



Diffuse Ref. Photoelectric Sensors

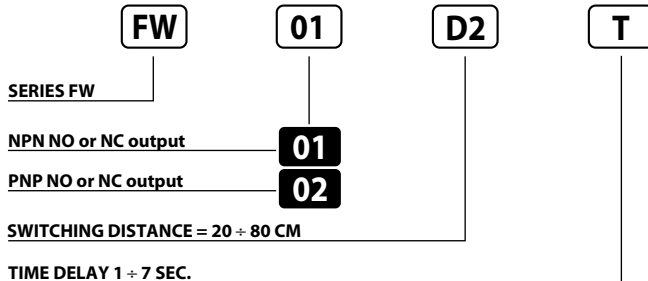
PHOTOELECTRIC SENSORS IN RECTANGULAR HOUSING 12 ÷ 30 V DC WITH TIMER NPN OR PNP OUTPUT

- Rectangle compact size
- Multi-function timer
- ON/OFF delay
- One shot-four functions
- NPN or PNP outputs
- Conduit wiring terminal block

FW Series



Identification code



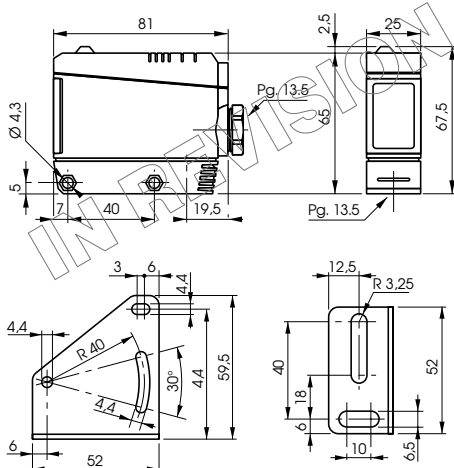
AVAILABLE	D2
SWITCHING DISTANCE	20 - 80 cm ⁽¹⁾
HYSTERESIS	10%
EMISSION	Infrared (875 nm)
NOMINAL VOLTAGE	12 ÷ 30VDC (-15 /+10%)
RESIDUAL RIPPLE	≤ 10%
OUTPUT	NPN or PNP
MAX OUTPUT CURRENT	200 mA
ABSORPTION	≤ 40 mA
VOLTAGE DECREASE	≤ 2.5 VDC
YELLOW LED	Present
SENSITIVITY ADJUSTEMENT	Timmer 1 turn
TIME REGULATION	0.1 ÷ 7 s ± 2 s (only models with timer)
SWITCHING FREQUENCY	100 Hz
RESPONSE TIME	10 mS
START UP DELAY	≤ 300 ms
PROTECTION AGAINTS SHORT-CIRCUIT	Present (self-resetting)
TEMPERATURE LIMITS	-25° ÷ +55°C
LIGHT IMMUNITY	5.000 Lux ⁽²⁾
PROTECTION DEGREE	IP 67
CONNECTIONS	Screw
CABLE GUIDE	PG 13.5
HOUSING MATERIAL	Polycarbonate
WEIGHT (Approximately)	110 g

⁽¹⁾ Determined with a white mat paper cm 20 x 20.

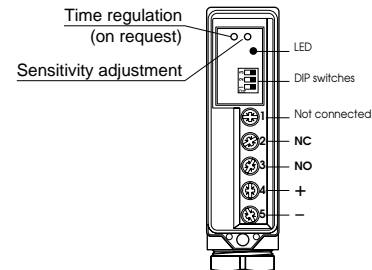
⁽²⁾ Determined with halogen tungsten lamp 3000° K.

Note: for a proper use see norms at pages 6, 7 and 8.

Dimensions (mm)



Wiring diagrams



Timing diagrams

MODELS WITHOUT TIMER

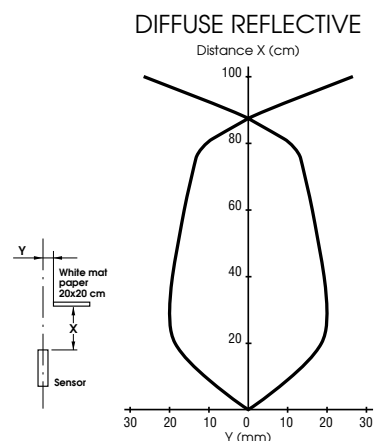
N.	DIP. SWITCHES POSITION	OBJECT	OUTPUT DIAGRAM
1	Output ON (2=NO; 3=NC)	Light impulse	Output status
2	Output OFF (2=NC; 3=NO)	Output status	Output status

MODELS WITH TIMER

N.	DIP. SWITCHES POSITION	OBJECT	OUTPUT DIAGRAM
1	On operate output ON	Light impulse	Output status
2	On operate output OFF	Output status	Output status
3	On release output ON	Output status	Output status
4	On release output OFF	Output status	Output status
5	One shot trailing edge output ON	Output status	Output status
6	One shot trailing edge output OFF	Output status	Output status
7	One shot leading edge output ON	Output status	Output status
8	One shot leading edge output OFF	Output status	Output status

T = Fixed delay

Characteristic curves





Diffuse Ref. Photoelectric Sensors

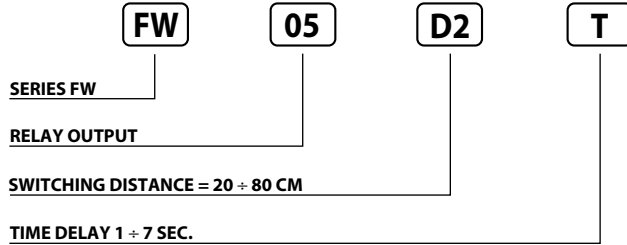
PH. SENSORS IN RECTANGULAR HOUSING 12 ÷ 240 V DC 24 ÷ 240 V AC WITH TIMER RELAY OUTPUT

- **Wide range World Wide Power Supply**
- **Rectangular compact size**
- **Multi-function timer:**
 - ON/OFF delay
 - One shot-four functions
 - 3A relay SPDT
 - Terminal block wiring

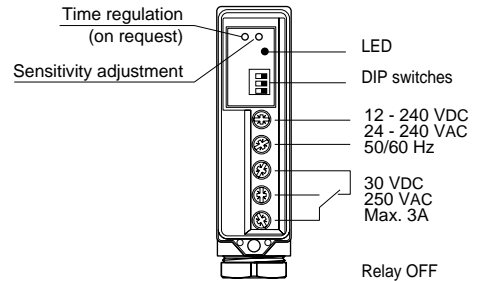
FW Series



Identification code



Wiring diagrams



AVAILABLE	D2
SWITCHING DISTANCE	20 - 80 cm ⁽¹⁾
HYSTERESIS	10%
EMISSION	Infrared (875 nm)
NOMINAL VOLTAGE	12 ÷ 240VDC / 24 ÷ 240 VAC (-15 / +10%)
NET FREQUENCY	45 ÷ 60 Hz
OUTPUT	Relay (40 x 10 ⁶ mec. op. - 5 x 10 ⁶ elect. op.)
MAX OUTPUT CURRENT	3A 250VAC - 3A 30VDC
ABSORPTION	≤ 2W (2.5 VA)
YELLOW LED	Present
GREEN LED	-
SENSITIVITY ADJUSTMENT	Present
TIME REGULATION	0.1 ÷ 7 s ± 2 s (only models with timer)
SWITCHING FREQUENCY	20 Hz
RESPONSE TIME	50 ms
START UP DELAY	≤ 300 ms
TEMPERATURE LIMITS	-25° ÷ +55°C
LIGHT IMMUNITY	5.000 Lux ⁽²⁾
PROTECTION DEGREE	IP 67
CONNECTIONS	Screw
CABLE GUIDE	PG 13.5
HOUSING MATERIAL	Polycarbonate
WEIGHT (Approximately)	110 g

Timing diagrams

MODELS WITHOUT TIMER

N.	DIP. SWITCHES POSITION	OBJECT	OUTPUT DIAGRAM
1	Output ON (2=NO; 3=NC)	Light impulse	[Timing diagram showing output ON for a light impulse]
2	Output OFF (2=NC; 3=NO)	Output status	[Timing diagram showing output OFF for a light impulse]

MODELS WITH TIMER

N.	DIP. SWITCHES POSITION	OBJECT	OUTPUT DIAGRAM
1	On operate output ON	Light impulse	[Timing diagram showing output ON with delay T]
2	On operate output OFF	Output status	[Timing diagram showing output OFF with delay T]
3	On release output ON	Output status	[Timing diagram showing output ON after release with delay T]
4	On release output OFF	Output status	[Timing diagram showing output OFF after release with delay T]
5	One shot trailing edge output ON	Output status	[Timing diagram showing one shot output ON on trailing edge]
6	One shot trailing edge output OFF	Output status	[Timing diagram showing one shot output OFF on trailing edge]
7	One shot leading edge output ON	Output status	[Timing diagram showing one shot output ON on leading edge]
8	One shot leading edge output OFF	Output status	[Timing diagram showing one shot output OFF on leading edge]

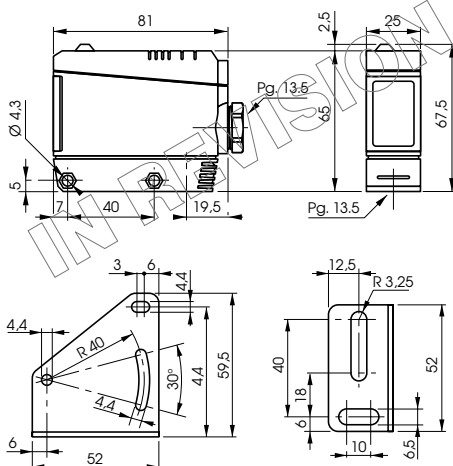
T = Fixed delay

⁽¹⁾ Determined with a white mat paper cm 20 x 20.

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

Note: for a proper use see norms at pages ? and ?.

Dimensions (mm)



PHOTOELECTRIC SENSOR

MOUNTING BRACKET (SUPPLIED ACCESSORY)

Characteristic curves

