



*Your future's safe!*



***Michon***

light curtains for measurement and automation

*product catalogue*



Models with  
IO-Link protocol



Aluminum casing  
Anodized

Compact size  
Only 30 x 28 mm

-10 ... +55° C  
Operating temperature

Caps  
Glass reinforced  
polypropylene

M12 connectors  
Cables easy to source and replace



# Michtron

## Measurement and automation light curtains...

Watch the video!





IP65 and IP67

Controlled height:  
Up to 3 meters

Beam spacing:  
5 mm, 10 mm, 25 mm  
30 mm, 50 mm, 75 mm

Status indicating display

Analogue and Digital readings  
2 outputs

Software configuration  
Easy to use and extensive  
parameters choice



...for industrial and civil applications

# OVERVIEW

Light curtains for industrial and civil applications where it is necessary to **detect**, **measure**, and **recognise** objects.

Depending on the number and position of the beams engaged by an object, Micron and Metron can provide real time information to a PLC or PC in order to:

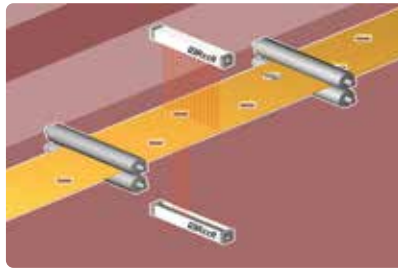
- Detect the presence or absence of objects
- Perform a count
- Detect a position
- Detect a shape or a profile
- Measure dimensions



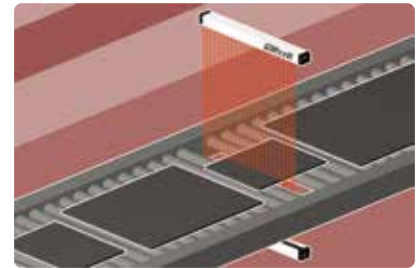
## TYPICAL APPLICATIONS



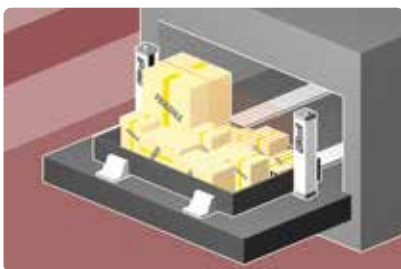
Measurement of the height of objects in transit on conveyor systems.  
Two-dimensional detection of objects in transit with use of 2 sets of light curtains



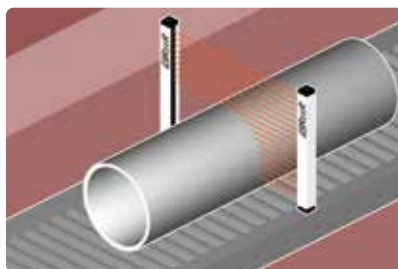
Quality control: verification of presence / absence / position of holes



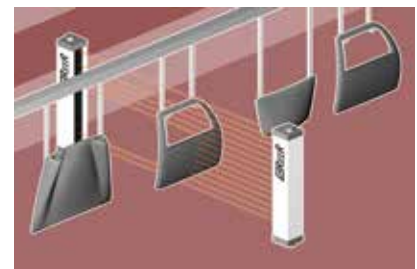
Measurement of the width and position of panels or sheets of material in transit on roller units or conveyor belts



Automatic warehouses: detection of maximum height of the objects present in the tray for efficient management of the machine's capacity



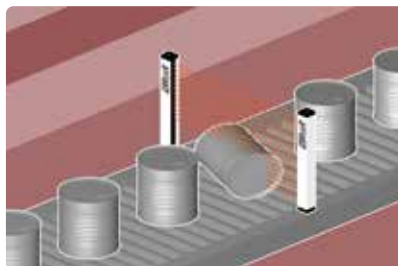
Measurement and identification of cylinders of various sizes



Detection of position and profile of pieces in automatic painting systems



Loop control



Quality control: verification of correct positioning of objects



Detection of overall dimensional limits of vehicles for vehicle handling in automatic parking garages

## THE MICRON RANGE



MICRON A		MICRON B	MICRON C	MICRON IO-LINK
Models MI AV	Models MI AC	Models MI B	Models MI C	Models MI IOL
Ideal for object measurement and detection of dimensional limits		Ideal for dimensional measurement, detection of object profile and position	Ideal for piece counting and detection of object presence/absence in the controlled field	Ideal for dimensional measurement, detection of object profile and position
Two analog outputs (0-10 VDC) with programmable functions.	Two analog outputs (4-20 mA) with programmable functions.	RS 485 serial interface with programmable functions.	Two antivalent solid state outputs.	IO-Link Protocol.
Two programmable digital outputs.	Two programmable digital outputs.	Two programmable digital outputs.	-	IO-Link output.
Solution providing simple measurement with easy interfacing.		Solution providing complete and detailed information on the status of each beam via the RS 485 serial line and, by means of the two solid state outputs, further on/off information related to the occurrence of the programmed conditions.	Solution providing simple on/off information related to the status of the controlled area.	Data available via the IO-Link Protocol data mapping: NCBO, NBO, CBO, LBO, FBO, curtain status, object detected, individual beam status.

### OPERATIVE RANGE

Models	Normal Range Selectable via software		Reduced Range Selectable via software	
	Low (m)	0 ... 1	Low (m)	0 ... 0,6
Beams spacing 5 mm	High (m)	0,6 ... 2,5	High (m)	0,6 ... 1,5
	Low (m)	0 ... 2		
Beams spacing 10, 30 mm	High (m)	1 ... 10		
	Low (m)	0 ... 3	Low (m)	0 ... 8
Beams spacing 25, 50, 75 mm	High (m)	0 ... 8	High (m)	1 ... 18

Hardware selection between low and high range via emitter connector cabling (pin 2).

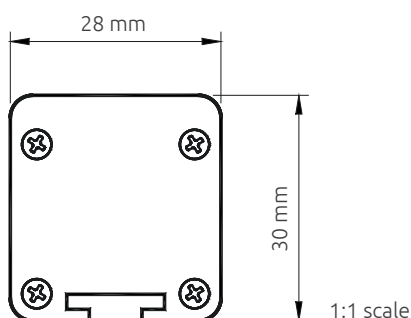


Operating temperature: -10 ... +55 °C



IP65 and IP67 protection rate

### DIMENSIONS



### IP69K VERSIONS

All Micron models can be manufactured with WTF or WTHF watertight enclosure (IP69K and Ecolab certified). In these versions, excluding C and IO-Link models, , factory programmed is mandatory.



Watertight enclosures allow light curtains to be used in a harsh working environments with exposure to water and steam.

The use of inert and non-toxic components allow WTF and WTHF enclosures to be used in the Food & Beverage industry, where frequent washdown procedures are requested.



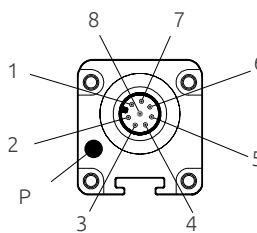
## MICRON A

### TECHNICAL FEATURES

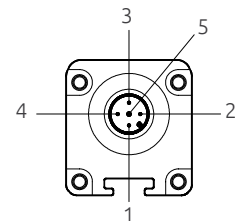
Max. range (m)	- 2,5 - models with beam spacing 5 mm - 10 - models with beam spacing 10, 30 mm - 18 - models with beam spacing 25, 50, 75 mm
Measurement time	(500 $\mu$ s + 70 $\mu$ s x n beams) x N Where N = scan cycles (1, 2, 3 selectable)
Scan cycles	1, 2, 3 selectable
Inputs (on receiver)	1 digital with programmable functions - 0 or 24 VDC
MI AV (5, 25, 50, 75 mm) Outputs	- 2 analog outputs (0-10 VDC) programmable - 2 solid state programmable digital outputs 0 or 24V (PNP 100 mA 24 VDC)
MI AC (5, 25, 50, 75 mm) Outputs	- 2 analog outputs (4-20 mA) programmable - 2 solid state programmable digital outputs 0 or 24V (PNP 100 mA 24 VDC)
MI AV (10, 30 mm) Outputs	- 2 analog outputs (0-10 VDC) programmable - 2 solid state programmable digital outputs 0 or 24V (Push-Pull). See
MI AC (10, 30 mm) Outputs	- 2 analog outputs (4-20 mA) programmable - 2 solid state programmable digital outputs 0 or 24V (Push-Pull). See
Synchronisation between emitter and receiver	Optical or via cable, selectable
Electrical connections	M12 5-pole connector (emitter) M12 8-pole connector (receiver) M5 4-pole connector for programming interface
Status display	LEDs for operating status and light curtain self-diagnosis
Power supply (VDC)	24 $\pm$ 20%
Fastening	Back slot, or to the top and lower end with SFB E180 rotating brackets (optional)

### CONNECTORS

Receiver M12 8-pole



Emitter M12 5-pole



- 1 - OUT 2/SYNC
- 2 - 24 VDC
- 3 - OUT 1
- 4 - INPUT
- 5 - ANALOG\_OUT 2
- 6 - ANALOG\_OUT 1
- 7 - 0 VDC
- 8 - PE

- P - Programming  
M5 4-pole connector

- 1 - 24 VDC
- 2 - RANGE
- 3 - 0 VDC
- 4 - SYNC
- 5 - PE



Beam spacing (mm)	Analog output	Digital output
5 - 10 - 25 30 - 50 - 75	2	2

Models MI AV equipped with two analog outputs (0-10 VDC) with programmable functions and two programmable digital outputs.

Models MI AC equipped with two analog outputs (4-20 mA) with programmable functions and two programmable digital outputs.

Controlled heights: 150 ... 3000 mm.

Programming interface: USB interface on M5 4-pole connector. See [page 25](#).

Max. length connection cables between light curtain and interface: 100 (m).



## PART NUMBERS

### Micron A - Beam spacing 5 mm

Micron A (AV) Beam spacing 5 mm	MI 150AV	MI 300AV	MI 450AV	MI 600AV	MI 750AV	MI 900AV	MI 1050AV	MI 1200AV	MI 1350AV	MI 1500AV
Ordering codes	1250580	1250581	1250582	1250583	1250584	1250585	1250586	1250587	1250588	1250589
Micron A (AC) Beam spacing 5 mm	MI 150AC	MI 300AC	MI 450AC	MI 600AC	MI 750AC	MI 900AC	MI 1050AC	MI 1200AC	MI 1350AC	MI 1500AC
Ordering codes	1250520	1250521	1250522	1250523	1250524	1250525	1250526	1250527	1250528	1250529
Measuring height (mm)	145	295	445	595	745	895	1045	1195	1345	1495
Number of beams	30	60	90	120	150	180	210	240	270	300
Overall height (mm)	223	373	523	673	823	973	1123	1273	1423	1573

### Micron A - Beam spacing 10 mm

Micron A (AV) Beam spacing 10 mm	MI 151AV	MI 301AV	MI 451AV	MI 601AV	MI 751AV	MI 901AV	MI 1051AV	MI 1201AV	MI 1351AV	MI 1501AV	MI 1651AV	MI 1801AV	MI 1951AV	MI 2101AV	MI 2251AV	MI 2401AV	MI 2551AV	MI 2701AV	MI 2851AV	MI 3001AV
Ordering codes	1250020	1250021	1250022	1250023	1250024	1250025	1250026	1250027	1250028	1250029	1250030	1250031	1250032	1250033	1250034	1250035	1250036	1250037	1250038	1250039
Micron A (AC) Beam spacing 10 mm	MI 151AC	MI 301AC	MI 451AC	MI 601AC	MI 751AC	MI 901AC	MI 1051AC	MI 1201AC	MI 1351AC	MI 1501AC	MI 1651AC	MI 1801AC	MI 1951AC	MI 2101AC	MI 2251AC	MI 2401AC	MI 2551AC	MI 2701AC	MI 2851AC	MI 3001AC
Ordering codes	1250120	1250121	1250122	1250123	1250124	1250125	1250126	1250127	1250128	1250129	1250130	1250131	1250132	1250133	1250134	1250135	1250136	1250137	1250138	1250139
Measuring height (mm)	140	290	440	590	740	890	1040	1190	1340	1490	1640	1790	1940	2090	2240	2390	2540	2690	2840	2990
Number of beams	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron A - Beam spacing 25 mm

Micron A (AV) Beam spacing 25 mm	MI 152AV	MI 302AV	MI 452AV	MI 602AV	MI 752AV	MI 902AV	MI 1052AV	MI 1202AV	MI 1352AV	MI 1502AV	MI 1652AV	MI 1802AV	MI 1952AV	MI 2102AV	MI 2252AV	MI 2402AV	MI 2552AV	MI 2702AV	MI 2852AV	MI 3002AV
Ordering codes	1250040	1250041	1250042	1250043	1250044	1250045	1250046	1250047	1250048	1250049	1250050	1250051	1250052	1250053	1250054	1250055	1250056	1250057	1250058	1250059
Micron A (AC) Beam spacing 25 mm	MI 152AC	MI 302AC	MI 452AC	MI 602AC	MI 752AC	MI 902AC	MI 1052AC	MI 1202AC	MI 1352AC	MI 1502AC	MI 1652AC	MI 1802AC	MI 1952AC	MI 2102AC	MI 2252AC	MI 2402AC	MI 2552AC	MI 2702AC	MI 2852AC	MI 3002AC
Ordering codes	1250140	1250141	1250142	1250143	1250144	1250145	1250146	1250147	1250148	1250149	1250150	1250151	1250152	1250153	1250154	1250155	1250156	1250157	1250158	1250159
Measuring height (mm)	125	275	425	575	725	875	1025	1175	1325	1475	1625	1775	1925	2075	2225	2375	2525	2625	2825	2975
Number of beams	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron A - Beam spacing 30 mm

Micron A (AV) Beam spacing 30 mm	MI 153AV	MI 303AV	MI 453AV	MI 603AV	MI 753AV	MI 903AV	MI 1053AV	MI 1203AV	MI 1353AV	MI 1503AV	MI 1653AV	MI 1803AV	MI 1953AV	MI 2103AV	MI 2253AV	MI 2403AV	MI 2553AV	MI 2703AV	MI 2853AV	MI 3003AV
Ordering codes	1250060	1250061	1250062	1250063	1250064	1250065	1250066	1250067	1250068	1250069	1250070	1250071	1250072	1250073	1250074	1250075	1250076	1250077	1250078	1250079
Micron A (AC) Beam spacing 30 mm	MI 153AC	MI 303AC	MI 453AC	MI 603AC	MI 753AC	MI 903AC	MI 1053AC	MI 1203AC	MI 1353AC	MI 1503AC	MI 1653AC	MI 1803AC	MI 1953AC	MI 2103AC	MI 2253AC	MI 2403AC	MI 2553AC	MI 2703AC	MI 2853AC	MI 3003AC
Ordering codes	1250160	1250161	1250162	1250163	1250164	1250165	1250166	1250167	1250168	1250169	1250170	1250171	1250172	1250173	1250174	1250175	1250176	1250177	1250178	1250179
Measuring height (mm)	120	270	420	570	720	870	1020	1170	1320	1470	1620	1770	1920	2070	2220	2370	2520	2670	2820	2970
Number of beams	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

## CABLES NEEDED

- Emitter M12 5-pole. See [page 23](#) (CD x, CD x SB, CD 9x, CDM 9 CDM 99)
- Receiver M12 8-pole. See [page 24](#) (C8D x, C8D x SB, C8D 9x, C8DM 9, C8DM 99, C8DM 11, C8DM 911)

## ACCESSORIES

- Support columns. See [page 27](#)
- Laser alignment device. See [page 30](#)
- Vibration dampers. See [page 29](#)
- Brackets. See [page 29](#)

## Micron A - Beam spacing 50 mm

Micron A (AV)	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI
Beam spacing 50 mm	155AV	305AV	455AV	605AV	755AV	905AV	1055AV	1205AV	1355AV	1505AV	1655AV	1805AV	1955AV	2105AV	2255AV	2405AV	2555AV	2705AV	2855AV	3005AV
Ordering codes	1250080	1250081	1250082	1250083	1250084	1250085	1250086	1250087	1250088	1250089	1250090	1250091	1250092	1250093	1250094	1250095	1250096	1250097	1250098	1250099
Micron A (AC)	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI
Beam spacing 50 mm	155AC	305AC	455AC	605AC	755AC	905AC	1055AC	1205AC	1355AC	1505AC	1655AC	1805AC	195AC	210AC	2255AC	2405AC	2555AC	2705AC	2855AC	3005AC
Ordering codes	1250180	1250181	1250182	1250183	1250184	1250185	1250186	1250187	1250188	1250189	1250190	1250191	1250192	1250193	1250194	1250195	1250196	1250197	1250198	1250199
Measuring height (mm)	100	250	400	550	700	850	1000	1150	1300	1450	1600	1750	1900	2050	2200	2350	2500	2650	2800	2950
Number of beams	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

## Micron A - Beam spacing 75 mm

Micron A (AV)	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI
Beam spacing 75 mm	157AV	307AV	457AV	607AV	757AV	907AV	1057AV	1207AV	1357AV	1507AV	1657AV	1807AV	1957AV	2107AV	2257AV	2407AV	2557AV	2707AV	2857AV	3007AV
Ordering codes	1250100	1250101	1250102	1250103	1250104	1250105	1250106	1250107	1250108	1250109	1250110	1250111	1250112	1250113	1250114	1250115	1250116	1250117	1250118	1250119
Micron A (AC)	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI
Beam spacing 75 mm	157AC	307AC	457AC	607AC	757AC	907AC	1057AC	1207AC	1357AC	1507AC	1657AC	1807AC	1957AC	2107AC	2257AC	2407AC	2557AC	2707AC	2857AC	3007AC
Ordering codes	1250200	1250201	1250202	1250203	1250204	1250205	1250206	1250207	1250208	1250209	1250210	1250211	1250212	1250213	1250214	1250215	1250216	1250217	1250218	1250219
Measuring height (mm)	75	225	375	525	675	825	975	1125	1275	1425	1575	1725	1875	2025	2175	2325	2475	2625	2775	2925
Number of beams	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063



Car wash application of Micron WT version



## MICRON B

### TECHNICAL FEATURES

Max. range (m)	- 2,5 - models with beam spacing 5 mm - 10 - models with beam spacing 10, 30 mm - 18 - models with beam spacing 25, 50, 75 mm
Measurement time	(500 $\mu$ s + 70 $\mu$ s x n beams) x N Where N = scan cycles (1,2,3 selectable)
Scan cycles	1, 2, 3 selectable
Inputs (on receiver)	1 digital with programmable functions - 0 or 24 VDC
MI B (5, 25, 50, 75 mm) Outputs	- RS 485 Serial line - 2 solid state programmable digital outputs 0 or 24V (PNP 100 mA 24 VDC)
MI B (10, 30 mm) Outputs	- RS 485 Serial line (up to 3 nodes) - 2 solid state programmable digital outputs 0 or 24V (Push-Pull) See
Synchronisation between emitter and receiver	Optical or via cable, selectable
Electrical connections	M12 5-pole connector (emitter) M12 8-pole connector (receiver) M5 4-pole connector for programming interface
Status display	LEDs for operating status and light curtain self-diagnosis
Power supply (VDC)	24 $\pm$ 20%
Fastening	Back slot, or to the top and lower end with SFB E180 rotating brackets (optional)



Beam spacing (mm)	Serial output	Digital output
5 - 10 - 25 30 - 50 - 75	RS 485 serial line	2

Models MI B equipped with an RS 485 serial interface with programmable functions and two programmable digital outputs.

Controlled heights: 150 ... 3000 mm.

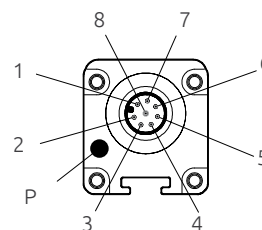
Programming interface: USB interface on M5 4-pole connector. See "CSU M5" on page 25

Max. length connection cables between light curtain and interface: 100 (m).

Possibility of connection of up to 3 Micron B light curtains as nodes of an RS 485 serial line for simultaneous detection of multiple dimensions and complex measurements. In this application could be necessary shielded cables for the connections.

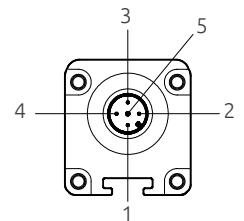
### CONNECTORS

Receiver M12 8-pole



- 1 - OUT 2/SYNC
- 2 - 24 VDC
- 3 - OUT 1
- 4 - INPUT
- 5 - LINE - (A)
- 6 - LINE + (B)
- 7 - 0 VDC
- 8 - PE

Emitter M12 5-pole



- P - Programming  
M5 4-pole connector
- 1 - 24 VDC
- 2 - RANGE
- 3 - 0 VDC
- 4 - SYNC
- 5 - PE

## PART NUMBERS

### Micron B - Beam spacing 5 mm

Micron B Beam spacing 5 mm	MI 150B	MI 300B	MI 450B	MI 600B	MI 750B	MI 900B	MI 1050B	MI 1200B	MI 1350B	MI 1500B
Ordering codes	1250540	1250541	1250542	1250543	1250544	1250545	1250546	1250547	1250548	1250549
Measuring height (mm)	145	295	445	595	745	895	1045	1195	1345	1495
Number of beams	30	60	90	120	150	180	210	240	270	300
Overall height (mm)	223	373	523	673	823	973	1123	1273	1423	1573

### Micron B - Beam spacing 10 mm

Micron B Beam spacing 10 mm	MI 151B	MI 301B	MI 451B	MI 601B	MI 751B	MI 901B	MI 1051B	MI 1201B	MI 1351B	MI 1501B	MI 1651B	MI 1801B	MI 1951B	MI 2101B	MI 2251B	MI 2401B	MI 2551B	MI 2701B	MI 2851B	MI 3001B
Ordering codes	1250220	1250221	1250222	1250223	1250224	1250225	1250226	1250227	1250228	1250229	1250230	1250231	1250232	1250233	1250234	1250235	1250236	1250237	1250238	1250239
Measuring height (mm)	140	290	440	590	740	890	1040	1190	1340	1490	1640	1790	1940	2090	2240	2390	2540	2690	2840	2990
Number of beams	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron B - Beam spacing 25 mm

Micron B Beam spacing 25 mm	MI 152B	MI 302B	MI 452B	MI 602B	MI 752B	MI 902B	MI 1052B	MI 1202B	MI 1352B	MI 1502B	MI 1652B	MI 1802B	MI 1952B	MI 2102B	MI 2252B	MI 2402B	MI 2552B	MI 2702B	MI 2852B	MI 3002B
Ordering codes	1250240	1250241	1250242	1250243	1250244	1250245	1250246	1250247	1250248	1250249	1250250	1250251	1250252	1250253	1250254	1250255	1250256	1250257	1250258	1250259
Measuring height (mm)	125	275	425	575	725	875	1025	1175	1325	1475	1625	1775	1925	2075	2225	2375	2525	2675	2825	2975
Number of beams	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron B - Beam spacing 30 mm

Micron B Beam spacing 30 mm	MI 153B	MI 303B	MI 453B	MI 603B	MI 753B	MI 903B	MI 1053B	MI 1203B	MI 1353B	MI 1503B	MI 1653B	MI 1803B	MI 1953B	MI 2103B	MI 2253B	MI 2403B	MI 2553B	MI 2703B	MI 2853B	MI 3003B
Ordering codes	1250260	1250261	1250262	1250263	1250264	1250265	1250266	1250267	1250268	1250269	1250270	1250271	1250272	1250273	1250274	1250275	1250276	1250277	1250278	1250279
Measuring height (mm)	120	270	420	570	720	870	1020	1170	1320	1470	1620	1770	1920	2070	2220	2370	2520	2670	2820	2970
Number of beams	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron B - Beam spacing 50 mm

Micron B Beam spacing 50 mm	MI 155B	MI 305B	MI 455B	MI 605B	MI 755B	MI 905B	MI 1055B	MI 1205B	MI 1355B	MI 1505B	MI 1655B	MI 1805B	MI 1955B	MI 2105B	MI 2255B	MI 2405B	MI 2555B	MI 2705B	MI 2855B	MI 3005B
Ordering codes	1250280	1250281	1250282	1250283	1250284	1250285	1250286	1250287	1250288	1250289	1250290	1250291	1250292	1250293	1250294	1250295	1250296	1250297	1250298	1250299
Measuring height (mm)	100	250	400	550	700	850	1000	1150	1300	1450	1600	1750	1900	2050	2200	2350	2500	2650	2800	2950
Number of beams	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron B - Beam spacing 75 mm

Micron B Beam spacing 75 mm	MI 157B	MI 307B	MI 457B	MI 607B	MI 757B	MI 907B	MI 1057B	MI 1207B	MI 1357B	MI 1507B	MI 1657B	MI 1807B	MI 1957B	MI 2107B	MI 2257B	MI 2407B	MI 2557B	MI 2707B	MI 2857B	MI 3007B
Ordering codes	1250300	1250301	1250302	1250303	1250304	1250305	1250306	1250307	1250308	1250309	1250310	1250311	1250312	1250313	1250314	1250315	1250316	1250317	1250318	1250319
Measuring height (mm)	75	225	375	525	675	825	975	1125	1275	1425	1575	1725	1875	2025	2175	2325	2475	2625	2775	2925
Number of beams	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

## CABLES NEEDED

- Emitter M12 5-pole. See [page 23](#) (CD x, CD x SB, CD 9x, CDM 9 CDM 99)
- Receiver M12 8-pole. See [page 24](#) (C8D x, C8D x SB, C8D 9x, C8DM 9, C8DM 99, C8DM 11, C8DM 911)

## ACCESSORIES

- Support columns. See [page 27](#)
- Laser alignment device. See [page 30](#)
- Vibration dumpers. See [page 29](#)
- Brackets. See [page 29](#)

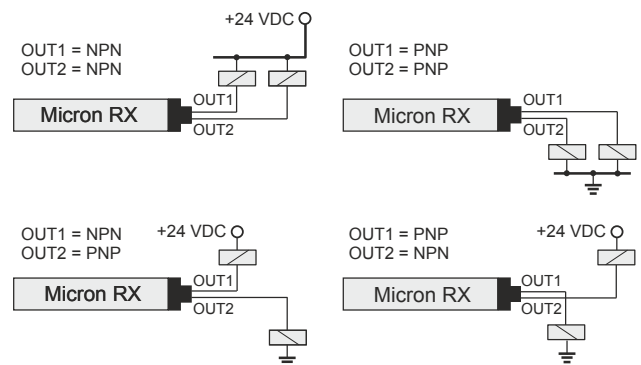
## MICRON C

### TECHNICAL FEATURES

Max. range (m)	- 2,5 - models with beam spacing 5 mm - 10 - models with beam spacing 10, 30 mm - 18 - models with beam spacing 25, 50, 75 mm
Measurement time	(500 $\mu$ s + 70 $\mu$ s x n beams) x 2
Micron MI C (5, 25, 50, 75 mm) outputs	2 - solid state 0 or 24V antivalent (PNP 100 mA at 24 VDC)
Micron MI C (10, 30 mm) outputs	2 - solid state 0 or 24V antivalent (Push-Pull). See the following image
Synchronisation between emitter and receiver	Optical
Electrical connections	2 M12 5-pole connectors (emitter and receiver)
Status display	LEDs for operating status and light curtain self-diagnosis
Power supply (VDC)	24 $\pm$ 20%
Fastening	Back slot, or to the top and lower end with SFB E180 rotating brackets (optional)

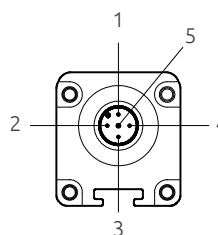
### Uscite Push-Pull

Push-Pull outputs can operate both in PNP and NPN mode. At the power-on the barrier recognizes the type of connection of the load and operates accordingly.



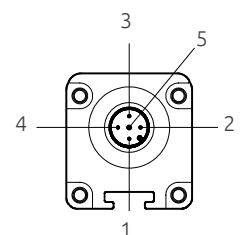
### CONNECTORS

Receiver M12 5-pole



- 1 - 24 VDC
- 2 - OUT 2
- 3 - 0 VDC
- 4 - OUT 1
- 5 - PE

Emitter M12 5-pole



- 1 - 24 VDC
- 2 - RANGE
- 3 - 0 VDC
- 4 - SYNC
- 5 - PE

Beam spacing (mm)	Digital output
5 - 10 - 25 30 - 50 - 75	2

Models MI C equipped with two antivalent solid state outputs.

Controlled heights: 150 ... 3000 mm.

Max. length connection cables between light curtain and interface: 100 (m).



## PART NUMBERS

### Micron C - Beam spacing 5 mm

Micron C Beam spacing 5 mm	MI 150C	MI 300C	MI 450C	MI 600C	MI 750C	MI 900C	MI 1050C	MI 1200C	MI 1350C	MI 1500C
Ordering codes	1250560	1250561	1250562	1250563	1250564	1250565	1250566	1250567	1250568	1250569
Measuring height (mm)	145	295	445	595	745	895	1045	1195	1345	1495
Number of beams	30	60	90	120	150	180	210	240	270	300
Overall height (mm)	223	373	523	673	823	973	1123	1273	1423	1573

### Micron C - Beam spacing 10 mm

Micron C Beam spacing 10 mm	MI 151C	MI 301C	MI 451C	MI 601C	MI 751C	MI 901C	MI 1051C	MI 1201C	MI 1351C	MI 1501C	MI 1651C	MI 1801C	MI 1951C	MI 2101C	MI 2251C	MI 2401C	MI 2551C	MI 2701C	MI 2851C	MI 3001C
Ordering codes	1250320	1250321	1250322	1250323	1250324	1250325	1250326	1250327	1250328	1250329	1250330	1250331	1250332	1250333	1250334	1250335	1250336	1250337	1250338	1250339
Measuring height (mm)	140	290	440	590	740	890	1040	1190	1340	1490	1640	1790	1940	2090	2240	2390	2540	2690	2840	2990
Number of beams	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron C - Beam spacing 25 mm

Micron C Beam spacing 25 mm	MI 152C	MI 302C	MI 452C	MI 602C	MI 752C	MI 902C	MI 1052C	MI 1202C	MI 1352C	MI 1502C	MI 1652C	MI 1802C	MI 1952C	MI 2102C	MI 2252C	MI 2402C	MI 2552C	MI 2702C	MI 2852C	MI 3002C
Ordering codes	1250340	1250341	1250342	1250343	1250344	1250345	1250346	1250347	1250348	1250349	1250350	1250351	1250352	1250353	1250354	1250355	1250356	1250357	1250358	1250359
Measuring height (mm)	125	275	425	575	725	875	1025	1175	1325	1475	1625	1775	1925	2075	2225	2375	2525	2625	2825	2975
Number of beams	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron C - Beam spacing 30 mm

Micron C Beam spacing 30 mm	MI 153C	MI 303C	MI 453C	MI 603C	MI 753C	MI 903C	MI 1053C	MI 1203C	MI 1353C	MI 1503C	MI 1653C	MI 1803C	MI 1953C	MI 2103C	MI 2253C	MI 2403C	MI 2553C	MI 2703C	MI 2853C	MI 3003C
Ordering codes	1250360	1250361	1250362	1250363	1250364	1250365	1250366	1250367	1250368	1250369	1250370	1250371	1250372	1250373	1250374	1250375	1250376	1250377	1250378	1250379
Measuring height (mm)	120	270	420	570	720	870	1020	1170	1320	1470	1620	1770	1920	2070	2220	2370	2520	2670	2820	2970
Number of beams	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron C - Beam spacing 50 mm

Micron C Beam spacing 50 mm	MI 155C	MI 305C	MI 455C	MI 605C	MI 755C	MI 905C	MI 1055C	MI 1205C	MI 1355C	MI 1505C	MI 1655C	MI 1805C	MI 1955C	MI 2105C	MI 2255C	MI 2405C	MI 2555C	MI 2705C	MI 2855C	MI 3005C
Ordering codes	1250380	1250381	1250382	1250383	1250384	1250385	1250386	1250387	1250388	1250389	1250390	1250391	1250392	1250393	1250394	1250395	1250396	1250397	1250398	1250399
Measuring height (mm)	100	250	400	550	700	850	1000	1150	1300	1450	1600	1750	1900	2050	2200	2350	2500	2650	2800	2950
Number of beams	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron C - Beam spacing 75 mm

Micron C Beam spacing 75 mm	MI 157C	MI 307C	MI 457C	MI 607C	MI 757C	MI 907C	MI 1057C	MI 1207C	MI 1357C	MI 1507C	MI 1657C	MI 1807C	MI 1957C	MI 2107C	MI 2257C	MI 2407C	MI 2557C	MI 2707C	MI 2857C	MI 3007C
Ordering codes	1250400	1250401	1250402	1250403	1250404	1250405	1250406	1250407	1250408	1250409	1250410	1250411	1250412	1250413	1250414	1250415	1250416	1250417	1250418	1250419
Measuring height (mm)	75	225	375	525	675	825	975	1125	1275	1425	1575	1725	1875	2025	2175	2325	2475	2625	2775	2925
Number of beams	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

## CABLES NEEDED

- Emitter M12 5-pole. See [page 23](#)  
(CD x, CD x SB, CD 9x, CDM 9 CDM 99)
- Receiver M12 5-pole. See [page 23](#)  
(CD x, CD x SB, CD 9x, CDM 9 CDM 99)

## ACCESSORIES

- Support columns. See [page 27](#)
- Laser alignment device.  
See [page 30](#)
- Vibration dumpers. See [page 29](#)
- Brackets. See [page 29](#)



IOL models with IO-Link protocol. These models allow the transfer of all measurement and detection data via the IO-Link communication protocol.

Controlled heights: 150 ... 3000 mm.

Max. length connection cables between light curtain and IO-Link Master: 20 (m).

With Micron IOL the IODD file (IO Device Description) is provided. This file contains the description of the device in electronic format:

- Communication properties
- Range of parameter values and default values
- Identification, process and diagnostic data
- Device data
- Textual description
- Image

This file must be loaded into the configuration of the Master IO-Link via the interface (tool) for configuring the Master itself.

## MICRON IOL



### TECHNICAL FEATURE

Max. range (m)	10
Electrical connections	2 M12 5-pole connectors (emitter and receiver)
Display	LEDs for operating status and light curtain self-diagnosis
Pwer supply (VDC)	24 ± 20%
Fastening	Back slot, or to the top and lower end with SFB E180 rotating brackets (optional)

### PROCESS DATA MAPPING

Data available via the IO-Link Process Data Mapping

- NCBO: Number of Consecutive Beams Obstructed
- NBO: Number of Beams Obstructed
- CBO: Central Beam Obstructed
- LBO: Last Beam Obstructed
- FBO: First Beam Obstructed
- Individual beam status
- Curtain Status (Free + Sync)
- Object Detected

### CONFIGURABLE PARAMETERS

Configurable Parameters via the IO-Link Master are the following:

Syncro type	Optical/Cable
Bearing	Normal/Upside down
Scan cycles	Number of curtain cycles to consider a measurement valid
Data transmission mode	Always enabled, Enabled on trigger, Disabled on trigger, Peak detection, One-shot
Teach-in mode	Disabled, Fixed, Moving, Blanking
Teach-in tolerance	Tolerance on the occupied beam to recognise an object



## WHAT IS IO-LINK?

IO-Link is a point-to-point serial communication protocol. This protocol (open standard based) allows the bi-directional exchange of data from sensors and the IO-Link Master.

The IO-Link master can transmit the received data over fieldbuses, networks or different buses, making the data accessible for other devices (i.e. PLC or interfaces).

Each IO-Link sensor carries an IODD file (IO Device Description) containing device information and features. The structure of the IODD description is the same for all IO-Link device manufacturers.

In the Master IO-Link configuration tool, the structure of the IODD description is always the same. In this way, the same methods of use are guaranteed for all IO-Link devices regardless of the manufacturer.

There are three primary data types made available via IO-Link communication:

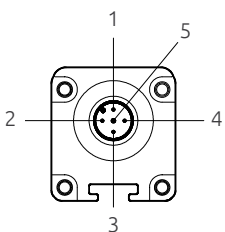
- Process Data refers to the information that the device reads and transmits to the master - such as the measure reading during machine cycles
- Service Data - also called Device Data - refers to information about the sensor itself
- Event Data refers to notifications such as error messages or maintenance warnings

### Advantages of IO-Link

- Standardized and reduced wiring. M12 5-pole connectors
- Increased data availability: process, service and event data
- Remote configuration and monitoring
- Simple device replacement
- Advanced sensor diagnostics

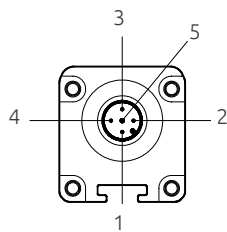
## CONNECTORS

Receiver  
M12 5-pole

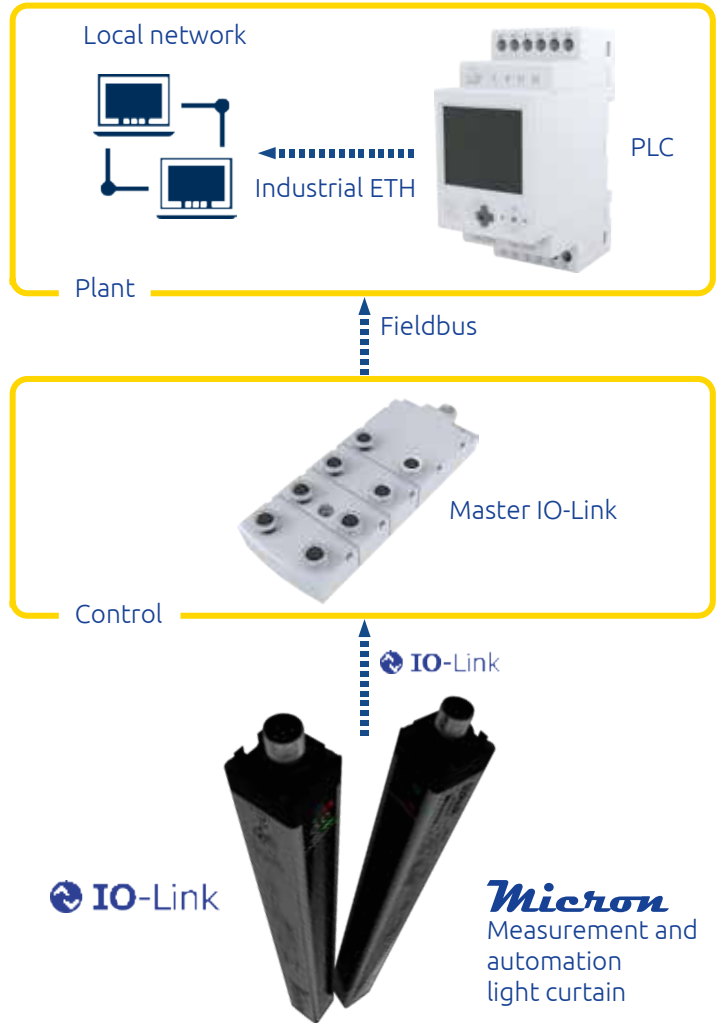


- 1 - 24 VDC
- 2 - SYNC
- 3 - 0 VDC
- 4 - Q/C
- 5 - Not used

Emitter  
M12 5-pole



- 1 - 24 VDC
- 2 - RANGE
- 3 - 0 VDC
- 4 - SYNC
- 5 - PE



## CABLES NEEDED

- Emitter M12 5-pole. See [page 23](#) (CD x, CD x SB, CD 9x, CDM 9 CDM 99)
- Receiver M12 5-pole. See [page 23](#) (CD x, CD x SB, CD 9x, CDM 9 CDM 99)
- Option: Y Splitter cable M 12 5-pole. For 24 V transmitter and Sync receiver connection (note). See [page 26](#)

Note: with Y splitter cable an extension cable is required. M12 5-pole male/female extension cable (CFM5PX).

## ACCESSORIES

- Support columns. See [page 27](#)
- Laser alignment device. See [page 30](#)
- Vibration dampers. See [page 29](#)
- Brackets. See [page 29](#)

## PART NUMBERS

### Micron IOL - Beam spacing 10 mm

Micron IO-Link Beam spacing 10 mm	MI 151IOL	MI 301IOL	MI 451IOL	MI 601IOL	MI 751IOL	MI 901IOL	MI 1051IOL	MI 1201IOL	MI 1351IOL	MI 1501IOL	MI 1651IOL	MI 1801IOL	MI 1951IOL	MI 2101IOL	MI 2251IOL	MI 2401IOL	MI 2551IOL	MI 2701IOL	MI 2851IOL	MI 3001IOL
Ordering codes	1250700	1250701	1250702	1250703	1250704	1250705	1250706	1250707	1250708	1250709	1250710	1250711	1250712	1250713	1250714	1250715	1250716	1250717	1250718	1250719
Measuring height (mm)	140	290	440	590	740	890	1040	1190	1340	1490	1640	1790	1940	2090	2240	2390	2540	2690	2840	2990
Number of beams	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron IOL - Beam spacing 25 mm

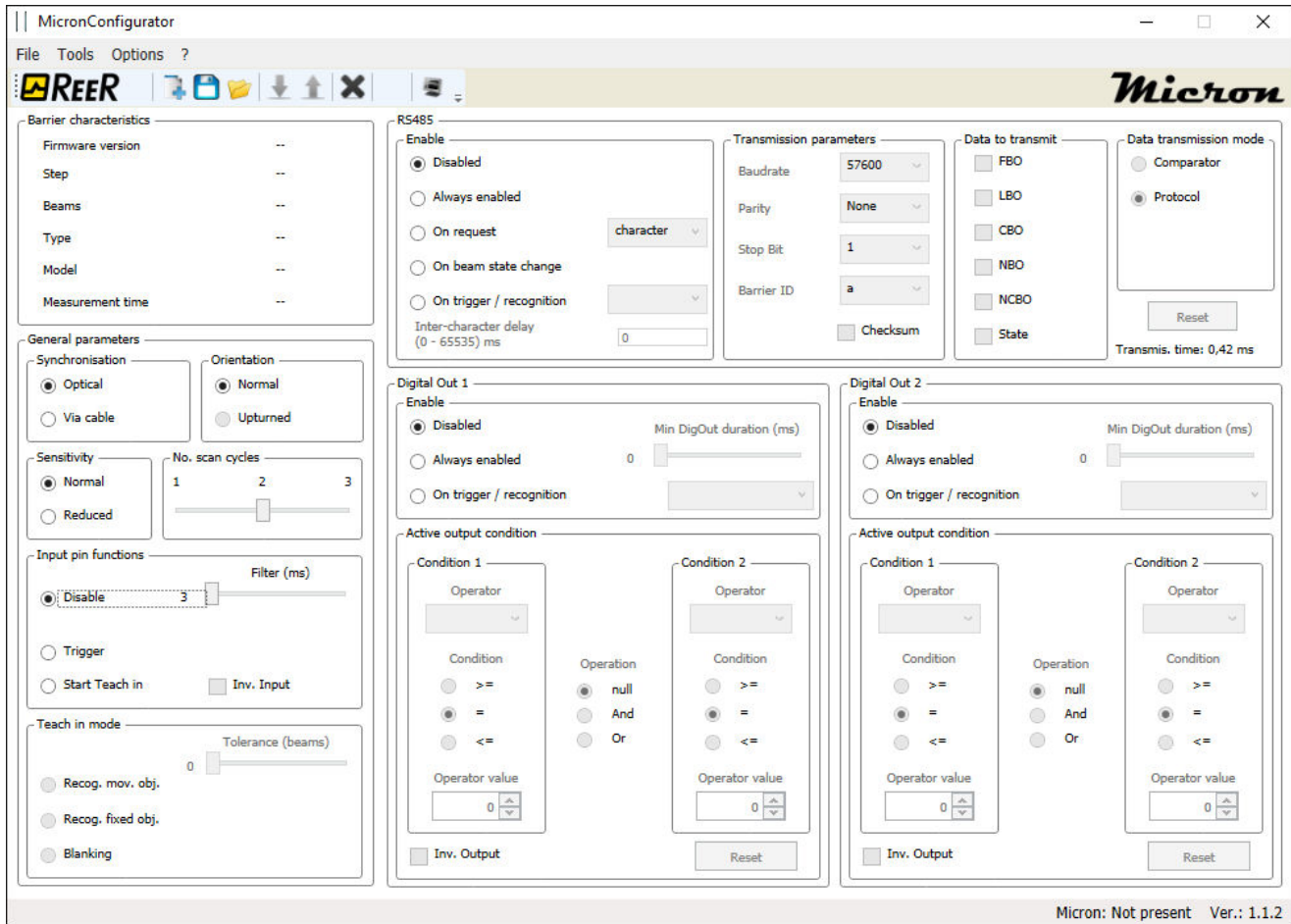


Micron IO-Link Beam spacing 25 mm	MI 152IOL	MI 302IOL	MI 452IOL	MI 602IOL	MI 752IOL	MI 902IOL	MI 1052IOL	MI 1202IOL	MI 1352IOL	MI 1502IOL	MI 1652IOL	MI 1802IOL	MI 1952IOL	MI 2102IOL	MI 2252IOL	MI 2402IOL	MI 2552IOL	MI 2702IOL	MI 2852IOL	MI 3002IOL
Ordering codes	1250740	1250741	1250742	1250743	1250744	1250745	1250746	1250747	1250748	1250749	1250750	1250751	1250752	1250753	1250754	1250755	1250756	1250757	1250758	1250759
Measuring height (mm)	125	275	425	575	725	875	1025	1175	1325	1475	1625	1775	1925	2075	2225	2375	2525	2625	2825	2975
Number of beams	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

### Micron IOL - Beam spacing 30 mm

Micron IO-Link Beam spacing 30 mm	MI 153IOL	MI 303IOL	MI 453IOL	MI 603IOL	MI 753IOL	MI 903IOL	MI 1053IOL	MI 1203IOL	MI 1353IOL	MI 1503IOL	MI 1653IOL	MI 1803IOL	MI 1953IOL	MI 2103IOL	MI 2253IOL	MI 2403IOL	MI 2553IOL	MI 2703IOL	MI 2853IOL	MI 3003IOL
Ordering codes	1250720	1250721	1250722	1250723	1250724	1250725	1250726	1250727	1250728	1250729	1250730	1250731	1250732	1250733	1250734	1250735	1250736	1250737	1250738	1250739
Measuring height (mm)	120	270	420	570	720	870	1020	1170	1320	1470	1620	1770	1920	2070	2220	2370	2520	2670	2820	2970
Number of beams	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Overall height (mm)	213	363	513	663	813	963	1113	1263	1413	1563	1713	1863	2013	2163	2313	2463	2613	2763	2913	3063

# CONFIGURATOR SOFTWARE



Software for PC, with graphic user interface, is supplied with each light curtain (Micron models A and B only).

Micron models A and B are provided with an M5 4-pole connector for parameter configuration and monitoring of the light curtain to be connected to a PC using the CSU M5 cable.

**NOTE:** Operating parameters of the Micron MI IOL models can be configured via the IO-Link master. These models therefore do not need a dedicated software.

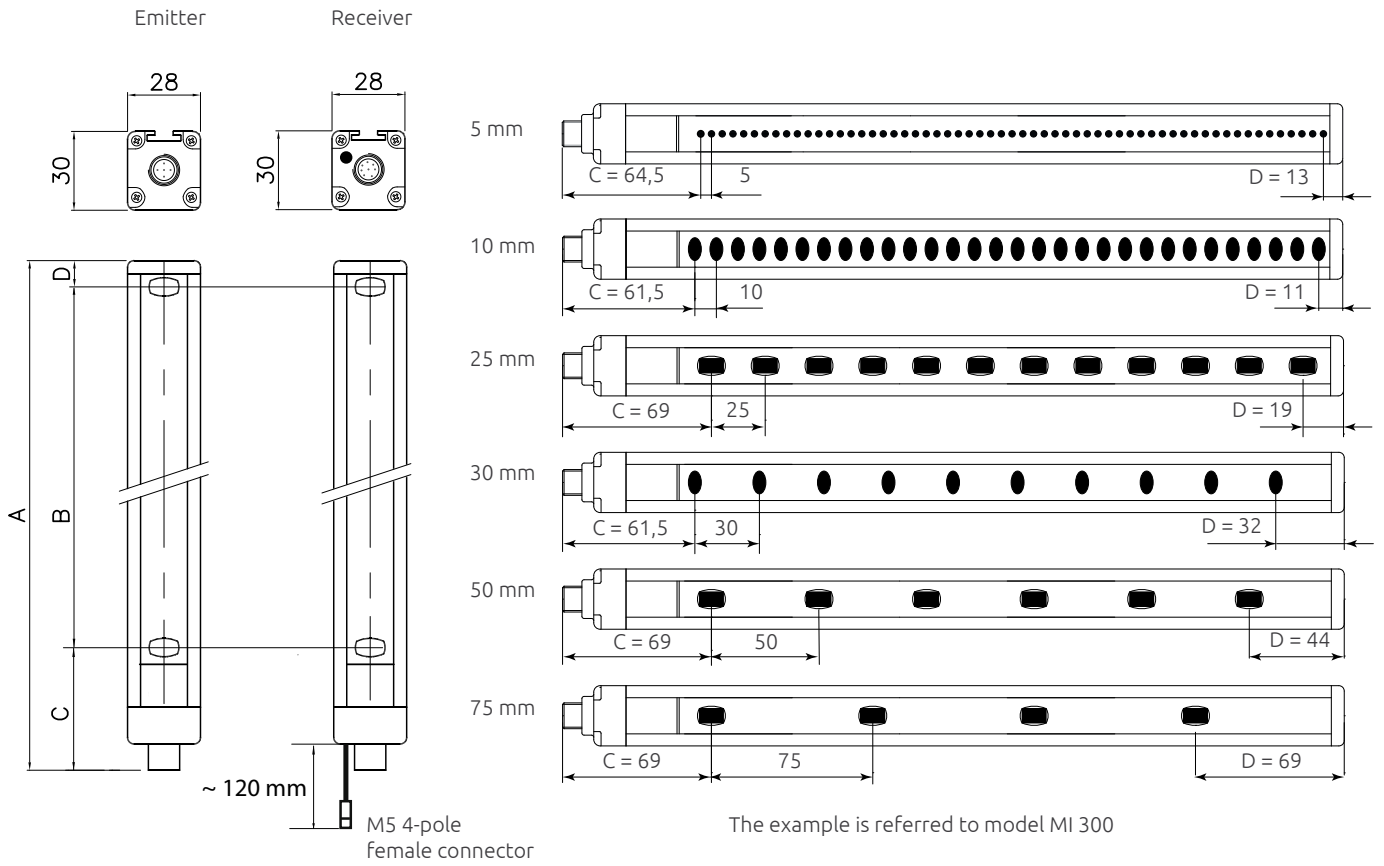
## “MicronConfigurator” CHARACTERISTICS

Possibility for on-line display on PC screen during operation: (via USB)      Status of each individual beam and solid state outputs

Configurable parameters      Operating logic (conditions for output activation)  
Parameters of the RS 485 serial line (transmission method, baud rate, parity, start-stop characters, binary, hex, ascii format, measurement time, etc.)



# MECHANICAL DATA



Dimensions: mm

Model MI	150	300	450	600	750	900	1050	1200	1350	1500	1650
A (5 mm Models)	223	373	523	673	823	973	1123	1273	1423	1573	
A (10, 25, 30, 50, 75 mm models)	213	363	513	663	813	963	1113	1263	1413	1563	1713
B (measuring height)	B = (number of beams -1) x beam spacing										
C (1 <sup>st</sup> beam position)	64,5 (for 5 mm models) - 61,5 (for 10 and 30 mm models) - 69 (for 25, 50 and 75 mm models)										

Mounting	Complete set of 4 LE type brackets included in the package						Complete set of 6 LE type brackets included in the package				
----------	--	--	--	--	--	--	--	--	--	--	--

Model MI	1800	1950	2100	2250	2400	2550	2700	2850	3000
A (10, 25, 30, 50, 75 mm models)	1863	2013	2163	2313	2463	2613	2763	2913	3063
B (measuring height)	B = (number of beams -1) x beam spacing								
C (1 <sup>st</sup> beam position)	61,5 (for 10 and 30 mm models) - 69 (for 25, 50 and 75 mm models)								
Mounting	Complete set of 6 LE type brackets included in the package								

## D versions (diaphragmed optics) - Ideal solution for automatic warehouse applications

The automatic system must be able to measure the maximum height of objects placed in the boxes of the warehouse. Detection of maximum height of the objects present in the boxes allows the efficient management of the machine's capacity

This measurement should be homogeneous at any points of the box: left side, right side and in the center and immune to optical reflections;

- Models with beams spacing: 25, 50, 75 mm
- The special optics of these light curtains allow detection of small objects in quick motion.
- Capability to detect small objects (even less than 4 mm) during the passage, in quick motion of the boxes, in front of the measurement light curtain;



## HS versions (High Sensibility) - For transparent or semi transparent materials

- Models with beams spacing: 10, 30 mm
- Max. range: 1 m
- Operative range:
  - Low (m): 0 ... 0,15
  - High (m): 0 .. 1

## H versions (High Range)

- Models with beams spacing: 10, 30 mm
- Max. range: 18 m
- Normal operative range - Software selectable
  - Low (m): 0 ... 8
  - High (m): 1 ... 18
- Reduced operative range - Software selectable
  - Low (m): 0 ... 3
  - High (m): 0 ... 8

## Versions -20 - With 20 mm beams spacing

Models with beams spacing: 20 mm

- Max. range: 10 m
- Operative range
  - Low (m): 0 ... 2
  - High (m): 1 ... 10

## P Versions - Pre-programmed

Programming is done directly by ReeR on customer's indications (OEM projects, etc.).

Please contact ReeR for availability and models..



BACKLIT TOP COVER WITH STATUS LED

Through-beam barrier type photocell with 5 beams.

With a compact metal housing and a polycarbonate protective front window it offers the right degree of robustness ideal also in the most demanding environments.

### STATUS DISPLAY

	LED	State	Description
Emitter		ON	Beam emitted
		OFF	No beam
Receiver		ON	Controlled area is free
		ON	Break condition (controlled area is obstructed)



Operating temperature -30 ... 55 °C



IP65 protection rate



## M<sup>5</sup> - M<sup>5</sup>H

### MULTI-BEAM PHOTOCELL

#### TECHNICAL FEATURES

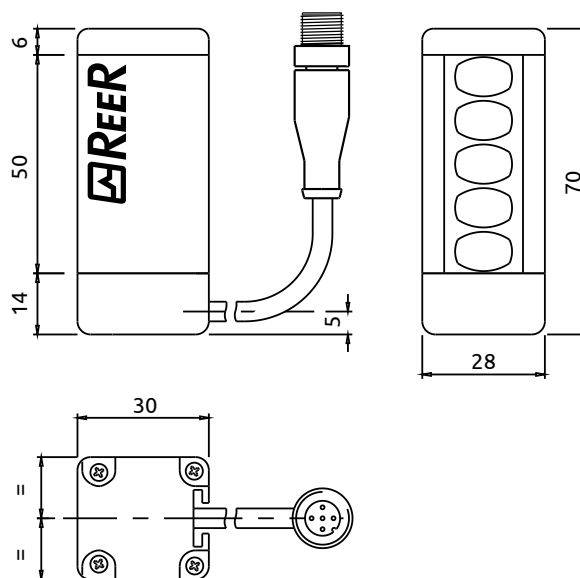
Max. range (m)	0 ... 3,5 (0 ... 5 H model)
Measurement time (ms)	< 100
Power supply (VDC)	24 ± 20%
Power consumption at 24 VDC (W)	1
Number of beams	5
Beam spacing (mm)	10
Outputs on receiver	0 or 24V (PNP 100 mA 24 VDC) dark-on
Immunity to the ambient light (lx)	> 10000 (solar)
Emission angle	± 5°
Emission wavelength (nm)	940 modulated infrared
Electrical connections	Pigtail cable with M12 5-pole (emitter and receiver)
Fastening	Back slot
Dimension h x w x d (mm)	70 x 28 x 30

#### PART NUMBERS

M<sup>5</sup> (A coding): 1250910      M<sup>5</sup>H (A coding): 1250916  
M<sup>5</sup> (B coding): 1250911      M<sup>5</sup>H (B coding): 1250917

**Note:** The use of different coding is recommended for the installation of two M<sup>5</sup> sensors next to each other in order to avoid interference.

#### DIMENSIONS



Dimensions: mm



Backlit top cover with status LED

Single-beam retro-reflection photocell, consisting of:

- Active TX/RX
- Retro-reflector (to be ordered separately)

With a compact metal housing and a polycarbonate protective front window, it offers the right degree of robustness ideal also in the most demanding environments.

Two models are available: M<sup>TRX</sup> and M<sup>TRX</sup> GLASS (G) with low scanning range to optimise correct and consistent detection of transparent materials (i.e. glass).

The integrated status signaling lamp allows to easily verify the status of the system.

### STATUS DISPLAY

	LED	State	Description
Active element		ON	Controlled area is free
		ON	Break condition (controlled area is obstructed)
		Blinking	Fault detect



Operating temperature: -30 ... +55 °C



Protection rate: IP65



## RETRO-REFLECTOR PHOTOCELL

### TECHNICAL FEATURES

Operative range (m)	Retro-reflector	M TRX	M TRX G
<i>It varies depending on the model of the retro-reflector</i>	C3F10	0 ... 2,5	0 ... 1,5
	C3F8	0 ... 3,5	0 ... 2
	CD8	0 ... 5	0 ... 3
Measurement time (ms)	65		
Power supply (VDC)	24 ± 20%		
Power cons. at 24 VDC (W)	0,2		
Number of beams	1		
Outputs	0 or 24 VDC (PNP 100 mA dark-on)		
Emission angle	± 5°		
Emission wavelength (nm)	660 (modulated infrared)		
Electrical connections	Pigtail cable with M12 5-pole		
Fastening	Back slot with L bracket		
Dimension h x w x d (mm)	70 x 28 x 30		
Cable length (mm)	900		

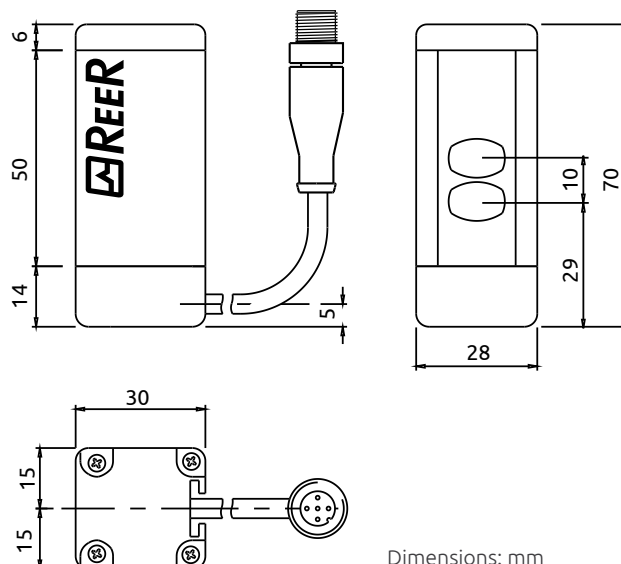
### PART NUMBERS

M<sup>TRX</sup> (A coding): 1250912    M<sup>TRX</sup> G (A coding): 1250914  
M<sup>TRX</sup> (B coding): 1250913    M<sup>TRX</sup> G (B coding): 1250915

NOTE: The use of different coding is recommended for the installation of two M<sup>TRX</sup> photocells next to each other in order to avoid interference.

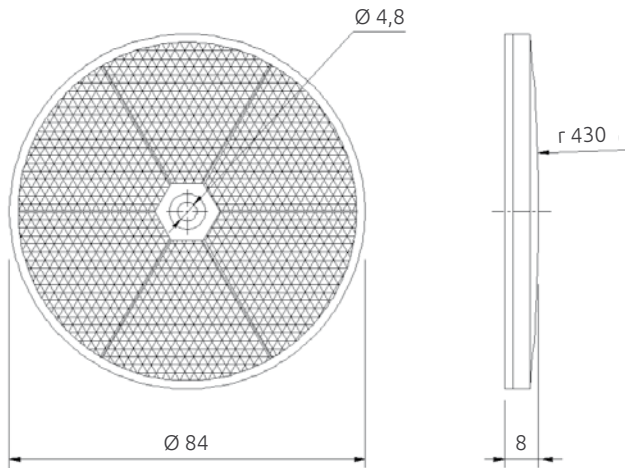
Retro-reflectors. [See page 40](#)

### DIMENSIONS



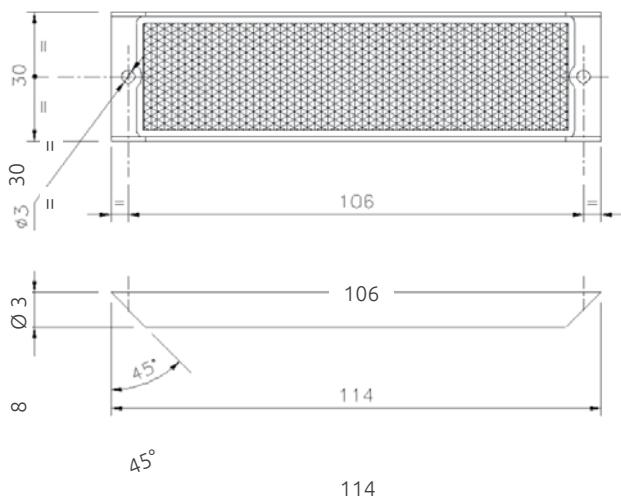
## RETRO-REFLECTOR

### Retro-reflector CD8



Mounting: with fixing screws (not provided)  
Operative range (m): 0 ... 5

### Retro-reflector C3F10



Mounting: with fixing screws (not provided)  
Operative range (m): 0 ... 2,5

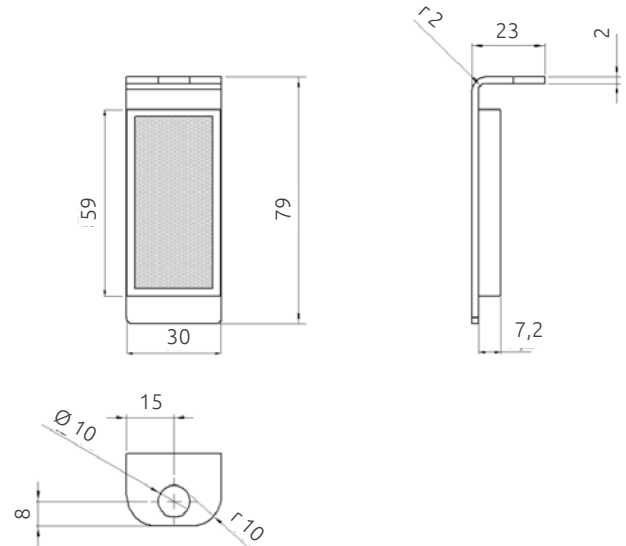
## PART NUMBERS

Retro-reflector CD8: 1210032

Retro-reflector C3F8: 1210221

Retro-reflector C3F10: 1210035

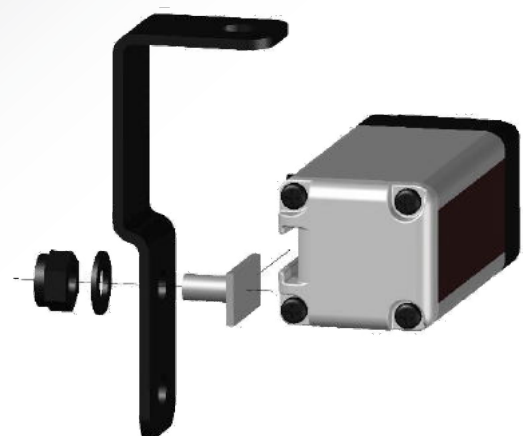
### Retro-reflector C3F8



Mounting: with provided brackets  
Operative range (m): 0 ... 3,5

## SFB 4M BRACKETS

Set of 4 swivel brackets for MZ SAFEGATE Muting sensor support. For correct fixing of the M5 and MTRX photocells on the SAFEGATE MZ support SFB



SFB 4M part number: 1250901

## MI - Bs

### FIELD BUS INTERFACES FOR MICRON

Expansion unit for connect Micron light curtain to the most common industrial Field-bus systems for diagnostics and data communication.

#### APPLICATION EXAMPLE

In all applications where it is required a communication between the Micron light curtains and PLC control.

#### TECHNICAL FEATURES

Ports	RS 485 serial ports for I/O BUS expansion USB port for configuration
Connection to Micron	Via Micron cable
Power supply (VDC)	24 ± 20%
Operating temperature (°C)	-10 ... +55 °C
Storage temperature (°C)	-20 ... +85 °C
Protection rating	IP20 for housing IP2X for terminal block
Fastening	DIN rail fastening according to EN 50022-35 standard
Connection	Removable terminal blocks, screw contacts
Dimensions h x w x d (mm)	99 x 22,5 x 114

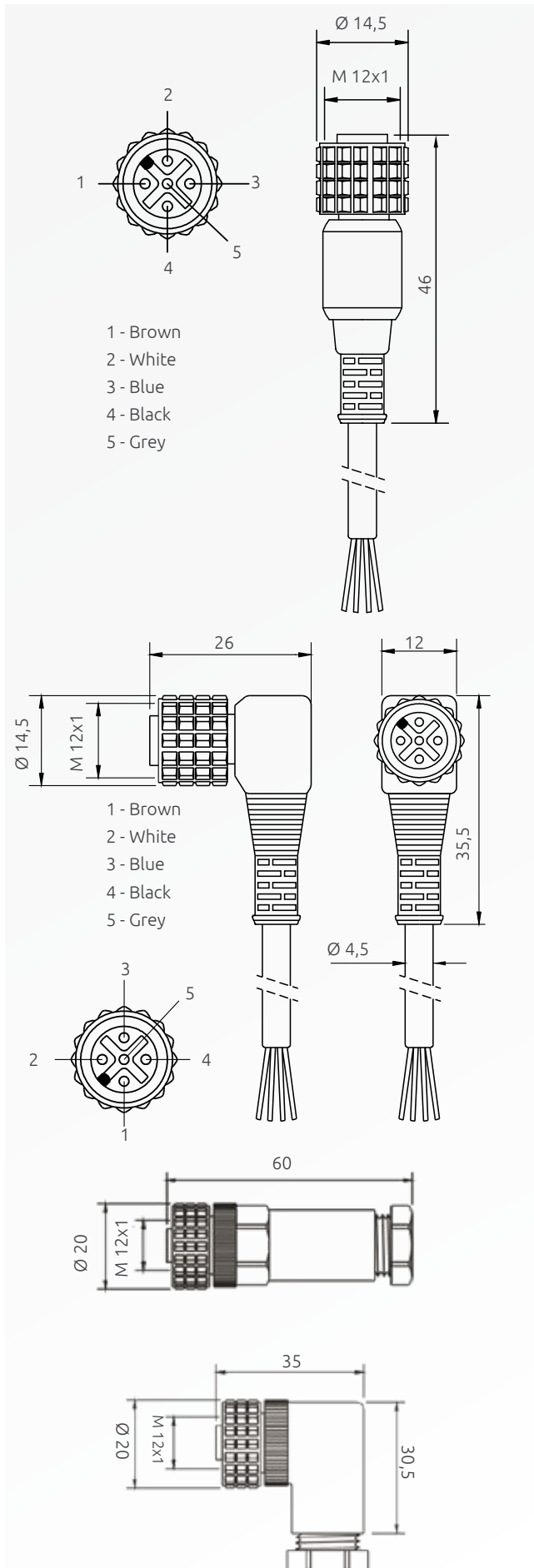
#### PART NUMBERS

1250500	MI - BP Profibus DP interface module
1250501	MI - BD DeviceNet interface module
1250502	MI - BC CANopen interface module
1250503	M - BEI Ethernet IP interface module
1250504	MI - BEC EtherCAT interface module
1250505	MI - BEP PROFINET interface module
1250506	MI - BU Universal Serial Bus interface module
1250507	MI - BMR ModBus RTU interface module
1250508	MI - BEM ModBus TCP/IP interface module



These modules allow the connection of the Micron measurement light curtains with the following industrial field bus:

- MI - BP - Profibus DP
- MI - BD - DeviceNET
- MI - BC - CANopen
- MI - BEC - EtherCAT
- MI - BEI - Ethernet IP
- MI - BEP - PROFINET
- MI - BMR - ModBus RTU
- MI - BEM - ModBus TCP/IP
- MI - BU - USB Universal Serial Bus



## CD x

### M12 STRAIGHT CONNECTOR 5-POLE

Models	Codes	Description
CD 5	1330950	Pre-wired cable 5 m
CD 10	1330956	Pre-wired cable 10 m
CD 15	1330952	Pre-wired cable 15 m
CD 20	1330957	Pre-wired cable 20 m
CD 25	1330949	Pre-wired cable 25 m
CD 50	1330965	Pre-wired cable 50 m

## CD x SB

### M12 STRAIGHT CONNECTOR 5-POLE, SHIELDED

Models	Codes	Description
CD 5 SB	1330850	Pre-wired shielded cable 5 m
CD 10 SB	1330856	Pre-wired shielded cable 10 m
CD 15 SB	1330852	Pre-wired shielded cable 15 m

## CD 9x

### M12 90° ANGLE CONNECTOR 5-POLE

Models	Codes	Description
CD 95	1330951	Pre-wired cable 5 m
CD 910	1330958	Pre-wired cable 10 m
CD 915	1330953	Pre-wired cable 15 m

## CDM 9

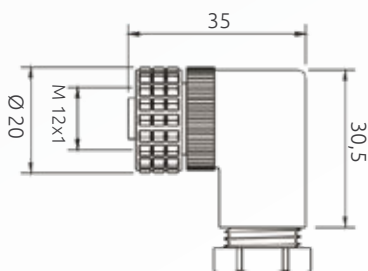
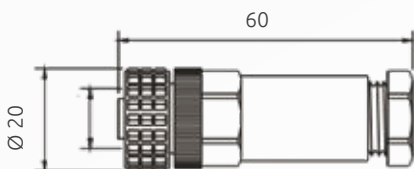
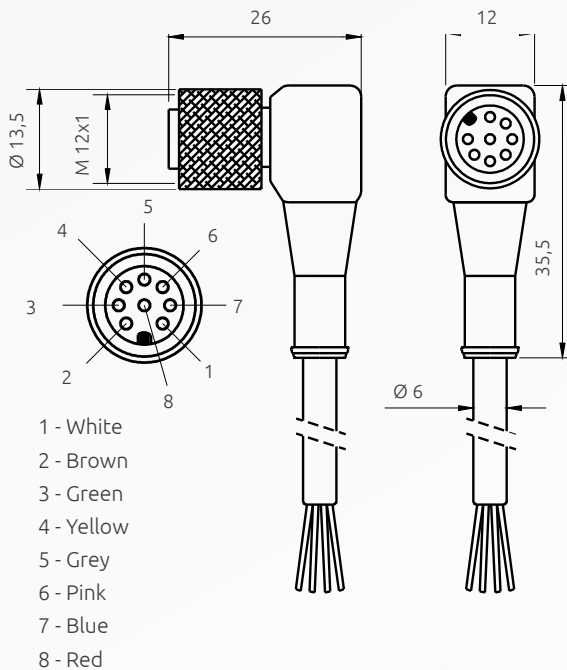
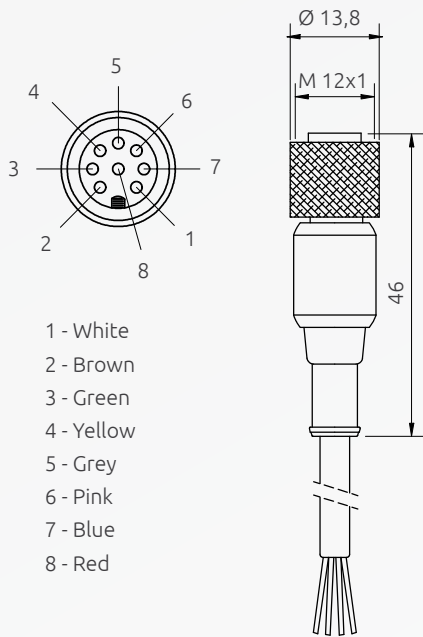
### M12 STRAIGHT CONNECTOR 5-POLE SCREW TERMINAL, PG9 CABLE GLAND

Model	Code
CDM 9	1330954

## CDM 99

### M12 STRAIGHT CONNECTOR 5-POLE SCREW TERMINAL, PG9 CABLE GLAND

Model	Code
CDM 99	1330955



## C8D x

### M12 STRAIGHT CONNECTOR 8-POLE

Models	Codes	Description
C8D 5	1330980	Pre-wired cable 5 m
C8D 10	1330981	Pre-wired cable 10 m
C8D 15	1330982	Pre-wired cable 15 m
C8D 25	1330967	Pre-wired cable 25 m
C8D 40	1330966	Pre-wired cable 40 m

## C8D x SB

### M12 STRAIGHT CONNECTOR 8-POLE, SHIELDED

Model	Codes	Description
C8D 5 SB	1330880	Pre-wired shielded cable 5 m
C8D 10 SB	1330881	Pre-wired shielded cable 10 m
C8D 15 SB	1330882	Pre-wired shielded cable 15 m

## C8D 9x

### M12 90° ANGLE CONNECTOR 8-POLE

Models	Codes	Description
C8D 95	1330983	Pre-wired cable 5 m
C8D 910	1330984	Pre-wired cable 10 m
C8D 915	1330985	Pre-wired cable 15 m

## C8DM 9

### M12 STRAIGHT CONNECTOR 8-POLE SCREW TERMINAL, PG9 CABLE GLAND

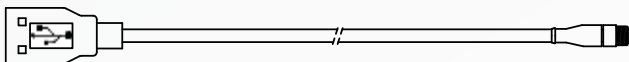
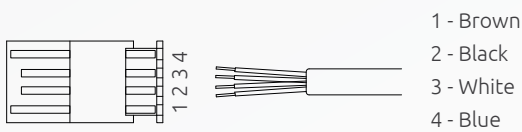
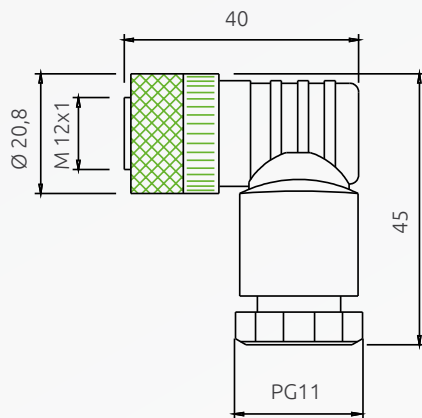
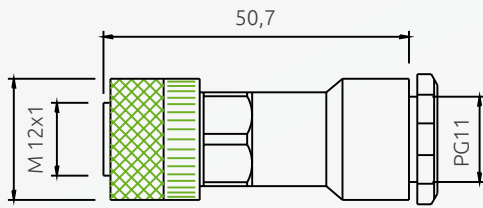
Model	Code
C8DM 9	1330986

## C8DM 99

### M12 STRAIGHT CONNECTOR 8-POLE SCREW TERMINAL, PG9 CABLE GLAND

Model	Code
C8DM 99	1330987





## C8DM 11

M12 STRAIGHT CONNECTOR 8-POLE  
SCREW TERMINAL, PG11 CABLE GLAND

Model	Code
C8DM 11	1330978

## C8DM 911

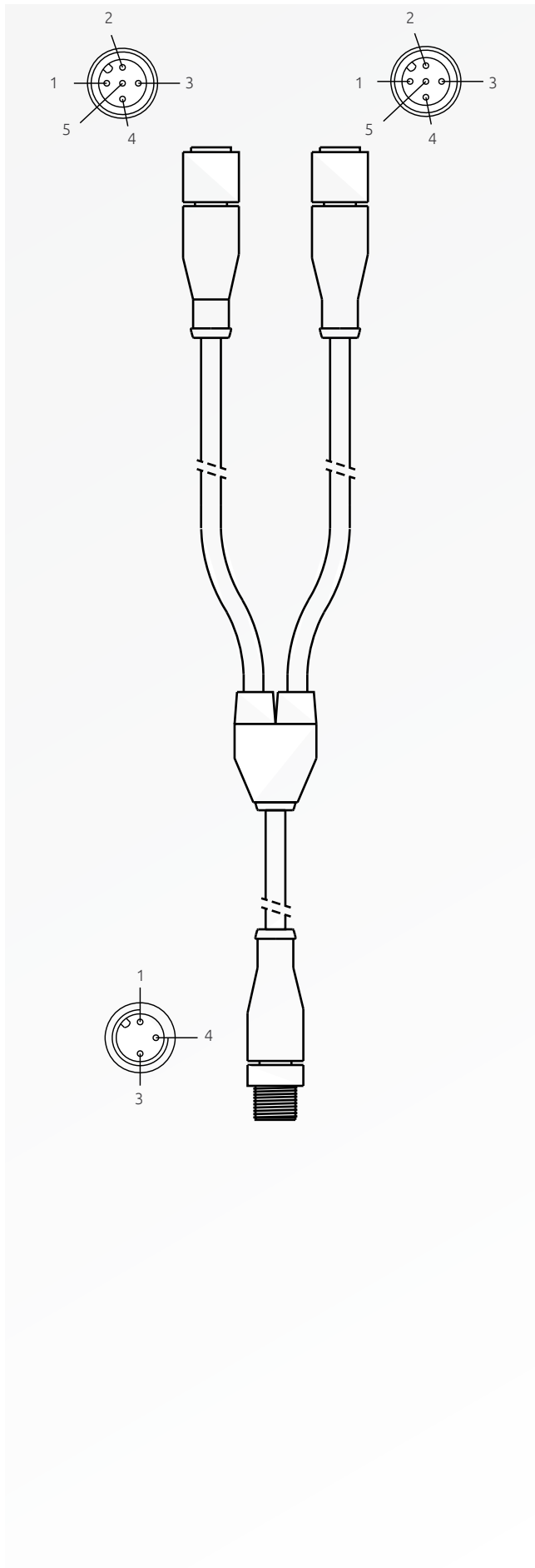
M12 90° ANGLE CONNECTOR 8-POLE  
SCREW TERMINAL, PG11 CABLE GLAND

Model	Code
C8DM 911	1330979

## CSU M5

MICRON PROGRAMMING CABLE

Model	Code	Description
CSU M5	1250900	2 meters cable, for connecting light curtain and PC for system configuration, equipped with one M5 4-pole connector and one USB A connector

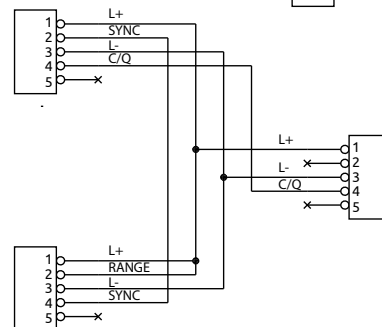
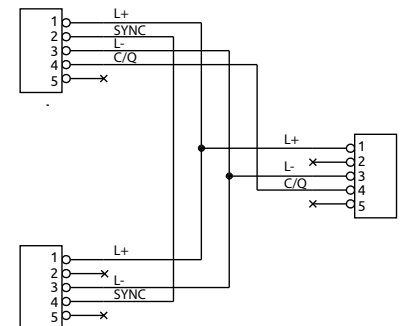


## CSYIOLH / CSYIOLL

### Y SPLITTER CABLE WITH 3 M12 5-POLE CONNECTORS

Model	Code	Description
CSYIOLH	1250902	Y Splitter cable M 12 5-pole. High range configuration
CSYIOLL	1250903	Y Splitter cable M 12 5-pole. Low range configuration

CSYIOLL cable connection  
Low range configuration



CSYIOLH cable connection  
High range configuration

## FMC EB / FMC EBR FLOOR SUPPORT COLUMNS

### PART NUMBERS

#### Columns

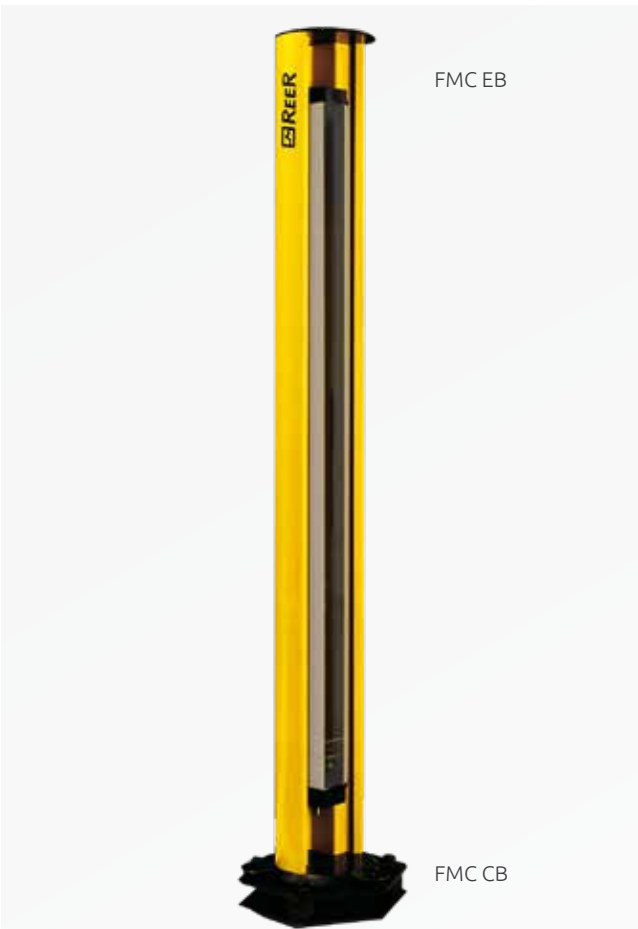
Standard models	FMC EB 2	FMC EB 4	FMC EB 1700	FMC EB 2000
Ordering codes	1207814	1207815	1207816	1207817
Models with PG11 rear union for cable sheath	FMC EB 2 R	FMC EB 4 R	FMC EB 1700 R	FMC EB 2000 R
Ordering codes	1207824	1207825	1207826	1207827
A - Height (mm)	1000	1200	1670	1970
B - Overall height with FMC CB base (mm)	1055	1255	1725	2025
B - Overall height with FMC CBL base (mm)	1037	1237	1707	2007

#### Bases for columns

Models	FMC CB	FMC CBL
Ordering codes	1200500	1200501
Description	Base for column	Base for column with reduced height
Height (mm)	55	37

#### Note for ordering

The column ordering codes does not include the base which must be ordered separately (CB FMC and FMC CBL models).



Support columns for Reer safety light curtains, designed to provide secure fastening to the floor, fast installation, and a simple and precise adjustment of the optical alignment of the system.



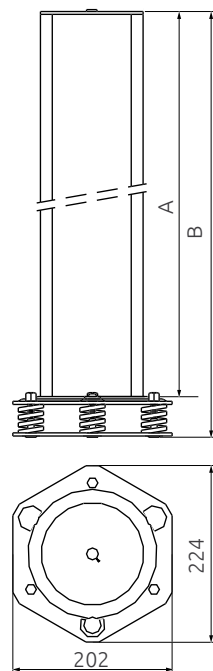
Steel base with springs for a perfect adjustment of the column vertical axis.

FMC BR models for light curtains complete with PG11 rear union for light curtain cable sheath.

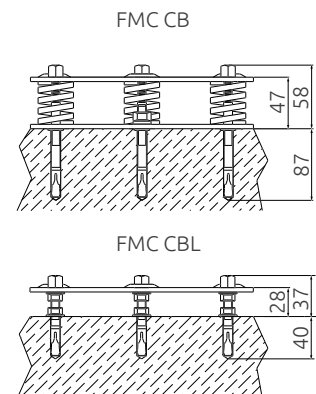
Columns made by aluminium extrusion poles, with adjustable angular orientation. Easy assembling and disassembling of the light curtain with easy adjustment of the first beam's height.

Steel foundation inserts included with the product.

Built-in spirit level for a correct positioning of the vertical axis.



A: Column height (mm)  
B: Column height with base FMC CB or FMC CBL



## FMC B12 / B18 SUPPORT COLUMNS

### PART NUMBERS

Model	FMC B12	FMC B18
Ordering codes	1200502	1200505
Dimensions (mm)	60 x 30	80 x 80
Height (mm)	1200	1800
Overall height with FMC CB base (mm)	1255	1255
Overall height with FMC CBL base (mm)	1237	1237



FMC B12

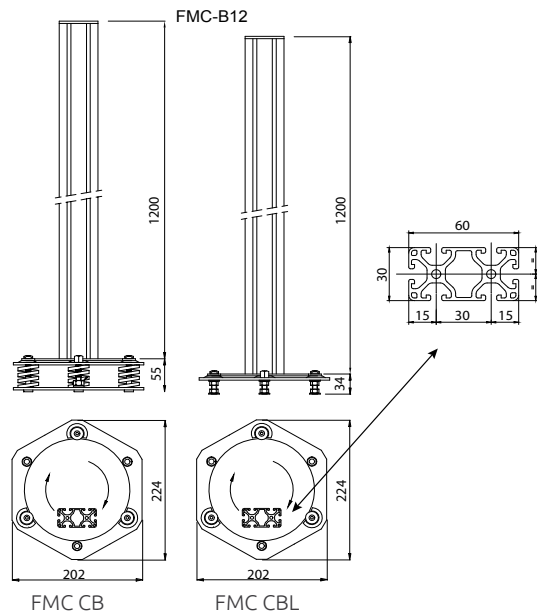
FMC CB

Simplified version support columns for Reer safety light curtains.

#### Note for ordering

The column ordering codes does not include the base which must be ordered separately (CB FMC and FMC CBL models)

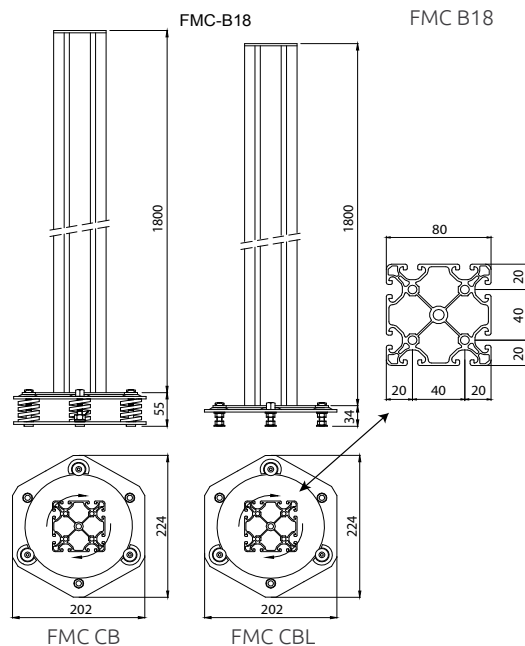
FMC B12



FMC CB

FMC CBL

FMC B18



FMC CB

FMC CBL

The SFB 4E / SFB 6E swivel brackets allow the rotation of the light curtain around its longitudinal axis, as well as the adjustment of its vertical and horizontal position.



The SFB E180 swivel brackets allow the 180° rotation of the light curtain around its longitudinal axis, as well as the adjustment of its vertical and horizontal position.



The FE 4 brackets, with a thickness of only 4 mm, allow proper fastening of Micron light curtains.



The SAV vibration dampers have been designed to avoid mechanical damage to the light curtains installed in those applications with have a high level of vibrations.



## SFB 4E / SFB 6E MICRON SWIVEL BRACKETS

### PART NUMBERS

Model	Ordering codes	Description
SFB 4E	1310976	Set of 4 swivel brackets for Micron with length ≤ 1200 mm
SFB 6E	1310977	Set of 6 swivel brackets for Micron with length ≥ 1200 mm

One set must be ordered for each pair of light curtain (emitter + receiver)

## SFB E180 MICRON 180° SWIVEL BRACKETS

### PART NUMBERS

Model	Ordering code	Description
SFB E180	1310980	Set or 4 180° swivel brackets for Micron

One set must be ordered for each pair of light curtain (emitter + receiver)

## FLAT FE 4 MICRON FLAT BRACKETS

### PART NUMBERS

Model	Ordering code	Description
FE 4	1310997	Set of 4 flat brackets for Micron

One set must be ordered for each pair of light curtain (emitter + receiver)

## SAV 4E, SAV 8E, SAV 12E MICRON VIBRATION DAMPERS

### PART NUMBERS

Model	Ordering codes	Description	For light curtains with protected height mm / beams
SAV 4E	1310972	Set 4 vibrations dampers	160
SAV 8E	1310973	Set 8 vibrations dampers	310 ... 1050
SAV 12E	1310974	Set 12 vibrations dampers	1210 ... 1810 / 2,3,4

One set must be ordered for each pair of light curtain (emitter + receiver)



PSE is a polycarbonate protective screen that preserves the light curtain's front screen from damages due to welding sparks or due to the presence of acids in the workspace.

Protective screens can be quickly replaced thanks to the fast and easy stainless steel clamping system.



LAD 4 laser alignment device allows a fast and reliable optical alignment of Reer safety light curtains; also compatible with the use of the FMC floor mounting columns.

LAD 4 device emit a laser beam with visible red light with useful range up to 100 m

## SFS - PSE

### MICRON PROTECTIVE SCREEN

#### PART NUMBERS

Each kit includes:

- SFS E (ordering code 1310981) - 1 set of stainless steel clamps for one safety light curtain (emitter and receiver)
- PSEx (ordering codes from 1310982 to 1310995 according to the length of light curtain) - 4 protective screens (2 as spare parts)

For each pairs of safety light curtain (emitter and receiver) it's necessary orderd both codes.

Models	PSE 150	PSE 300	PSE 450	PSE 600	PSE 750	PSE 900
Ordering codes	1310982	1310983	1310984	1310985	1310986	1310987
Models	PSE 1050	PSE 1200	PSE 1350	PSE 1500	PSE 1650	PSE 1800
Ordering codes	1310988	1310989	1310990	1310991	1310992	1310996
Models	PSE 2B	PSE 3B	PSE 4B			
Ordering codes	1310993	1310994	1310995			

## LAD 4

### LASER ALIGNEMENT DEVICE

#### TECHNICAL FEATURES

Light source	Laser diode – wavelength 650 nm
Class light source	II – EN 60825-1
Range m	100
Beam divergence (mrd)	< 0,5
Max. power (mW)	1
Power supply (VDC)	3 (2 AAA batteries)
Fastening	Quick fastening to the light curtains
Dimensions h x w x d (mm)	117 x 48 x 80 - LAD 2 - LAD 4

#### PART NUMBERS

Includes multi-language instruction manual.

Ordering code: 1220301



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The Safety Division is in fact today a world leader in the development and manufacturing of safety optoelectronic sensors and controllers.

ReeR is ISO 9001, ISO 14001 and ISO 45001 certified.



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