

# Micro MF

## Technical data

### FEATURES

- ▶ Integrated controller
- ▶ LED indicator integrated into the edge
- ▶ Telemonitoring status output (TMS)
- ▶ Test input for increased safety
- ▶ Criss-cross beams
- ▶ IP65 (Standard) and IP67 (waterproof) versions available
- ▶ High EMC immunity



### OPTICAL

Operating range	
- Static installation	0.8 ... 6 m
- Static / dynamic installation	0 ... 4 m
Max. protection height	2,322 mm
No. of optical elements	4 ... 32
Aperture angle at 2 m	Tx: ±10° and Rx: ±20°
Max. ambient light	100,000 Lux

### MECHANICAL

Dimensions (w × h × l)	12 × 16 × max. 2,500 mm
Housing material	Natural or black anodized Aluminum, other colors on request
Enclosure rating	IP65 or IP67
Temperature range	-40°C ... +60°C

### ELECTRICAL

Supply voltage $U_{sp}$	14 ... 30 VDC
Typ. current consumption at 24 VDC	60 mA
Max. inrush current per edge	< 2 A
Output	PNP/NPN (push-pull)
Optional output	TMS output (NPN)
Max. output load	120 mA, 100 nF
Response time	25 ... 100 ms (depending on number of elements)

### GENERAL

EMC emission	EN 12015:2014
EMC immunity	EN 12016:2013
Vibration	IEC 60068-2-6:2007
Shock	IEC 60068-2-27:2008
Cable durability	IEC 60227-2:2003
RoHS	2011/65/EU
Certificate	CE

### CONNECTION CABLE AND ELECTRICAL CONNECTION

#### Emitter

Cable length	5 m
Diameter	Ø 3.5 mm
Material	PVC, black
Connection	M8, 4-pin
Plug color	White
Wires	AWG26
• brown	Usp
• blue	GND (0 V)
• black	Not used
• white	Test input

#### Receiver

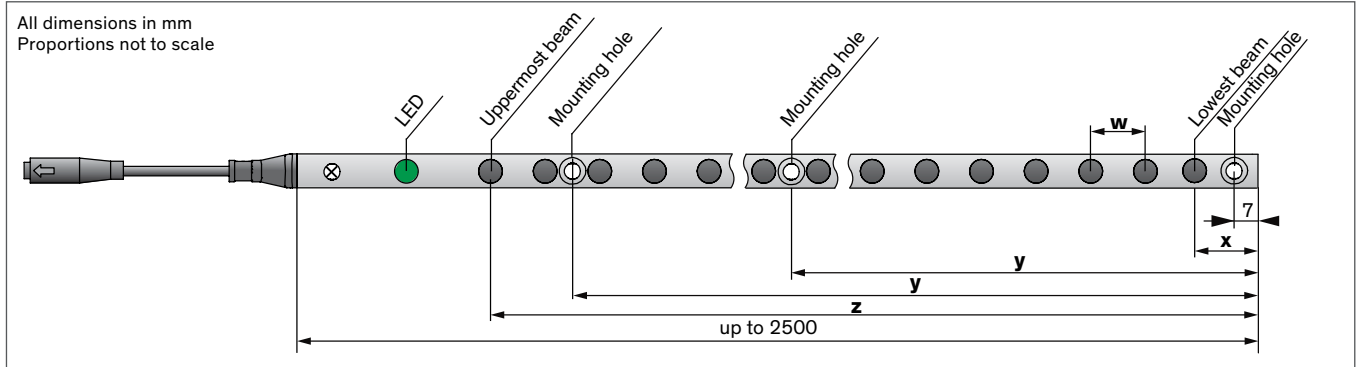
Cable length	5 m
Diameter	Ø 3.5 mm
Material	PVC, black
Connection	M8, 4-pin
Plug color	Blue
Wires	AWG26
• brown	Usp
• blue	GND (0 V)
• black	Output
• white	TMS output



CEDES AG is certified according to ISO 9001: 2015.

## Dimensions

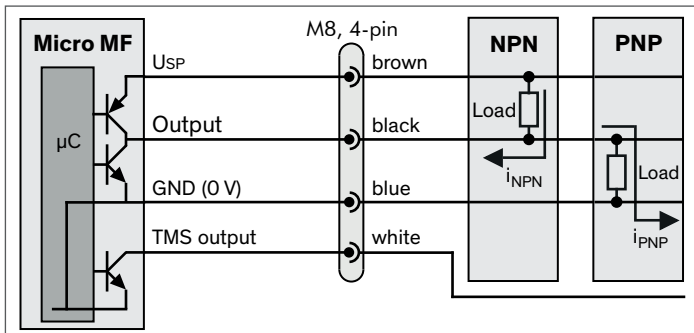
All dimensions in mm  
 Proportions not to scale



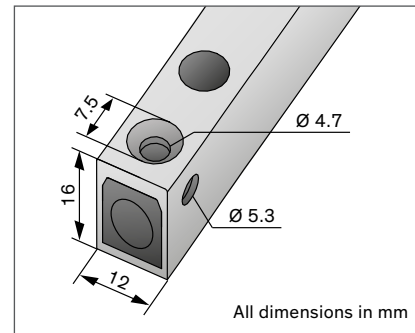
Standard types	Total edge length / protection height 'z' (in mm)	Number of elements	Number of beams	Lowest element 'x' (in mm)	Mounting hole 'y' (in mm)	Operating range	Grid 'w' (in mm)
MF-900-4	900 / 726	4	10	30	7 / 700	1.8 ... 6 m	232
MF-900-8	900 / 722	8	22	22	7 / 700	0.8 ... 6 m	100
MF-1300-12	1,300 / 1,122	12	34	22	7 / 470 / 970	0.8 ... 6 m	100
MF-950-16	950 / 772	16	46	22	7 / 750	0.8 ... 6 m	50
MF-1925-24	1,925 / 1,747	24	70	22	7 / 880 / 1,717	0.8 ... 6 m	75
MF-990-32	990 / 797	32	94	22	7 / 812	0.8 ... 6 m	25
MF-1750-32	1,750 / 1,572	32	94	22	7 / 847 / 1,547	0.8 ... 6 m	50
MF-2000-12	2,000 / 1,800	12	34	20	7 / 847 / 1,717	0.8 ... 6 m	162

Other types on request

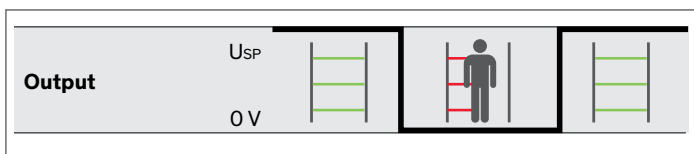
## PNP / NPN output



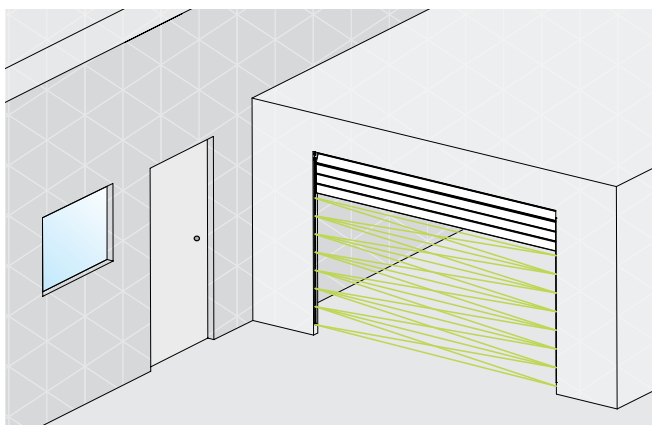
## Detailed view



## Output logic



## Applications



Residential garage doors



Sliding doors