

PHOTOELECTRIC SENSORS

RETRO REFLECTIVE

12÷30 V DC PROGRAMMABLE OUTPUT

- Square housing
- Compact size, output and stability indicators
- Cost effective
- Cable or M12 quick connect models
- Fast response time: 2.5 ms / 200 Hz
- Version for transparent

FQ Series

IDENTIFICATION CODE

FQ	02	P	T*	K

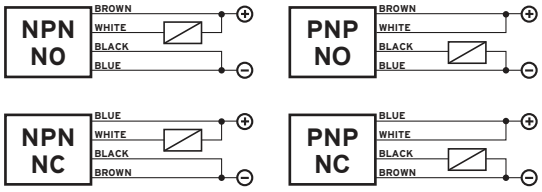
- SERIES FQ
- PROGRAMMABLE OUTPUT
- POLARIZED OPTIC
- FOR TRANSPARENT
- CONNECTOR OUTPUT M12

* Long tail option not available with option "K".

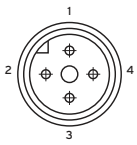
AVAILABLE	POLARIZED	POLAR. FOR TRANSPARENT	STANDARD
NOMINAL SWITCHING DISTANCE (Sn)	**6 m** (1)	**0,05 ÷ 2m** (1)	**13 m** (1)
TOLERANCE	+10/-10 %Sn		
HYSTERESIS	10%		
EMISSION	Red (660 nm)		Infrared (875 nm)
NOMINAL VOLTAGE	12 ÷ 30VDC (-15 /+10%)		
RESIDUAL RIPPLE	10%		
OUTPUT	NPN or PNP (programmable)		
CONTACT	NO or NC (programmable)		
MAX. OUTPUT CURRENT	200 mA		
ABSORPTION AT 30 VDC	40 mA		
VOLTAGE DROP (Sensor ON)	1.8 V (I = 100 mA)		
YELLOW LED	Output indicator		
GREEN LED	Supply indicator		
SENSITIVITY ADJUSTEMENT	Trimmer 1 turn		
SWITCHING FREQUENCY	200 Hz		
RESPONSE TIME	2.5 ms		
START UP DELAY	100 ms		
SHORT CIRCUIT PROTECTION	Present (self-resetting)		
ELECTRIC PROTECTIONS	Againts polarity reversal - inductive loads		
TEMPERATURE LIMITS	-10 ÷ +60 °C		
LIGHT IMMUNITY	> 10.000 Lux (2)		
PROTECTION DEGREE	IP 65		
CABLE LENGTH	2 m		
CABLE SECTION	4 x 0.25 mm²		
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate		
WEIGHT - cable output - (connector output)	- 160 g - (120 g)		

(1) Determined with CT04S reflector.
(2) Determined with halogen tungsten lamp 3000 °K.
Note: for a proper use see norms at pages 18, 19, 20, 21 and 22.

WIRING DIAGRAMS



CONNECTION WITH CONNECTOR M12 (K)



CONTACTS CONFIGURATION

Output	Contacs numbers			
	1	2	3	4
NPN NO	+	NO	−	−
NPN NC	−	NC	+	−
PNP NO	+	+	−	NO
PNP NC	−	+	+	NC
Emitter	+		−	

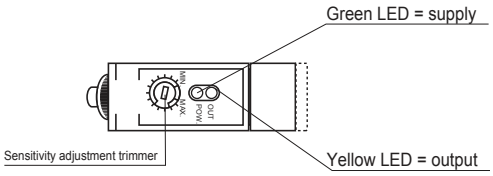
View of quadripole male connector.

Note: Photoelectric sensor not suitable for use with 90° connectors.

SENSITIVITY ADJUSTMENT

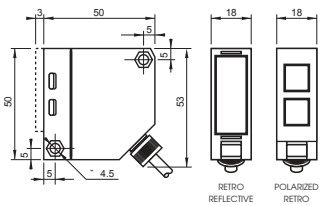
1) **SENSITIVITY INCREASE**
Screw the trimmer towards right towards position "+"

2) **SENSITIVITY DECREASE**
Screw the trimmer towards left towards position "-"



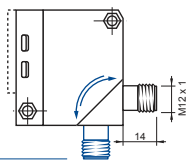
Note: the trimmer just needs one turn.

DIMENSIONS (mm)



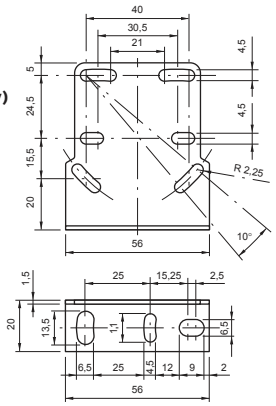
Configuration with cable

Configuration with connector K

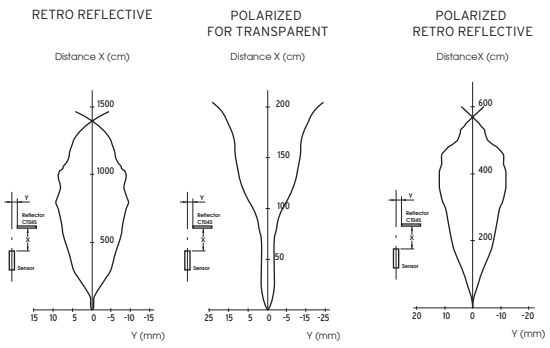


Rotating connector

Mounting bracket (supplied accessory)



CHARACTERISTIC CURVES



PHOTOELECTRIC

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