

PHOTOELECTRIC SENSORS FT18M SERIES

10 ÷ 30 VDC



STAINLESS STEEL CYLINDRICAL HOUSING M18x1

PROGRAMMABLE OUTPUT NPN/PNP

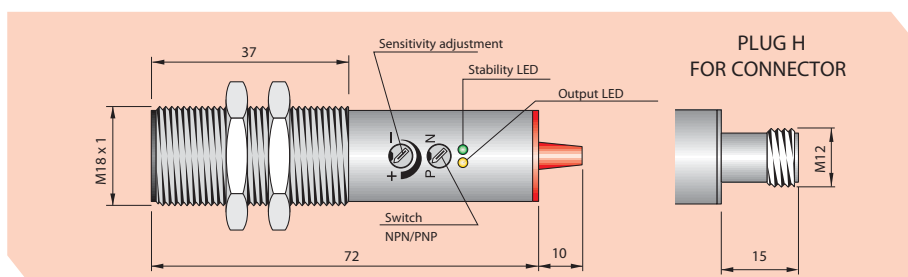
FUNCTIONS NO + NC

SENSITIVITY ADJUSTMENT

AXIAL BEAM

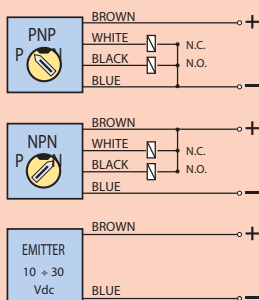
TECHNICAL CHARACTERISTICS

Dimensions mm



TYPE		DIRECT REFLECTION		REFLECTION WITH REFLECTOR	POLARIZED REFLECTION WITH REFLECTOR	THRU BEAM	
MODEL WITH CABLE		FT18M-CP2	FT18M-CP4	FT18M-CR	FT18M-CAR	FT18M-CBR	FT18M-CBE
MODEL WITH H PLUG		FT18M-CP2-H	FT18M-CP4-H	FT18M-CR-H	FT18M-CAR-H	FT18M-CBR-H	FT18M-CBE-H
Sensing range (Sn)	cm	20*	40*	250**	100**	1500	
Programmable output		NPN/PNP				NO + NC	
Light source	Led	Infrared				Red	Infrared
Power ON delay	mSec	≤ 75					
Switching frequency	Hz	700					250
Continuous voltage (Res. ripple ≤10%)	V	10 ÷ 30					
Max output current	mA	200					-
Max current consumption at 24 Vdc	mA	≤ 50	≤ 20				≤ 35
Voltage drop (I out = 200 mA)	V	≤ 3					-
Short circuit protection		Incorporated					-
Light immunity		> 10.000 Lux					-
LED	Yellow	Operation indicator					Power supply (Red led)
	Green	Stability					
Temperature limit	°C	Storage -20 ÷ +90°C • Working -20 ÷ +50°C					
Protection degree	IP	67					
Housing		Stainless steel AISI 303					
Cable	2m	4 x 0.25 mm ²				4 x 0,25 mm ²	2 x 0,50 mm ²
Connector plug		H					

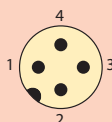
WIRING DIAGRAMS



N.B.: On request is available cable for sensors with different length 3.5 - 5 - 7.5 - 10 m.

CONNECTION WHIT H PLUG FOR CONNECTORS SEE PAGE 85

VIEW OF MALE CONNECTOR H

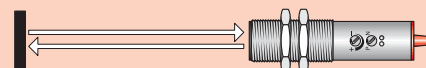


2 WIRINGS (EMITTER)
1 = Brown / +
3 = Blue / -

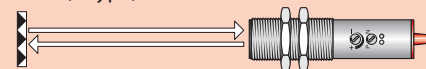
4 WIRINGS
1 = Brown / +
3 = Blue / -
4 = Black / output NO
2 = White / output NC

TYPES

Direct reflection (P type)



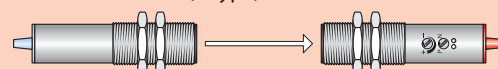
Reflection with reflector (R type)



Polarized reflection (AR type)



Thru beam emitter + receiver (B type)

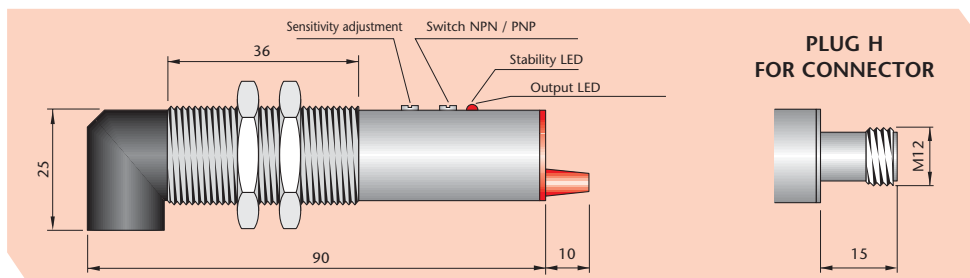


*The sensing distance is related to matt white paper dim. 10 x 10 cm. **The sensing distance is related to CT80 reflector.

PHOTOELECTRIC SENSORS FT18M SERIES 90° BEAM 10 ÷ 30 VDC

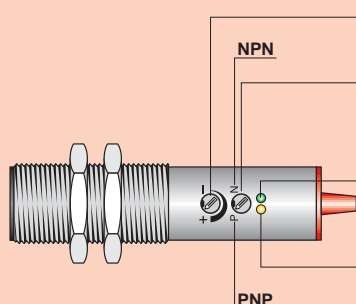


STAINLESS STEEL CYLINDRICAL HOUSING M18x1
PROGRAMMABLE OUTPUT NPN/PNP
FUNCTIONS NO + NC
SENSITIVITY ADJUSTMENT
90° BEAM



DIRECT REFLECTION		REFLECTION WITH REFLECTOR	POLARIZED REFLECTION WITH REFLECTOR	RECEIVER THRU BEAM	EMITTER
FT18M-CP2-90	FT18M-CP4-90	FT18M-CR-90	FT18M-CAR-90	FT18M-CBR-90	FT18M-CBE-90
FT18M-CP2-90-H	FT18M-CP4-90-H	FT18M-CR-90-H	FT18M-CAR-90-H	FT18M-CBR-90-H	FT18M-CBE-90-H
20*	40*	250**	100**	1500	
		NPN/PNP	NO + NC	-	
Infrared			Red	Infrared	
≤ 75					
700				250	
10 ÷ 30					
200					-
≤ 50	≤ 20				≤ 35
≤ 3					-
Incorporated					-
> 10.000 Lux					-
Operation indicator					Power supply (Red led)
Stability					
Storage -20 ÷ +90°C • Working -20 ÷ +50°					
67					
Stainless steel AISI 303					
4 x 0,25 mm²				4 x 0,25 mm²	2 x 0,50 mm²
H					

INSTRUCTIONS FOR THE PROGRAMMING AND ADJUSTMENT



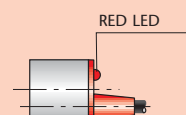
- **TRIMMER FOR THE SENSING RANGE ADJUSTMENT:** The photocell is supplied with max. sensing range with the trimmer totally rotated in the clockwise direction. The sensitivity reduces by rotating the trimmer in the anti-clockwise direction.
- **SWITCH NPN/PNP:** The photocell is supplied with the switch in P (PNP output). To change to NPN turn the switch to N in the anti-clockwise direction. **WARNING!** For a correct working of the unit, do not carry out the switching when the photocell is powered.
- **GREEN LED - STABILITY INDICATOR:** This led is on when the level of the output signal and the alignment of the photoelectric sensors are in the optimum position. In the case that the led is off this indicates that the lens is obscured or for the types with direct reflection a possible alteration of the dimension or color of the object to be detected.
- **YELLOW LED - OPERATION INDICATOR:** This led is on when the object to be detected enters the sensing range of the photocell giving output signals.

NOTE! Before giving a power supply to the photocell it is recommended that the same unit be programmed by using the switch in the required function NPN or PNP.

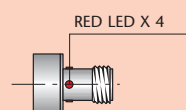
NOTE! It is recommended that the trimmer and the switch be rotated very carefully by using a proper tool otherwise these can be seriously damaged.

EMITTER FT18M-CBE

POWER SUPPLY LED POSITION



TYPES WITH CABLE



TYPES WITH CONNECTOR