

PHOTOELECTRIC SENSORS

RETRO REFLECTIVE

12÷30 V DC WITH PROGRAMMABLE OUTPUT

- Rectangular housing
- Multi-function timer
- ON/OFF delay
- One shot-four functions
- NPN or PNP programmable outputs
- Conduit wiring terminal block

INFRA

FW Series

IDENTIFICATION CODE

FW 03 P T K

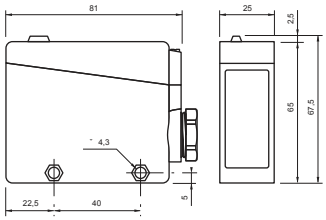
- **FW** — SERIES FW
- **03** — NPN PNP OUTPUT
- **P** — POLARIZED OPTIC
- **T** — TIME DELAY 1 ÷ 7 SEC.
- **K** — CONNECTOR OUTPUT M12

AVAILABLE	POLARIZED	STANDARD
NOMINAL SWITCHING DISTANCE (Sn)	**9 m** (1)	**15 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)	
MAX OUTPUT CURRENT	200 mA	
ABSORPTION	40 mA	
VOLTAGE DECREASE	2.5 VDC	
YELLOW LED	Light on indicator	
GREEN LED	Supply indicator	
SENSITIVITY ADJUSTEMENT	Trimmer 1 turn	
TIME REGULATION	0.1 ÷ 7 s ± 2 s (only models with timer)	
SWITCHING FREQUENCY	200 Hz	
RESPONSE TIME	2.5 ms	
START UP DELAY	300 ms	
PROTECTION AGAINTS SHORT-CIRCUIT	Present (self-resetting)	
TEMPERATURE LIMITS	-10° ÷ +60 °C	
LIGHT IMMUNITY	10.000 Lux (2)	
PROTECTION DEGREE	IP 67	
CONNECTIONS	Screw or M12 conn.	
CABLE GUIDE	PG 13.5	
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate	
WEIGHT (Approximately)	110 g	

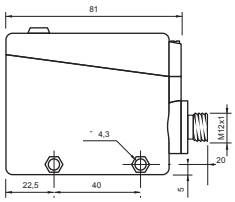
(1) Determined with CT04S reflector.
(2) Determined with halogen tungsten lamp 3000 °K.

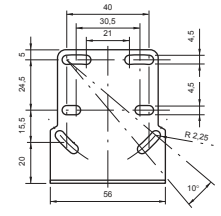
Note: for a proper use see norms at pages 18, 19, 20, 21 and 22.

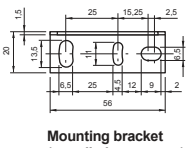
DIMENSIONS (mm)



Photoelectric sensor

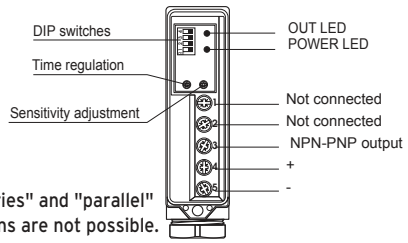






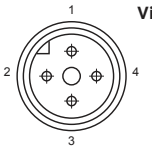
Mounting bracket (supplied accessory)

WIRING DIAGRAMS



Note: "series" and "parallel" connections are not possible.

CONNECTION WITH CONNECTOR M12 (K)



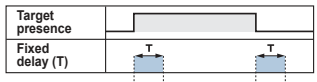
View of quadripole male connector

CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO + NC)			-	NO/NC

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

TIMING DIAGRAMS



ALL MODELS

NO.	FUNCTION	DIP SWITCHES	OUTPUT DIAGRAM
1	Muting	ON OFF 1 2 3 4	PNP = NO NPN = NO

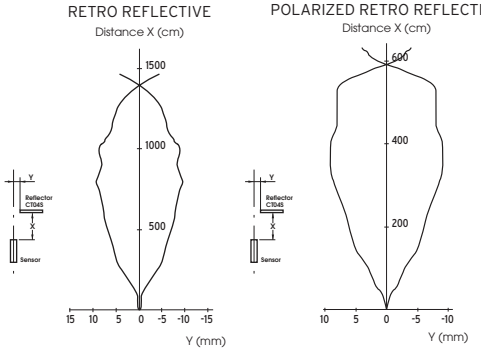
MODELS WITHOUT TIMER

1	Normally ON PNP	ON OFF 1 2 3 4	PNP = NC NPN = NO
2	Normally ON NPN	ON OFF 1 2 3 4	PNP = NO NPN = NC

MODELS WITH TIMER

1	Delay on operate	ON OFF 1 2 3 4	PNP = NC NPN = NO
2		ON OFF 1 2 3 4	PNP = NO NPN = NC
3	Delay on release	ON OFF 1 2 3 4	PNP = NC NPN = NO
4		ON OFF 1 2 3 4	PNP = NO NPN = NC
1	One shot leading edge	ON OFF 1 2 3 4	PNP = NC NPN = NO
2		ON OFF 1 2 3 4	PNP = NO NPN = NC
3	One shot trailing edge	ON OFF 1 2 3 4	PNP = NC NPN = NO
4		ON OFF 1 2 3 4	PNP = NO NPN = NC

CHARACTERISTIC CURVES



PHOTOELECTRIC

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