

# Thru Beam Photoelectric Sensors



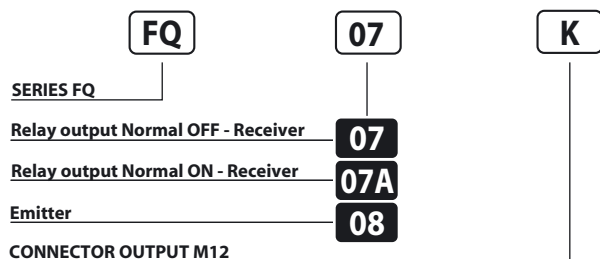
PHOTOELECTRIC SENSORS IN SQUARE HOUSING 14 ÷ 230 V AC - DC RELAY OUTPUT

- Wide input voltage
- 3A relay SPDT
- Cable or M12 quick connect models
- Output and Stability indicators

**FQ Series**



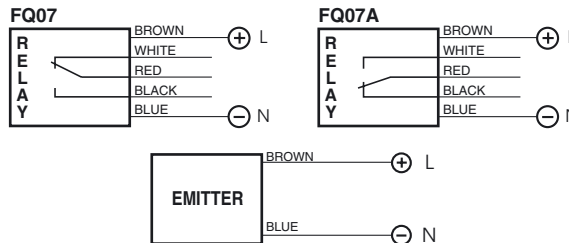
## Identification code



AVAILABLE	RECEIVER	EMITTER
NOMINAL SWITCHING DISTANCE (Sn)	<b>20 m</b>	
TOLERANCE	+10/-10 %Sn	
HYSTERESIS	10%	
EMISSION	-	Infrared (875 nm)
NOMINAL VOLTAGE	14 ÷ 230V AC - DC (-15 /+10%)	
MAINS FREQUENCY	50 ÷ 60 Hz	
OUTPUT	Relay (10 x 10 <sup>6</sup> ops. min.)	-
MAX. OUTPUT CURRENT	3A 30V AC - 1A 220V AC (90W, 360 VA)	-
ABSORPTION	2.5 VA	
YELLOW LED	Output indicator	-
GREEN LED	Supply indicator	
SENSITIVITY ADJUSTMENT	Trimmer 1 turn	-
SWITCHING FREQUENCY	10 Hz	
RESPONSE TIME	100 mS	
START UP DELAY	≤ 300 mS	
TEMPERATURE LIMITS	-10 ÷ +60° C	
LIGHT IMMUNITY	> 10.000 Lux <sup>(1)</sup>	
PROTECTION DEGREE	IP 65	
CABLE LENGTH	2 m	
CABLE SECTION	5 x 0.30 mm <sup>2</sup>	2 x 0.25 mm <sup>2</sup>
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate	
WEIGHT - cable output - (connector output)	- 180 g - (125 g)	

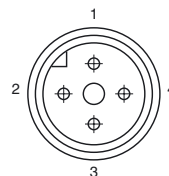
<sup>(1)</sup> Determined with halogen tungsten lamp 3000° K.  
Note: for a proper use see norms at pages 14, 15, 16, 17 and 18.

## Wiring diagrams



**Note:** in case of inductive loads it is necessary to connect one diode in antiparallel at the edges of the load.

## Connection with connector M12 (K)



View of quadrupole male connector.

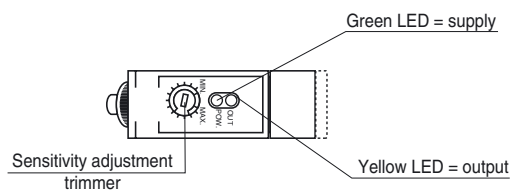
### CONTACTS CONFIGURATION

Output	Contacts numbers			
	1	2	3	4
Relay	L	COM	N	NO
Emitter	L (+)	-	N (-)	-
Wire colors	brown	white	blue	black

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

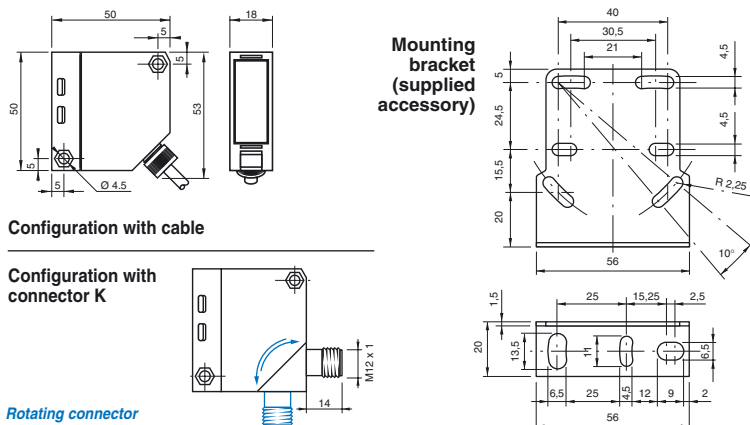
## Sensitivity adjustment

- 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)



## Characteristic curves

### EMITTER RECEIVER THRU BEAM

