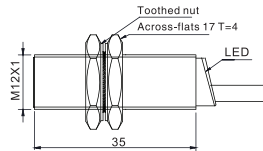


TSN08-02/04 □ □

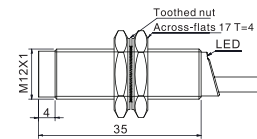


M12

TSF12-02/04 □ □

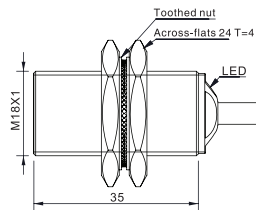


TSN12-04/08 □ □

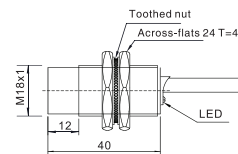


M18

TSF18-05/08 □ □

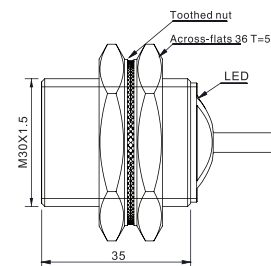


TSN18-08/16 □ □



M30

TSF30-10/16 □ □



TSN30-15/25 □ □

