





Safety notes for Fieldbus module

- Read the operating instructions before commissioning.
Connection, mounting, and setting may only be performed by trained specialists.
Not a safety component in accordance with the EU Machinery Directive.
When commissioning, protect the device from moisture and contamination.
UL: Only for use in applications in accordance with NFPA 79. These devices must be fused with a 1 A fuse that is suitable for 30 V DC. UL-listed adapters with connecting cables are available.
Fieldbusmodule: IP Rating not evaluated by UL use at max. altitude 2000m, max. rel. humidity 80%, pollution degree 2
MLG-2: Enclosure Type 1, IP Rating not evaluated by UL
These operating instructions contain information required during the life cycle of the sensor.
The operating instructions for the MLG-2 ProNet must always be available and must be followed.
EtherCAT = 8018740
EtherNet/IP = 8018742
PROFINET = 8018748
PROFIBUS = 8018748
CANopen = 8018744

Intended use

The fieldbus module is intended exclusively for use with the MLG-2 PRONET. In the event of any other usage or modification to the MLG-2 (e.g. due to opening the housing during mounting and electrical installation) or in the event of changes made to the SICK software, any claims against SICK AG under the warranty will be rendered void.
The Fieldbus module is not suitable for the following applications, among others:
As a safety device to protect persons, their hands, or other body parts
Under water
In explosive environments
Outdoors, without additional protection

Function and use

The Fieldbus module comprises the following components:
Fieldbus module

Mounting

- Mount the plastic element to the MLG-2.
Screw two pins to the fieldbus module.
Slide the fieldbus module into the MLG-2.
The fieldbus module can also be mounted rotated by 180°.
Tighten the hexagon socket screw to 0.5 Nm.
You can also mount the fieldbus module remotely (see Fig. G)

Remote mounting:

A quick fix holder can be used for remote mounting. The connection cable for remote mounting must not be longer than 2.7m.

Electrical installation

All cables for the Fieldbus module are connected to the field module (see fig. B).

- DEVICE: Receiver connection
CONFIG: Notebook/PC connection for configuration
BUS IN, BUS OUT: Ethernet connections for the fieldbus
POWER: Power supply connection, sender synchronization, switching output

Status indicators

The receiver has three LEDs on its front and a control panel with LEDs and membrane keys on its rear. The LEDs and the control panel are located on the connection side.
The teach-in process for the MLG-2 can be started by pressing the Teach pushbutton.
The sender has three LEDs on its front. The LEDs are located on the connection side.
The fieldbus module has six LEDs (see fig. I).

Commissioning

After mounting and electrical installation, the sender and receiver must be aligned with each other. No objects should be located between the sender and the receiver. The light path must be clear.
The yellow LED on the front of the receiver and the Alignment LED show the rough alignment.

- 3 Hz yellow
The yellow LED on the front flashes rapidly.
Improve the alignment of the MLG-2.
When the yellow LED and the Alignment LED go out, the MLG-2 is optimally aligned.

With the MLG-2 ProNet, SOPAS ET will help you to align the device and teach in the sensitivity (see operating instructions on www.sick.com).

- Now fix the position of the sender and receiver.
Press the Teach pushbutton (< 1 s). The teach-in process can also be initiated via SOPAS ET, the integrated web server, or the PLC.
1 Hz yellow
The yellow LED on the front and the Alignment LED flash slowly.
If the teach-in process is successful, the yellow LED on the front and the Alignment LED go out. The MLG-2 is operational.
If the teach-in process is unsuccessful, the Alignment and RS485/IOlink LEDs flash rapidly, as does the red LED on the front of the device.
Check that the MLG-2 is correctly aligned, that the front screens are clean and that there are no objects located in the light path.
Then carry out the teach-in process again.
The MLG-2 is incorporated into the respective fieldbus. It supports process data for cyclical communication and data for acyclical communication. Device description files and function blocks are available for the MLG-2 depending on the fieldbus system (see www.sick.com).

Configuration

The MLG-2 is configured using SOPAS ET.
Ethernet factory settings:
Assigning of addresses active via DHCP
Without DHCP server
Static IP address: 192.168.200.100 (sub-net mask 255.255.255.0)
For information on this process, please read the SOPAS ET help file or the "Configuration" chapter.

For PROFIBUS and CANopen:

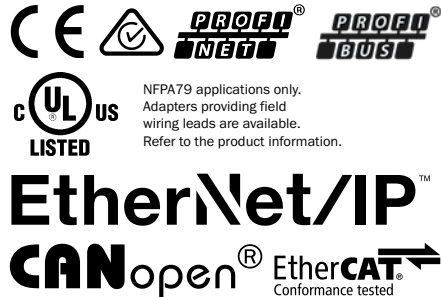
Eight DIP switches are located under a cover in the fieldbus module. Use these DIP switches to set the node ID/address and the baud rate



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MLG-2 ProNet Fieldbus module

- Australia Phone: +61 3 9457 0600
Austria Phone: +43 22 36 62 28 9 0
Belgium/Luxembourg Phone: +32 2 466 95 66
Brazil Phone: +55 11 3215-4900
Canada Phone: +1 505 771 14 44
Czech Republic Phone: +420 2 71 91 18 90
Chile Phone: +56 2 2274 7490
China Phone: +86 20 2882 3600
Denmark Phone: +45 46 62 64 00
Finland Phone: +358-9-2515 800
France Phone: +33 1 64 62 35 00
Germany Phone: +49 211 6301.301
Hong Kong Phone: +852 2153 6300
Hungary Phone: +36 1 371 2680
India Phone: +91 22 4033 8333
Israel Phone: +972 4 6881000
Italy Phone: +39 02 274341
Japan Phone: +81 3 5309 2112
Malaysia Phone: +63 8080 7425
Mexico Phone: +52 472 748 9451
Netherlands Phone: +31 30 2044 000
SICK AG, Erwin-Sick-Strasse 1, D-79183 Waldkirch
Please find detailed addresses and further locations in all major industrial nations at www.sick.com



of the MLG-2.
CANopen: Node IDs 1 to 63 can be set with DIP switches 1 to 6. If all six DIP switches are off, then the node ID set using SOPAS ET or LSS is used.

Table with columns: DIP switches, 6, 5, 4, 3, 2, 1. Value in ON position, Value in OFF position.

- Set node ID in range 1 to 63 using DIP switches 1 to 6.
Switch the supply voltage off and then on again.
The changed node ID is activated.

Baud rates 250 kbit/s, 500 kbit/s, or 1,000 kbit/s can be set with DIP switches 7 and 8. If both of these DIP switches are off, then the baud rate set using SOPAS ET or LSS is used.

Table with columns: DIP switches, 8, 7. SOPAS ET or LSS, 250 kbit/s, 500 kbit/s, 1,000 kbit/s.

PROFIBUS: Addresses 1 to 125 can be set with DIP switches 1 to 7 (DIP switch 8 has the PB function "No\_Add\_Chg").

Table with columns: DIP switches, 7, 6, 5, 4, 3, 2, 1. Value in ON position, Value in OFF position.

All DIP switches are set to 0 at the factory. If the address 0, 126, or 127 is set with the DIP switches, then the address configured using SSA or SOPAS ET is used.
Set device address in range 1 to 125 using DIP switches 1 to 7.
Switch the supply voltage off and then on again.
The changed device address is activated.

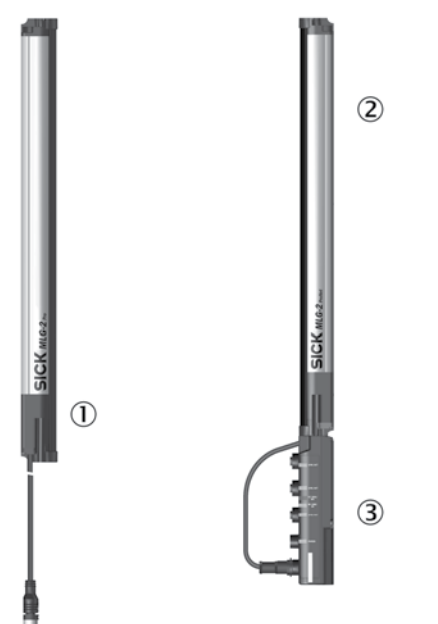
Disassembly and disposal

The sensor must be disposed of according to the applicable country-specific regulations. Efforts should be made during the disposal process to recycle the constituent materials (particularly precious metals).

Maintenance

SICK sensors are maintenance-free.
We recommend doing the following regularly:
Clean the external lens surfaces
Check the screw connections and plug-in connections
No modifications may be made to devices.
Subject to change without notice. Specified product properties and technical data are not written guarantees.

A



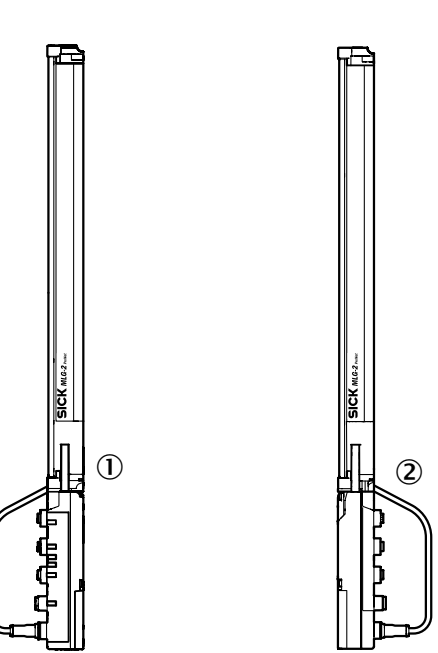
- MLG-2 Pro sender
MLG-2 ProNet receiver
Fieldbus module
MLG-2 Pro Sender
MLG-2 ProNet Empfänger
Feldbusmodul

B

Female connector / Dose diagrams showing pin assignments for CONFIG and BUS IN/OUT.

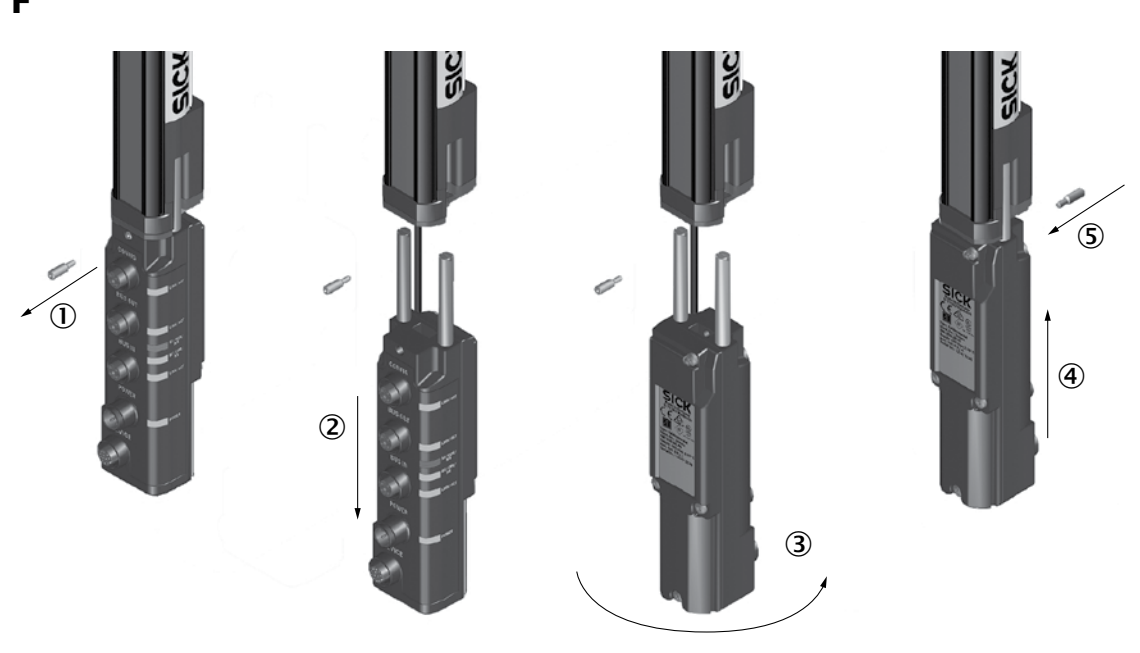
Female connector / Dose and Male connector / Stecker diagrams showing pin assignments for BUS IN and POWER.

E



- Mounting with the connections to the front side
Mounting with the connections to the rear side

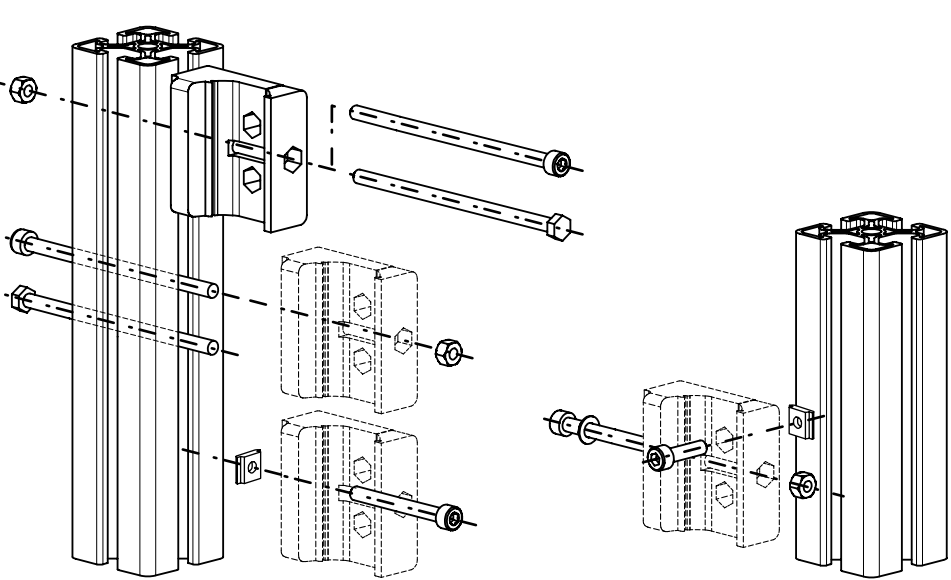
F



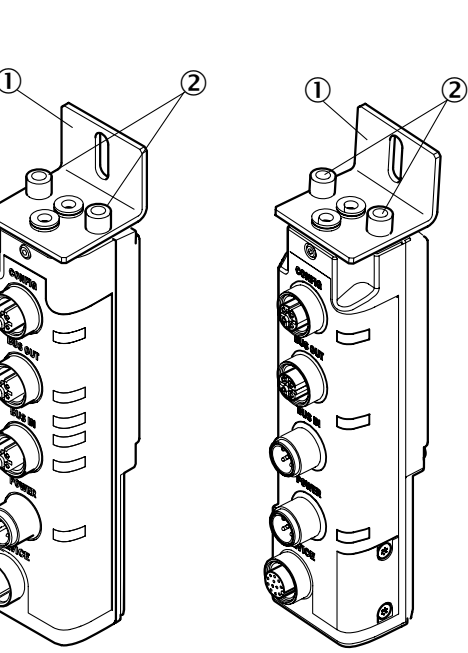
- Unscrew the Torx T20 mounting screw
Pull the field module downwards and away
Turn the field module by 180°
Insert the field module again
Tighten the mounting screw
Montageschraube Torx T20 lösen
Feldmodul nach unten wegziehen
Feldmodul um 180° drehen
Feldmodul wieder einstecken
Montageschraube festdrehen

- Montage mit den Anschlüssen zur Vorderseite
Montage mit den Anschlüssen zur Rückseite

C

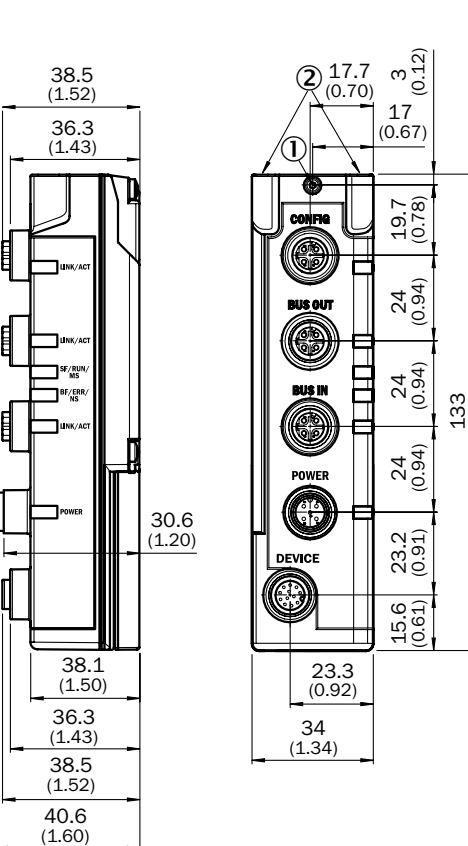


G



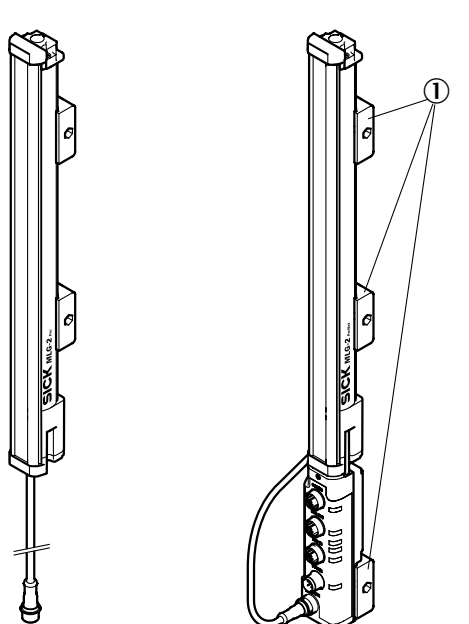
- Mounting bracket
M4 x 16
Haltewinkel
M4 x 16

H



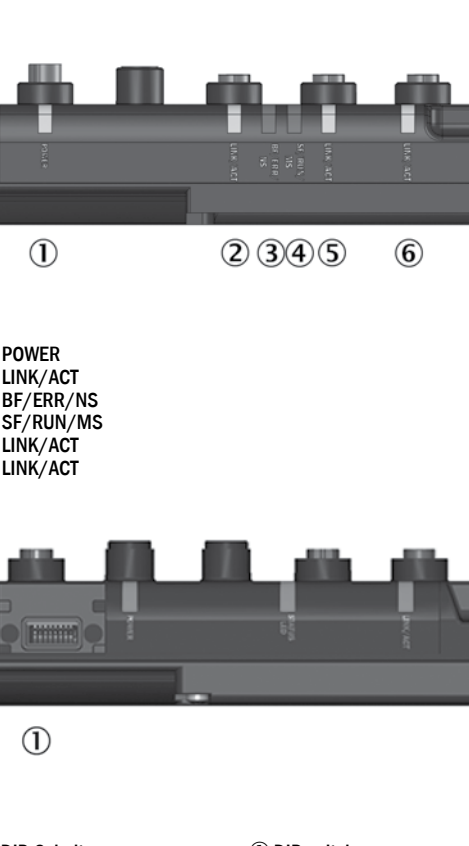
- Fieldbus module fixing screw
Openings for mounting pins
Befestigungsschraube Feldbusmodul
Öffnungen für Montagestifte

D



- QuickFix bracket
QuickFix-Halterungen

I



- DIP-Schalter
DIP switches
POWER
LINK/ACT
BF/ERR/NS
SF/RUN/MS
LINK/ACT
LINK/ACT

Technical specification table with columns: Protection class, Enclosure rating, Ambient operating temperature, Supply voltage, Switching output, Digital output, Typical current consumption of sender/receiver, Current consumption of sender/receiver in sunlight, Maximum current consumption of fieldbus module, and Maximum current consumption of fieldbus module.

Do not use light grid outdoors unless protected (condensation will form)
With 24 V DC and 25 °C ambient temperature
Class 2
No utilizar la rejilla fotoeléctrica sin protección en exteriores (formación de agua de condensación)
Con 24 V CC y una temperatura ambiente de 25 °C
Clase 2
不得在未經保護的情況下在室外使用 (形成冷凝水)
在 24 VDC 和 25 °C 環境溫度下
2 級
ライトグリッドは保護なしで屋外で使用しないでください (結露
水形成)
24 VDC および周囲温度 25 °C の場合
クラス 2
Не эксплуатировать световую завесу на открытом воздухе без дополнительной защиты (образование конденсата)
При напряжении 24 В DC и окружающей температуре 25 °С
Класс 2

