



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 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 Mater 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:

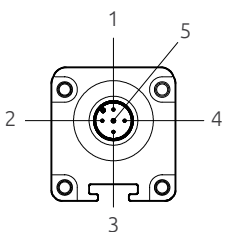
- Process Data refers to the information that the device reads and transmits to the master - such as the measure reading during machine cycles
- Service Data - also called Device Data - refers to information about the sensor itself
- Event Data refers to notifications such as error messages or maintenance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

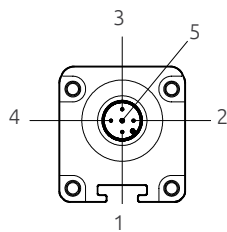
CONNECTORS

Receiver
M12 5-pole

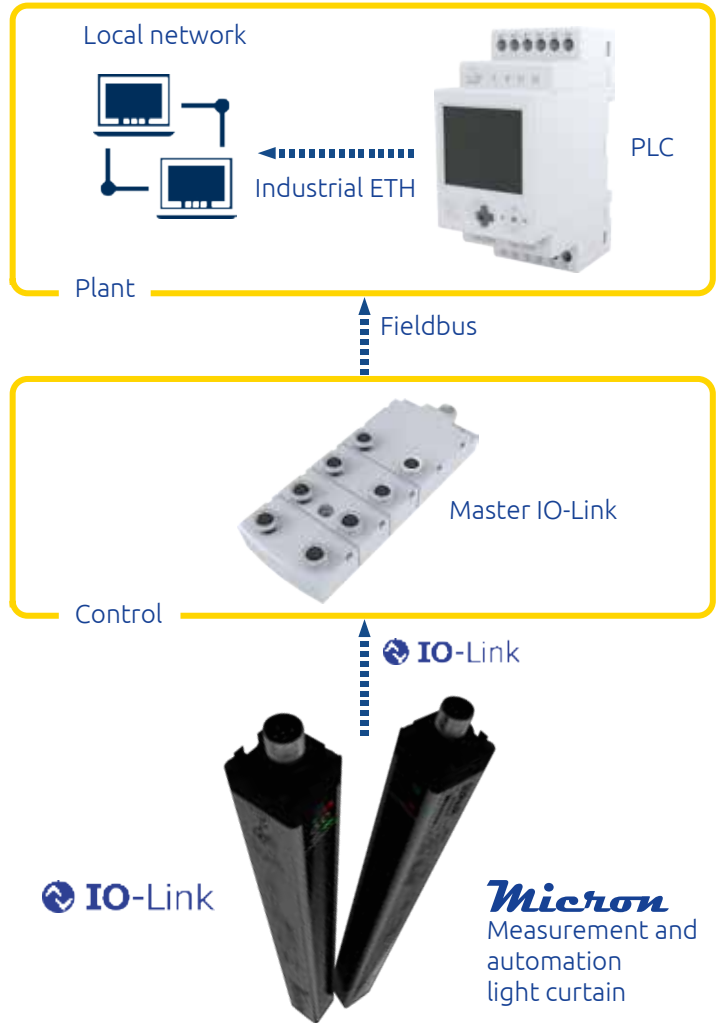


- 1 - 24 VDC
- 2 - SYNC
- 3 - 0 VDC
- 4 - Q/C
- 5 - Not used

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)
- Y Splitter cable M 12 5-pole. For 24 V transmitter and Sync receiver connection. See [page 26](#)

ACCESSORIES

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

PART NUMBERS

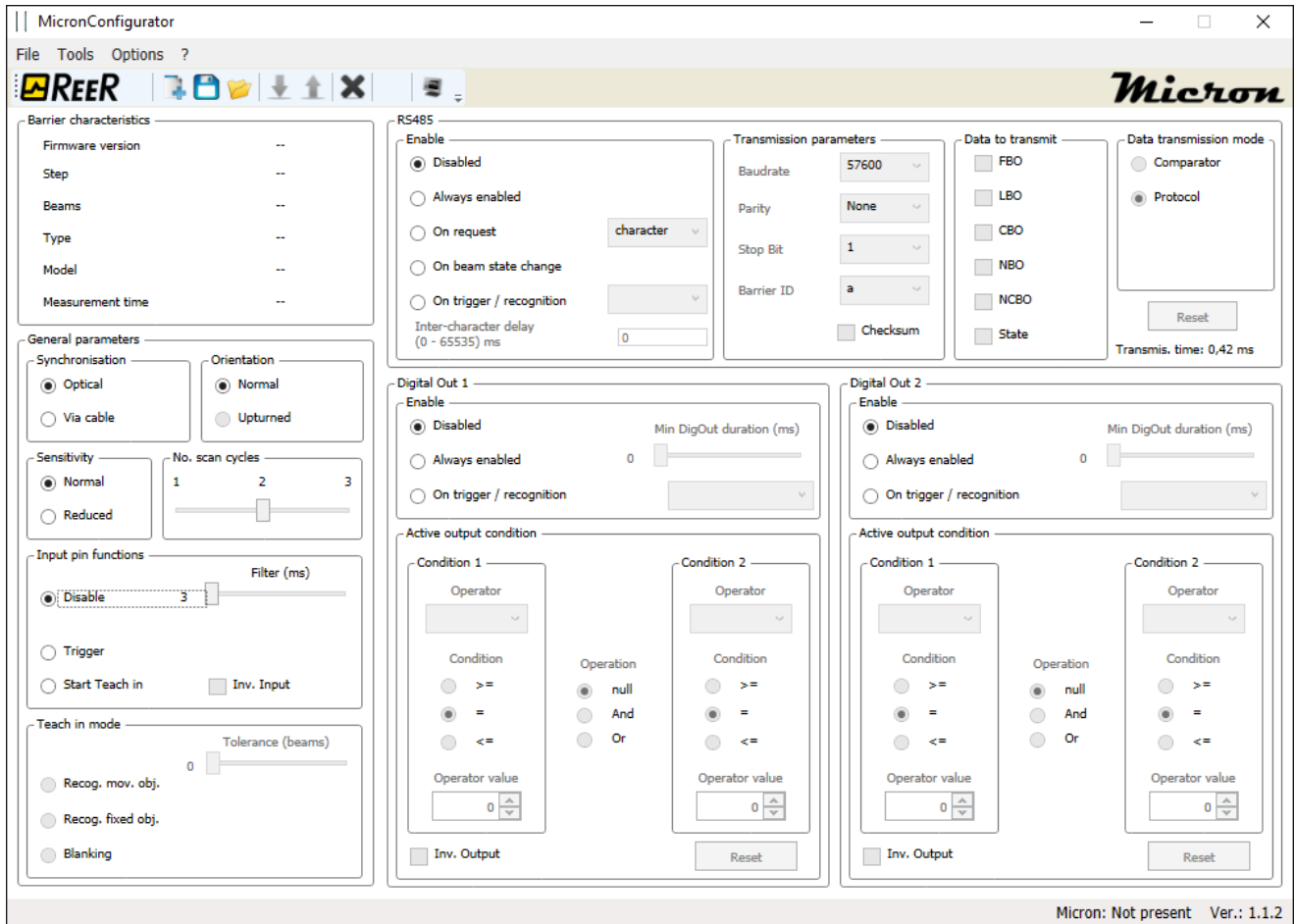
Micron IOL - Beam spacing 10 mm

Micron IO-Link Beam spacing 10 mm	MI 1511IOL	MI 3011IOL	MI 4511IOL	MI 6011IOL	MI 7511IOL	MI 9011IOL	MI 10511IOL	MI 12011IOL	MI 13511IOL	MI 15011IOL	MI 16511IOL	MI 18011IOL	MI 19511IOL	MI 21011IOL	MI 22511IOL	MI 24011IOL	MI 25511IOL	MI 27011IOL	MI 28511IOL	MI 30011IOL
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 30 mm

Micron IO-Link Beam spacing 30 mm	MI 1531IOL	MI 3031IOL	MI 4531IOL	MI 6031IOL	MI 7531IOL	MI 9031IOL	MI 10531IOL	MI 12031IOL	MI 13531IOL	MI 15031IOL	MI 16531IOL	MI 18031IOL	MI 19531IOL	MI 21031IOL	MI 22531IOL	MI 24031IOL	MI 25531IOL	MI 27031IOL	MI 28531IOL	MI 30031IOL
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.)