

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
Max. protection height	2,322 mm
No. of optical elements	4 ... 32
Aperture angle at 2 m	Tx: $\pm 10^\circ$ and Rx: $\pm 20^\circ$
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
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, UKCA

CONNECTION CABLE AND ELECTRICAL CONNECTION

Emitter

Cable length	5 m
Diameter	\varnothing 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

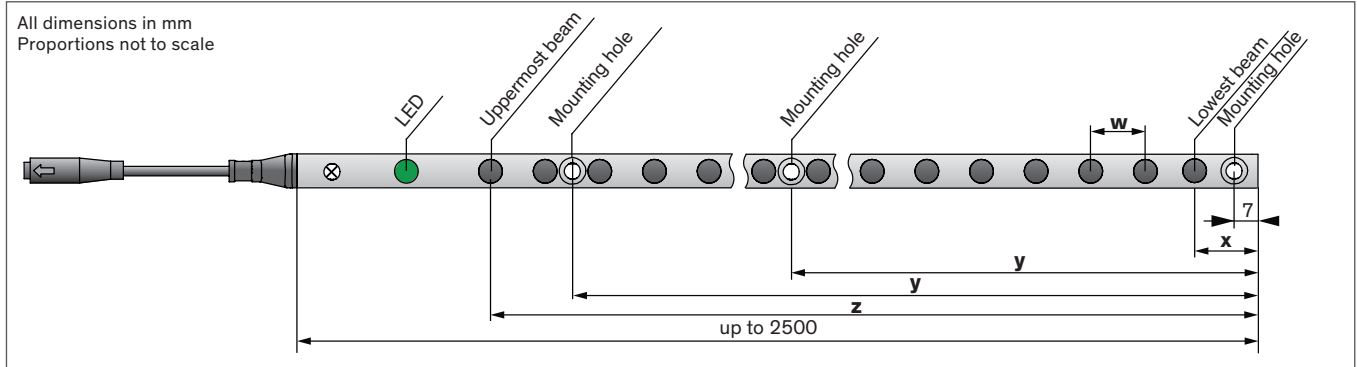
Cable length	5 m
Diameter	\varnothing 3.5 mm
Material	PVC, black
Connection	M8, 4-pin
Plug color	Blue
Wires	AWG26
• brown	Usp
• blue	GND (0 V)
• black	Output
• white	TMS output



CEDES AG is certified according to ISO 9001: 2015.

Dimensions

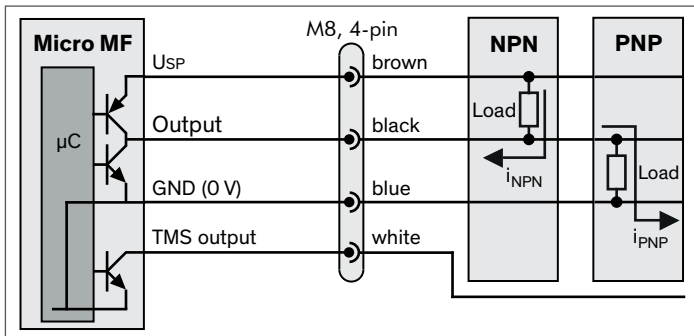
All dimensions in mm
 Proportions not to scale



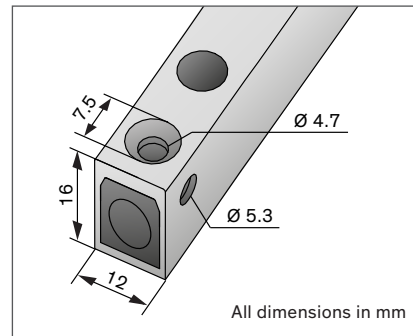
Standard types	Total edge length / protection height 'z' (in mm)	Number of elements	Number of beams	Lowest element 'x' (in mm)	Mounting hole 'y' (in mm)	Operating range	Grid 'w' (in mm)
MF-900-4	900 / 726	4	10	30	7 / 700	1.8 ... 6 m	232
MF-900-8	900 / 722	8	22	22	7 / 700	0.8 ... 6 m	100
MF-1300-12	1,300 / 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

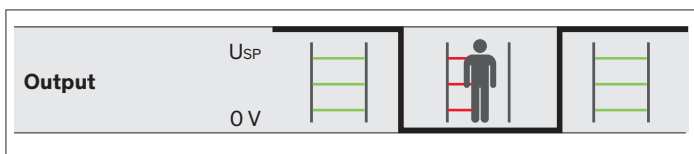
PNP / NPN output



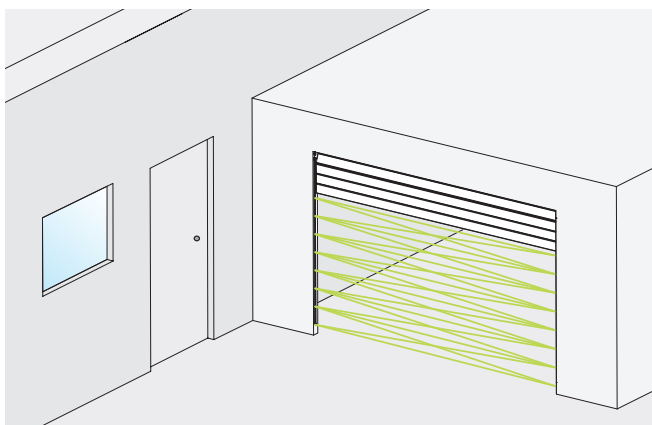
Detailed view



Output logic



Applications



Residential garage doors



Sliding doors