



Diffuse Ref. Photoelectric Sensors



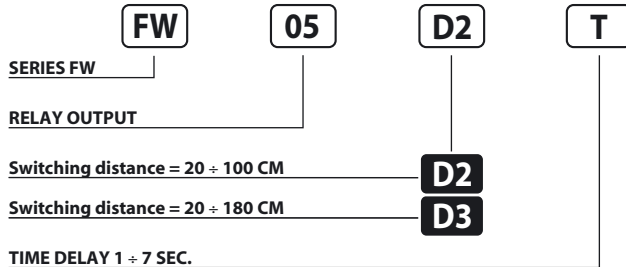
PH. SENSORS IN RECTANGULAR HOUSING 14 ÷ 230 V AC/DC WITH TIMER RELAY OUTPUT

- Wide input voltage
- Rectangular compact size
- Multi-function timer:
- ON/OFF delay
- One shot-four functions
- 3A relay SPDT
- Conduit wiring terminal block

FW Series



Identification code



AVAILABLE	D2	D3
NOMINAL SWITCHING DISTANCE (Sn)	20 ÷ 100 cm ⁽¹⁾	20 ÷ 180 cm ⁽²⁾
TOLERANCE	+10/-10 %Sn	
HYSTERESIS	10%	
EMISSION	Infrared (875 nm)	
NOMINAL VOLTAGE	14-230VAC / DC (-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	Light on indicator	
GREEN LED	Supply indicator	
SENSITIVITY ADJUSTEMENT	Present	
TIME REGULATION	0.1 ÷ 7 s ± 2 s (only models with timer)	
SWITCHING FREQUENCY	10 Hz	
RESPONSE TIME	100 mS	
START UP DELAY	≤ 300 mS	
TEMPERATURE LIMITS	-10° ÷ +60°C	
LIGHT IMMUNITY	> 10.000 Lux ⁽³⁾	
PROTECTION DEGREE	IP 67	
CONNECTIONS	Screw	
CABLE GUIDE	PG 13.5	
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate	
WEIGHT (Approximately)	110 g	

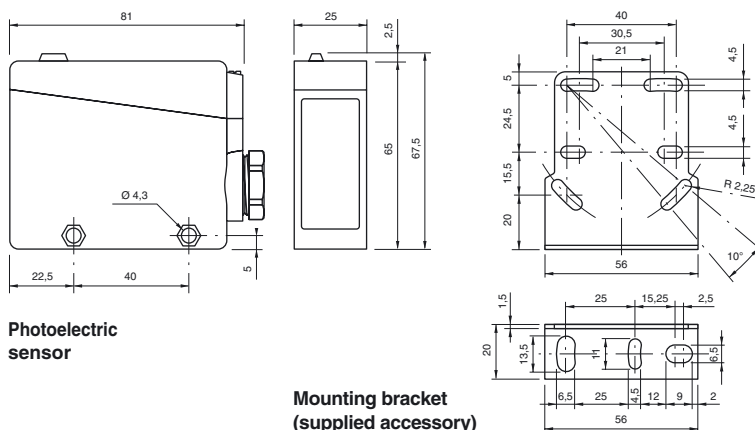
⁽¹⁾ Determined with a white mat paper (cm 10 x 10).

⁽²⁾ Determined with a white mat paper (cm 20 x 20).

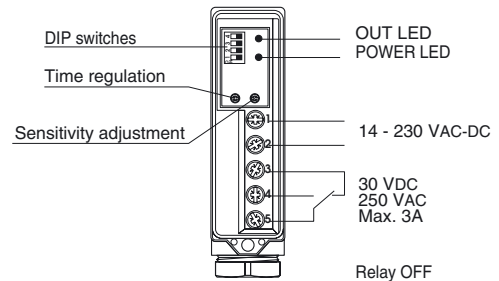
⁽³⁾ Determined with halogen tungsten lamp 3000° K.

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

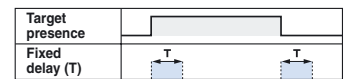
Dimensions (mm)



Wiring diagrams



Timing diagrams



ALL MODELS

NO.	FUNCTION	DIP SWITCHES	OUTPUT DIAGRAM								
1	Muting	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr> </table>	1	2	3	4	ON	ON	ON	OFF	Not activated relay
1	2	3	4								
ON	ON	ON	OFF								

MODELS WITHOUT TIMER

1	Normally ON	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr> </table>	1	2	3	4	ON	ON	ON	OFF	Normally activated relay
1	2	3	4								
ON	ON	ON	OFF								
2	Normally OFF	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr> </table>	1	2	3	4	ON	OFF	OFF	OFF	Normally not activated relay
1	2	3	4								
ON	OFF	OFF	OFF								

MODELS WITH TIMER

1	Delay on operate	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr> </table>	1	2	3	4	ON	ON	ON	OFF	Normally activated relay
1		2	3	4							
ON	ON	ON	OFF								
2	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr> </table>	1	2	3	4	ON	OFF	OFF	OFF	Normally not activated relay	
1	2	3	4								
ON	OFF	OFF	OFF								
3	Delay on release	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr> </table>	1	2	3	4	ON	ON	ON	OFF	Normally activated relay
1		2	3	4							
ON	ON	ON	OFF								
4	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr> </table>	1	2	3	4	ON	OFF	OFF	OFF	Normally not activated relay	
1	2	3	4								
ON	OFF	OFF	OFF								
1	One shot leading edge	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td></tr> </table>	1	2	3	4	ON	ON	ON	OFF	Normally activated relay
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2	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td></tr> </table>	1	2	3	4	ON	OFF	OFF	OFF	Normally not activated relay	
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1	2	3	4								
ON	OFF	OFF	OFF								

Characteristic curves

