



Retro Ref. Photoelectric Sensors



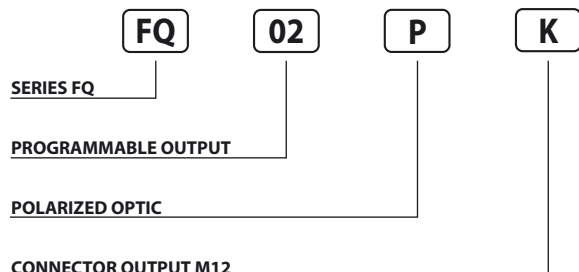
PHOTOELECTRIC SENSORS IN SQUARE HOUSING 12 ÷ 30 V DC PROGRAMMABLE OUTPUT

- Compact size, output and stability indicators
- Cost effective
- Cable or M12 quick connect models
- Fast response time: 5 mS / 200 Hz

FQ Series



Identification code



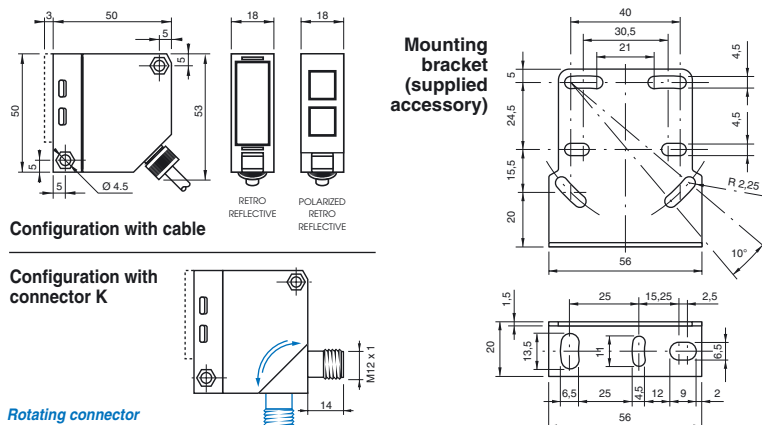
AVAILABLE	POLARIZED	STANDARD
NOMINAL SWITCHING DISTANCE (Sn)	6 m ⁽¹⁾	13 m ⁽¹⁾
TOLERANCE	+10/-10 %Sn	
HYSTERESIS	10%	
EMISSION	Red (660 nm)	Infrared (875 nm)
NOMINAL VOLTAGE	12 ÷ 30VDC (-15 /+10%)	
RESIDUAL RIPPLE	≤ 10%	
OUTPUT	NPN or PNP (programmable)	
CONTACT	NO or NC (programmable)	
MAX. OUTPUT CURRENT	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 ADJUSTMENT	Trimmer 1 turn	
SWITCHING FREQUENCY	200 Hz	
RESPONSE TIME	5 mS	
START UP DELAY	100 mS	
SHORT CIRCUIT PROTECTION	Present (self-resetting)	
ELECTRIC PROTECTIONS	Against 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 mm ²	
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate	
WEIGHT - cable output - (connector output)	- 160 g - (120 g)	

⁽¹⁾ Determined with CT04S reflector.

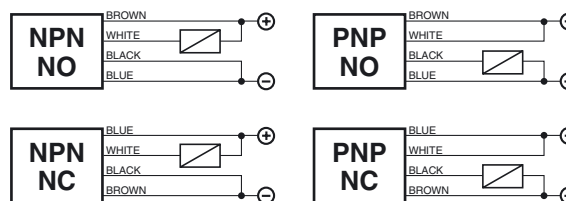
⁽²⁾ Determined with halogen tungsten lamp 3000° K.

Note: for a proper use see norms at pages 12, 13, 14, 15 and 16.

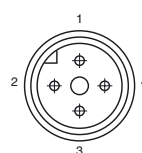
Dimensions (mm)



Wiring diagrams



Connection with connector M12 (K)



CONTACTS CONFIGURATION

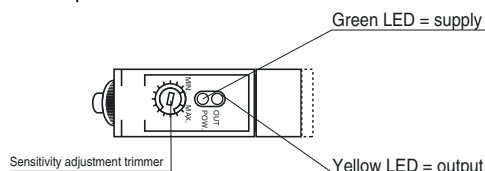
Output	Contacts numbers			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC
Emitter	+	-	-	-

View of quadrupole 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.

Characteristic curves

