



Diffuse Ref. Photoelectric Sensors

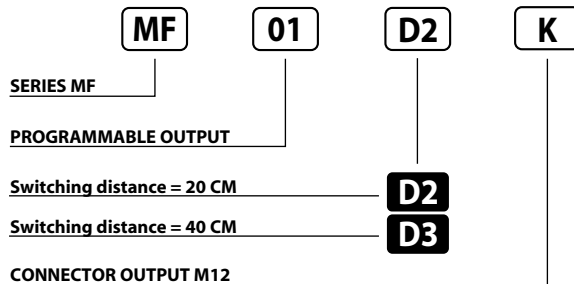
PHOTOELECTRIC SENSORS IN STANDARD HOUSING 12 ÷ 30 V DC PROGRAMMABLE OUTPUT

- Programmable outputs, NPN or PNP, N.C. or N.O.
- Simple one-turn sensitivity
- M12 quick connect or integral cable
- 2 msec ON/OFF

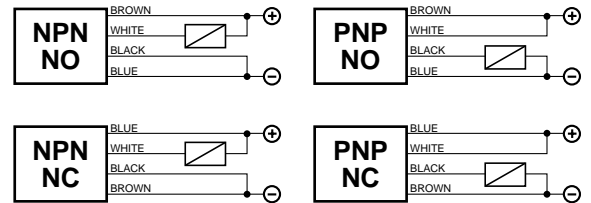
MF Series



Identification code

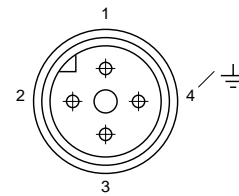


Wiring diagrams



Note: For series or parallel connections see notes at page 6.

Connection with connector M12 (K)



View of quadripole male connector.

CONTACTS CONFIGURATION

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

Note: the K plug is compatible with the following connectors: VAUDEHA, BINDER, HIRSCHMANN, LUMBERG, AMPHENOL-TUCHEL.

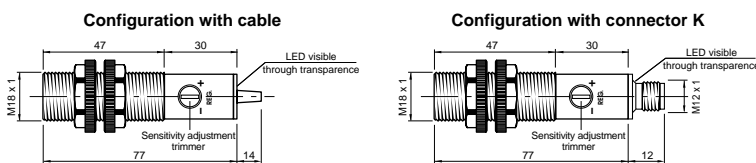
AVAILABLE	D2	D3
SWITCHING DISTANCE	20 cm ⁽¹⁾	40 cm ⁽¹⁾
HYSTERESIS	10%	
EMISSION	Infrared (875 nm)	
NOMINAL VOLTAGE	12 ÷ 30VDC (-15 /+10%)	
RESIDUAL RIPPLE	≤ 10%	
OUTPUT	NPN or PNP (may be selected)	
CONTACT	NO or NC (may be selected)	
MAX. OUTPUT CURRENT	200 mA	
ABSORPTION AT 30 VDC	40 mA	
VOLTAGE DROP (Sensor ON)	≤ 2 V (I = 100 mA)	
STATUS LED	Yellow	
SENSITIVITY ADJUSTMENT	Trimmer 1 turn	
SWITCHING FREQUENCY	500 Hz	
RESPONSE TIME	2 mS	
START UP DELAY	100 mS	
SHORT CIRCUIT PROTECTION	Present (self-resetting)	
ELECTRIC PROTECTIONS	Against polarity reversal - inductive loads	
TEMPERATURE LIMITS	-10 ÷ +60 °C	
LIGHT IMMUNITY	> 10.000 Lux ⁽²⁾	
PROTECTION DEGREE	IP 65	
CABLE LENGTH	2 m	
CABLE SECTION	4 x 0.25 mm ²	
HOUSING MATERIAL	Housing: ABS - Lenses: methacrylate	
WEIGHT - cable output - (connector output)	- 130 g - (70 g)	

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

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

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

Dimensions (mm)



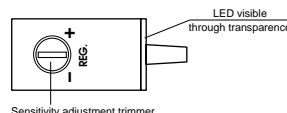
Sensitivity adjustment

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.

Characteristic curves

