

Background and Foreground Suppression Ph. Sens.



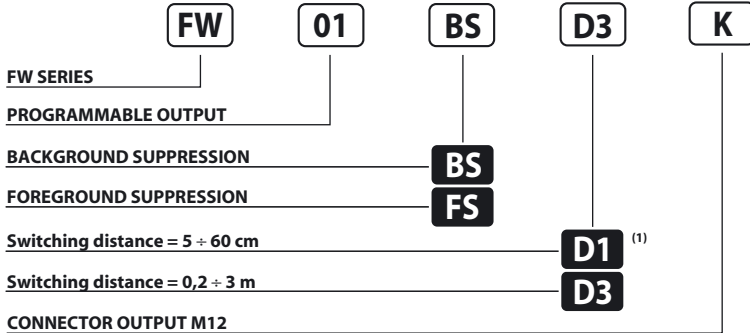
PH. SENSORS IN RECTANGULAR HOUSING 12 ÷ 30V DC PROGRAMMABLE OUTPUT

- **Switching distance: 300 cm**
- **Detecting black targets on white background**
- **Insensitive to colours**
- **Foreground suppression**
- **Conduit wiring terminal block**

FW Series



Identification code



(1) Available only with option FS - not available with option BS

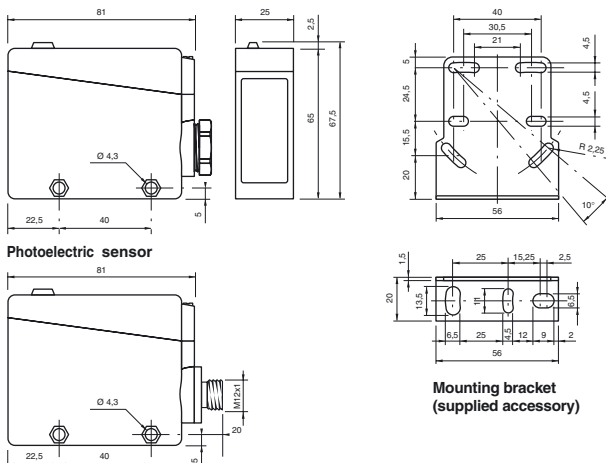
AVAILABLE	D1	D3
NOMINAL SWITCHING DISTANCE (Sn)	60 cm (1)	2 m (1) (On White Target 3 m (1))
TOLERANCE		+10/-10 %Sn
HYSTERESIS		< 5%
EMISSION		880 nm
NOMINAL VOLTAGE	12 ÷ 30VDC (-15 /+10%)	
NET FREQUENCY	≤ 10%	
OUTPUT	NPN o PNP (programmable)	
CONTACT	NO o NC (programmable)	
MAX OUTPUT CURRENT	200 mA	
ABSORPTION	25 ÷ 40 mA	
VOLTAGE DROP	≤ 1.8 VDC	
YELLOW LED	Output indicator	
SWITCHING FREQUENCY	500 Hz	
RESPONSE TIME	100 mS	
SHORT CIRCUIT PROTECTION	Present (self-resetting)	
ELECTRICAL PROTECTION	Against polarity reversal - inductive loads	
TEMPERATURE LIMITS	-10 ÷ +60 °C	
LIGHT IMMUNITY	> 10.000 Lux (2)	
PROTECTION DEGREE	IP 66	
CONNECTIONS	Screw or M12 conn.	
CABLE GUIDE	PG 13.5	
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate	
WEIGHT (Approximately)	110 g	

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

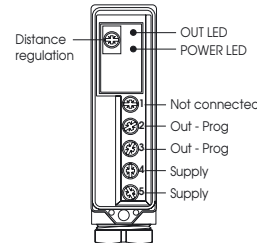
(2) Determined with halogen tungsten lamp 3000° K.

Note: for a proper use see norms at pages 14, 15, 16, 17 and 18.

Dimensions (mm)

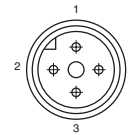


Wiring diagrams



Output	Contacts numbers			
	2	3	4	5
NPN NO	NO	—	+	—
NPN NC	NC	—	—	+
PNP NO	+	NO	+	—
PNP NC	+	NC	—	+

Connection with connector M12 (K)



CONTACTS CONFIGURATION

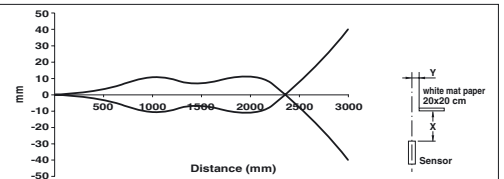
Output	Contacts numbers			
	1	2	3	4
NPN NO	+	NO	—	—
NPN NC	—	NC	+	—
PNP NO	+	+	—	NO
PNP NC	—	+	+	NC

View of quadripole male connector.

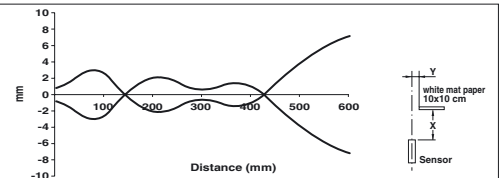
Note: Photoelectric sensor not suitable for use with 90° connectors.

Characteristic curves

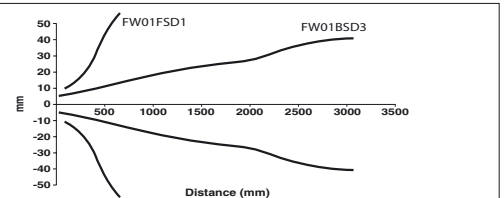
Emission curve FW01BSD3



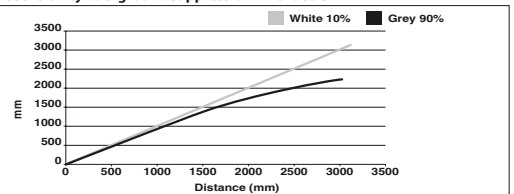
Emission curve FW01FSD1



Emission cone



Chromatic sensitivity background suppression FW01BSD3



Chromatic sensitivity foreground suppression FW01FSD1

