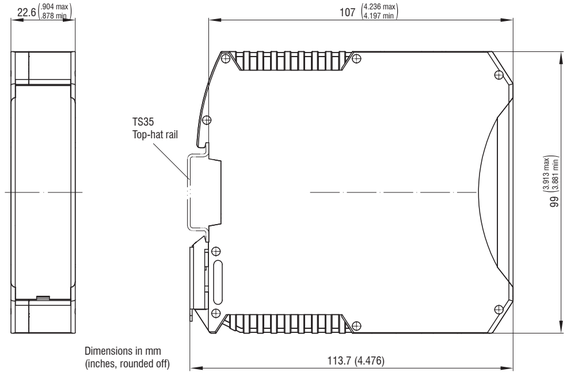
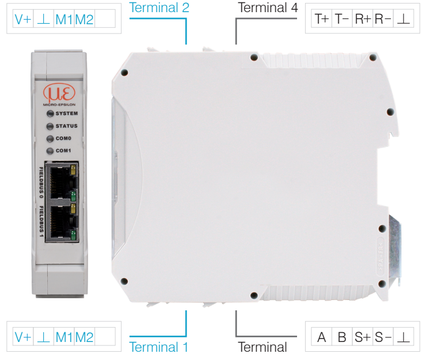
Installation and Assembly

Ensure careful handling during installation and operation.



Pin Assignment



Terminal 2	
V+	Supply voltage [1]
⊥	Ground for supply voltage
M1	Multifunction input 1
M2	Multifunction input 2
Terminal 1 connections daisy-chained	

Terminal 4	
T+	RS422 Tx+
T-	RS422 Tx-
R+	RS422 Rx+
R-	RS422 Rx-
⊥	Ground [2] e.g., for RS422 shield connection

Terminal 1	
V+	Supply voltage [1]
⊥	Ground for supply voltage
M1	Multifunction input 1
M2	Multifunction input 2
Terminal 2 connections daisy-chained	

Terminal 3	
A	RS485 A
B	RS485 B
S+	Synchronization output +
S-	Synchronization output -
⊥	Ground [2] e.g., for RS485 shield connection

1) If the distance between IF2035-EIP and the sensor/controller is long, a separate supply for the sensor/controller may be advisable.

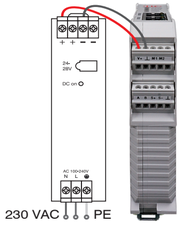
2) Internally connected to supply ground

Supply Voltage

The supply voltage is daisy-chained from the supply port (terminal 1) to the sensor port (terminal 2), i.e., the supply voltage must match that of the sensor. Positive voltage must be between 9 V and 36 V.

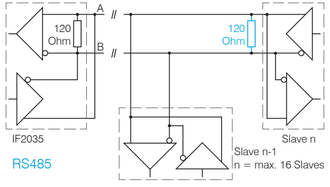
Connect the inputs V+ and ⊥ on terminal 1 to a voltage supply. Maximum cable length 3 m.

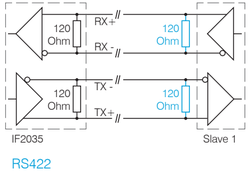
MICRO-EPSILON recommends using the optionally available power supply PS2020.



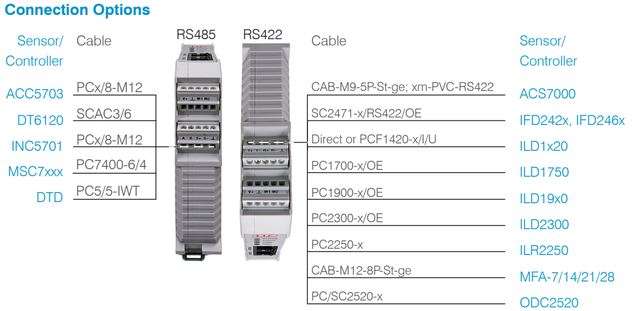
Cable Termination at Interface

Ensure correct cable termination for an RS485 bus or RS422 bus! The IF2035-EIP works as a master for both interfaces; internally, a 120 Ohm terminating resistor has already been permanently incorporated. The IF2035-EIP should be at the bus start.





Connection Options

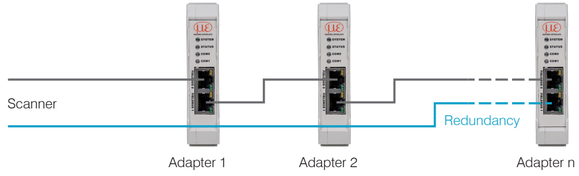


RS422	
IF2035-EIP	Sensor/Controller
T+	R+
T -	R -
R+	T+
R -	T -
⊥	Cable shield

The length of the cable between IF2035-EIP and sensor/controller is 10 m at most. Because of the PCx/8-M12 cable, the sensor supply for ACC5703 and INC5701 sensors is possible only via the IF2035-EIP.

Standard Cabeling

During cabling, channel 0 of the scanner is connected to a port of adapter 1 (slave device).
The second port of the adapter 1 is connected to the port of the next adapter, etc. One port of the last adapter and channel 1 of the master device (scanner) remain unused.



Optional: IF2035-EIP can participate in a device level ring as a ring node and thereby reduce the threat of failures through redundant cabling.

MICRO-EPSILON MESSTECHNIK
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Koenigbacher Str. 15 · 94496 Ortenburg
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Your local contact: www.micro-epsilon.com/contact/worldwide/

X9771468-A022123MSC

MICRO-EPSILON

Assembly Instructions IF2035-EIP

Intended Use

The IF2035-EIP interface module is designed for use in industrial and laboratory applications. It is used to convert the internal MICRO-EPSILON sensor protocol (RS485, RS422) to EtherNet/IP™.

The interface module must only be operated within the limits specified in the technical data. The interface module must be used in such a way that no persons are endangered or machines and other material goods are damaged in the event of malfunction or total failure of the sensor/controller. Take additional precautions for safety and damage prevention in case of safety-related applications.

Warnings

Connect the power supply and the display/output device according to the safety regulations for electrical equipment.
> Risk of injury

> Damage to or destruction of the interface module

The supply voltage must not exceed the specified limits.
> Damage to or destruction of the interface module

Avoid shocks and impacts to the interface module.
> Damage to or destruction of the interface module

Proper Environment

Protection class:	IP 20
Operating temperature:	0 ... +50 °C (+32 ... +122 °F)
Storage temperature:	-20 ... +70 °C (-4 ... 158 °F)
Humidity:	5 - 95% (non-condensing)
Ambient pressure:	Atmospheric pressure

Configuring the Sensor Interface

Only sensors (controllers) that support the ME sensor protocol can be connected via RS485/RS422. Micro-Epsilon recommends selecting the corresponding sensor interface via the web interface of the sensor (controller).

Baud Rate

There is no automatic baud rate matching between IF2035-EIP and the connected sensor (controller). MICRO-EPSILON recommends selecting the corresponding baud rate via the web interface of the sensor (controller).

Data Format

All configuration parameters and data are transmitted in Little Endian format.

Sensors/controllers with RS485: cyclical data are transmitted via the fieldbus without change, i.e., as a binary block as described and supplied by the sensor.
Sensors/controllers with RS422: cyclical data are decoded, i.e., a 4th byte is added to the 3 bytes and then transmitted.

Baud Rate and Sensor Interface

Option 1: MSG Command

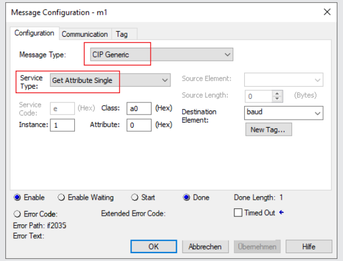
An MSG command is configured as follows:

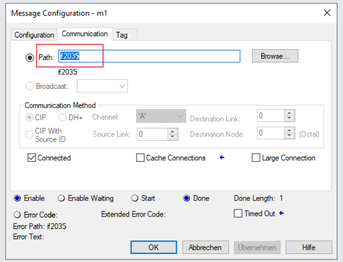
➡ Click the button `...` .

➡ Click the `Configuration tab` and set type `CIP Generic` as `Message Type`.

The following `Service Types` are possible:
- Get Attribute Single or
- Set Attribute Single.

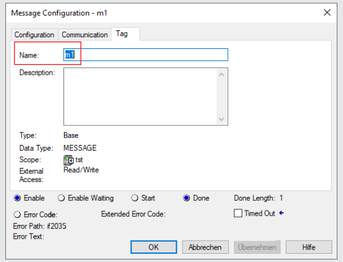
➡ Click the `Communication` tab and select the target device using the `Browse` button in the `Path` field.





➡ Click the `Tag` tab and assign an element name in the `Name` field.

Nothing needs to be set here. The Message Configuration dialog is only available if a tag of type `Message` had been previously entered in the MSG element. In the example above, `m1` was chosen for this purpose.



Option 2: External Software

IF2035-EIP can also be configured beyond the PLC (e. g., with a software tool) by using EtherNet/IP™ Explicit Messaging.

The software used for this purpose must support the following services:
- 0x0E - Get Attribute Single as well as
- 0x10 - Set Attribute Single.

Service, Repair

Please send us the affected parts for repair or exchange.

If the cause of a fault cannot be clearly identified, please send the entire measuring system to:

MICRO-EPSILON MESSTECHNIK
GmbH & Co. KG
Koenigbacher Str. 15
94496 Ortenburg / Germany

Telephone: +49/8542/168 - 0
Fax: +49/8542/168 - 90
info@micro-epsilon.com
www.micro-epsilon.com

Decommissioning, Disposal

➡ Remove all cables from the interface module.

Incorrect disposal may cause harm to the environment.

➡ Dispose of the device, its components and accessories as well as the packaging materials in compliance with the applicable country-specific waste treatment and disposal regulations of the region of use.