

# Diffuse Ref. Photoelectric Sensors



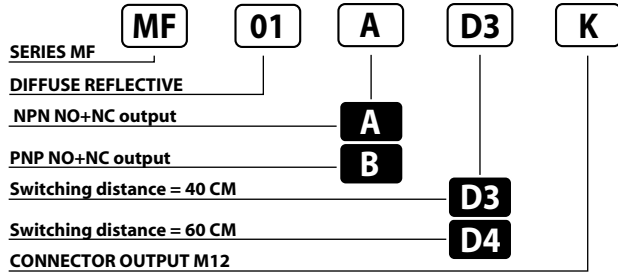
PHOTOELECTRIC SENSORS IN METAL HOUSING 12 ÷ 30 V DC NPN / PNP OUTPUT

- Programmable output, NPN or PNP, NC + NO
- Simple one-turn sensitivity
- Cable or M12 quick connect models
- Fast response time: 2 mS / 500 Hz
- Long working distances

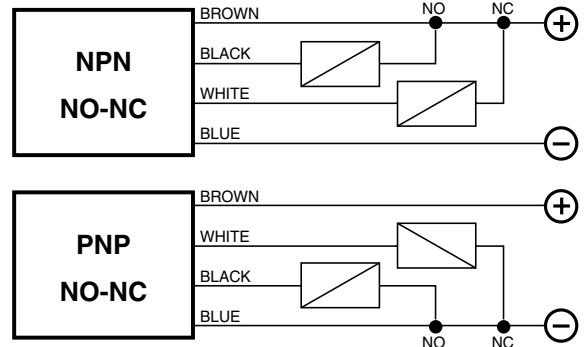
## MF Series



### Identification code



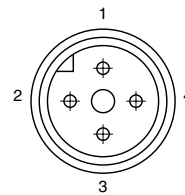
### Wiring diagrams



AVAILABLE	D3	D4
SWITCHING DISTANCE	40 cm <sup>(1)</sup>	60 cm <sup>(2)</sup>
HYSTERESIS	10%	
EMISSION	Infrared (875 nm)	
NOMINAL VOLTAGE	12 ÷ 30VDC (-15 /+10%)	
RESIDUAL RIPPLE	≤ 10%	
MAX. OUTPUT CURRENT	200 mA	
ABSORPTION AT 30 VDC	40 mA	
VOLTAGE DROP (Sensor ON)	≤ 1,5 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 <sup>(3)</sup>	
PROTECTION DEGREE	IP 67	
CABLE LENGTH	2 m	
CABLE SECTION	4 x 0.25 mm <sup>2</sup>	
HOUSING MATERIAL	Housing: nickel-plated brass - Lenses: methacrylate	
WEIGHT - cable output - (connector output)	- 130 g - (70 g)	

### Connection with connector M12 (K)

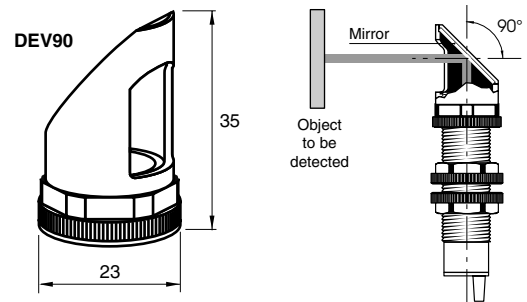
View of quadripole male connector



#### CONTACTS CONFIGURATION

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

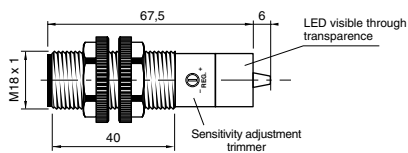
### Accessories



<sup>(1)</sup> Determined with a white mat paper (cm 10 x 10).  
<sup>(2)</sup> Determined with a white mat paper (cm 20 x 20).  
<sup>(3)</sup> Determined with halogen tungsten lamp 3000 °K.  
 Note: for a proper use see norms at pages 7, 8, 9 and 10.

### Dimensions (mm)

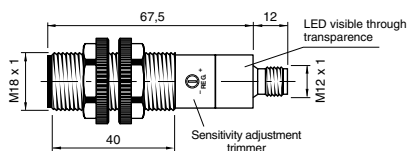
#### Configuration with cable



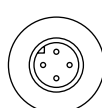
#### Configuration with cable - Back view



#### Configuration with connector K



#### Configuration with connector K Back view



Note: the trimmer just needs one turn.

### Characteristic curves

