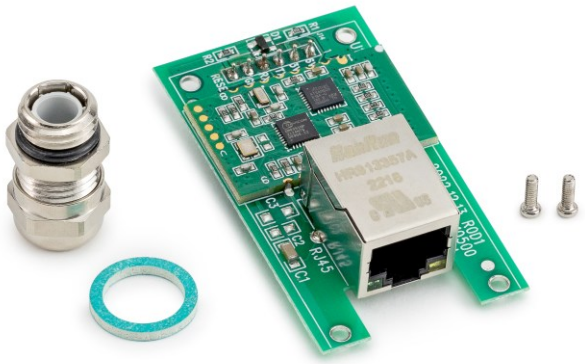
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Installation instructions Ethernet module

KERN KUM-04-EX2

Type TYKUM-04-EX2-A
Version 1.0
2025-08
en



i	You can also find the current version of these instructions online at https://www.kern-sohn.com/shop/de/DOWNLOADS/ Under the heading Operating instructions

en

Ethernet module

Version 1.0 2025-08

Installation instructions

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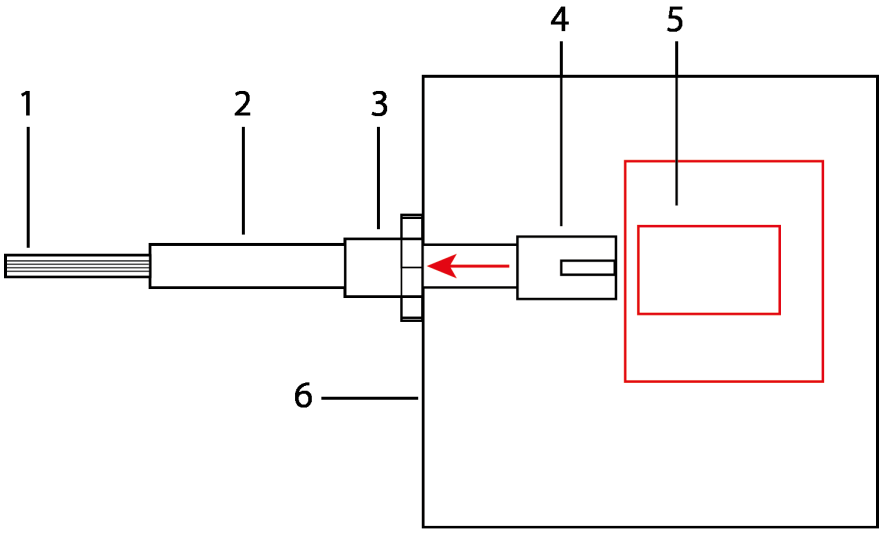
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1 Scope of delivery and installation note

- Ethernet module
- Cable gland M12
- Flat seal

NOTE

The Ethernet module has an RJ45 socket. The RJ45 plug does not fit through the cable gland!
Pull the **open end** of the cable with the RJ45 plug **from the inside** (see arrow direction) through the cable gland (see figure).



Pos.	Description	Pos.	Description
1	Open end of the Ethernet cable	**4**	Ethernet plug
2	Ethernet cable	**5**	RJ45 socket on the Ethernet module
3	Cable gland	**6**	Housing

2 General information and safety instructions

⚠ DANGER



Electric shock from touching live components

Electric shock leads to serious injury or death

- ⇨ Disconnect the appliance from the mains voltage before opening it.
- ⇨ Only carry out installation work on devices that are disconnected from the mains voltage.

NOTE



Electrostatic sensitive components

Electrostatic discharge (ESD) can cause damage to electronic components. Damaged components do not always lead to malfunctions immediately, but sometimes only after some time.

Therefore, take precautions for ESD protection before removing hazardous components from the packaging and carrying out work in the electronics area:

- ⇨ Ground yourself before touching electronic components (ESD clothing, wristband, shoes, etc.).
- ⇨ Only carry out work on electronic components at suitable ESD workstations (EPA) with suitable ESD tools (antistatic mat, conductive screwdrivers, etc.).
- ⇨ Only transport electronic components outside the EPA in suitable ESD packaging.
- ⇨ Never remove electronic components from their packaging if they are outside the EPA.

EX-SAFETY INSTRUCTIONS



- ⇨ Planning, installation, maintenance and repair may only be carried out by qualified specialist personnel with the necessary and up-to-date knowledge in the field of explosion protection. The requirements of EN 60079-14 and any country-specific regulations must be observed (e.g. in Germany the Technical Rules for Operational Safety TRBS 1203).
- ⇨ Observe the ATEX directives, the applicable standards and the local safety and accident prevention regulations for selection, installation, maintenance, repair and operation.
- ⇨ Only open the evaluation unit when it is de-energized.
- ⇨ Only open the evaluation unit if there is no potentially explosive atmosphere.
- ⇨ Do not connect or disconnect the connections when they are live. Exception: The intrinsically safe battery TYKR-04-EX2 may be

plugged into and unplugged from the TKXC-TM-EX2-... evaluation unit in hazardous areas.

⇨ Additional devices are connected to the evaluation unit via interfaces with type of protection "ec" or "tc". The specified connected loads must be observed.

⇨ Only original spare parts from KERN may be used.

⇨ All connection cables must be laid securely. Tensile stress on the cable glands must be avoided.

---

3 Technical data

KERN	TYKUM-04-A	
Network	Work mode	TCP server
	Network protocol	TCP/IP
	IP assignment	Static/DHCP
	Internet Protocol Version	IPv4

4 Default settings

Parameters	Standard setting
Static IP	192.168.178.150
Subnet mask	255.255.255.0
Gateway	192.168.178.1
Username	admin
Password	admin
Port	23

5 Installation

INFORMATION

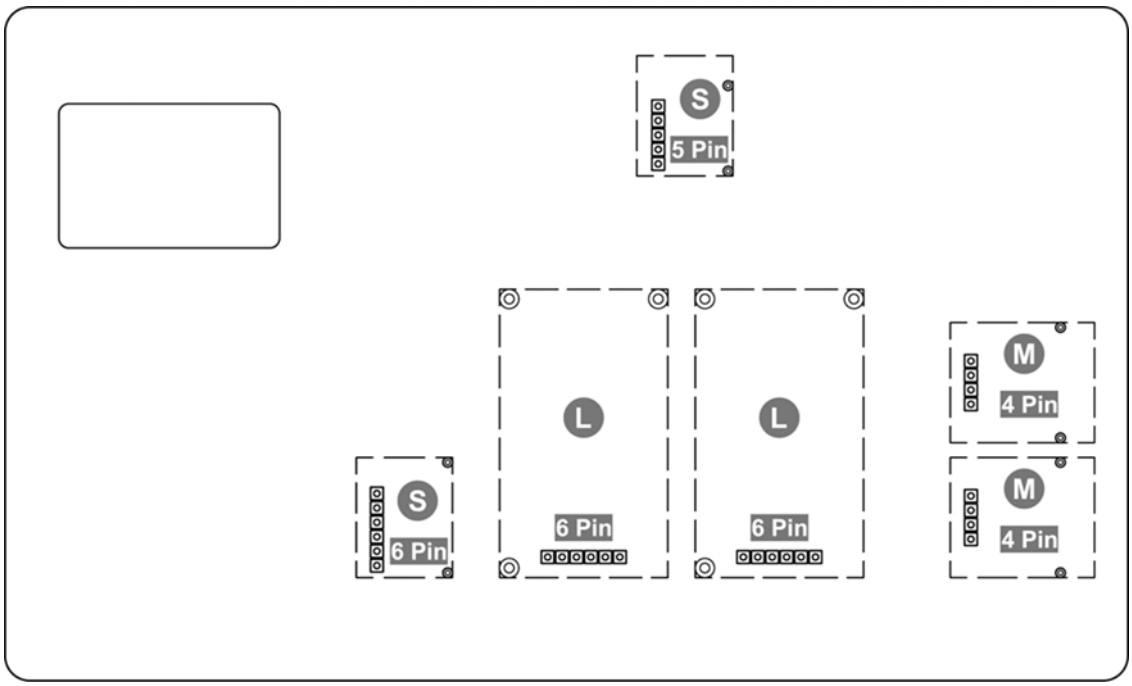
- Always follow the instructions in this manual before starting work.
- The illustrations are examples that may differ from the actual product (e.g. positions of the components).
- When installing and connecting a cable, the requirements in EN 60079-14 must be observed.
- The ignition protection type of the module is “increased safety”.
- Use a shielded interface cable with a diameter of 3 – 6.5 mm.
- The cable gland must be tightened with a tightening torque of 4 Nm.
- Tensile loads on the cable used should be avoided.
- The maximum permissible voltage values of the Ethernet interface of ±2.5 V (10BASE-T) or ±1.0 V (100BASE-TX) must be observed.
- The recommended maximum cable length is 100 m.

5.1 Opening the terminal

Opening the terminal is described in the respective installation instructions. Carry out the steps described there.

5.2 Installing the interface in the housing

5.2.1 Overview of the circuit board



The illustration above shows examples of different slots. There are three slot sizes for optional modules: S, M, L. These have a specific number of pins.

The correct position for your module is determined by the size and number of pins (e.g. size L, 6 pins), which is described in the respective installation steps.

If there are several identical slots on the board, it does not matter which slot you select. The device automatically recognizes which module it is.

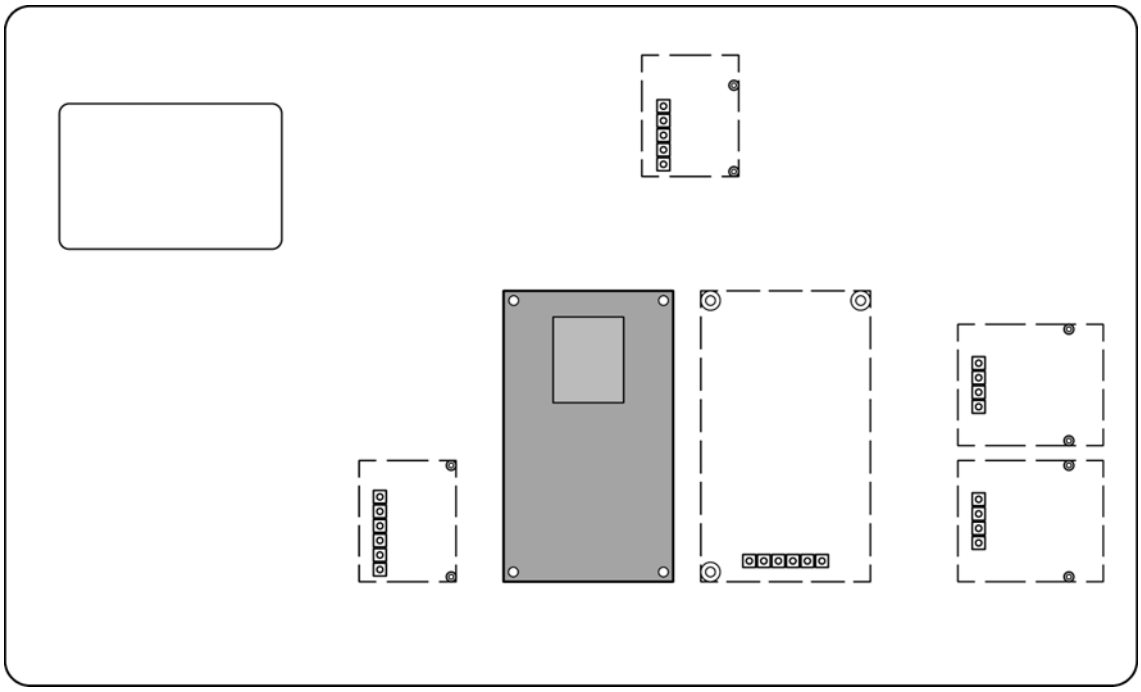
The interface module TYKUM-04-EX2-A is size L.

5.2.2 Installing the module

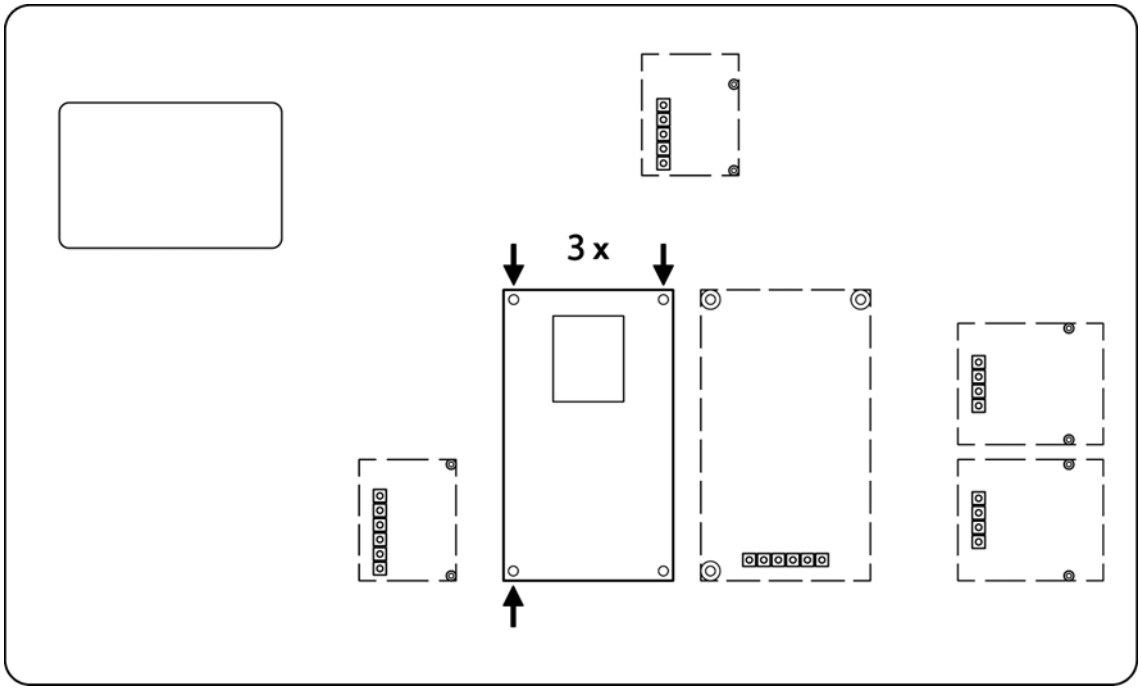
1. Open the terminal while observing the safety instructions in chapter (see the terminal's installation instructions).

2. Remove the module from the packaging.

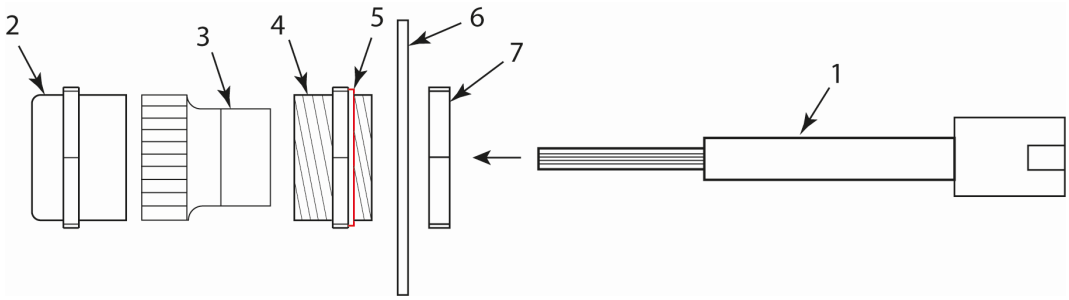
3. Insert the module into one of the two **size L, 6-pin** slots.



4. Mount the module with the screws provided.

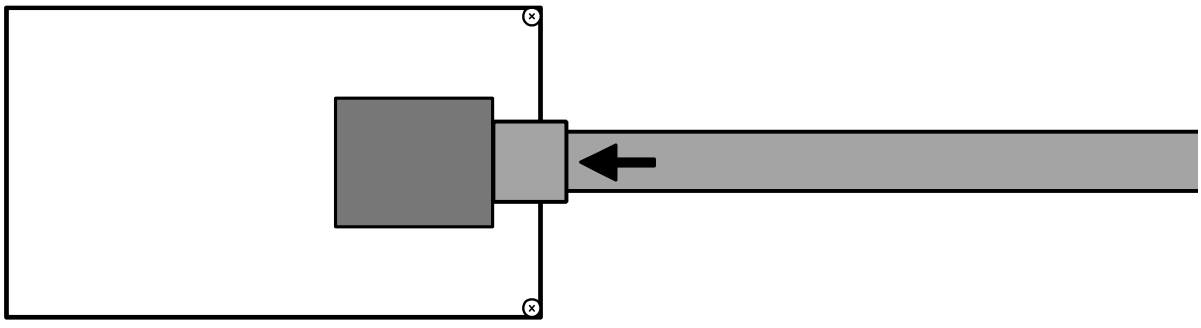


5. The cable gland is attached to the metal enclosure and the counter nut on one of the openings provided for M12 screw connections on the terminal enclosure.



Pos.	Naming
1	Cable sheath
2	Shield
3	Union nut
4	Plastic insert
5	Metal housing
6	Flat gasket
7	Housing
8	Locknut

6. Insert the interface cable with the plastic insert and the swivel nut into the metal casing.
7. Tighten the union nut to the specified torque of 4 Nm.
8. Plug the interface cable into the Ethernet connection of the module.



9. The module has been installed.

5.2.3 Closing the terminal

1. Check module for tight fit.
2. Close the terminal as described in the KXC-TM-EX2 installation instructions

5.3 Connecting the interface

1. Connect the Ethernet cable to the network/PC
2. Establish TCP connection
3. Using KCP commands to communicate with the scales

5.4 Setting the IP address

The interface is configured with a fixed IP address by default (see section 4). The IP address can be configured as required in the following ways.

5.4.1 About KCP commands

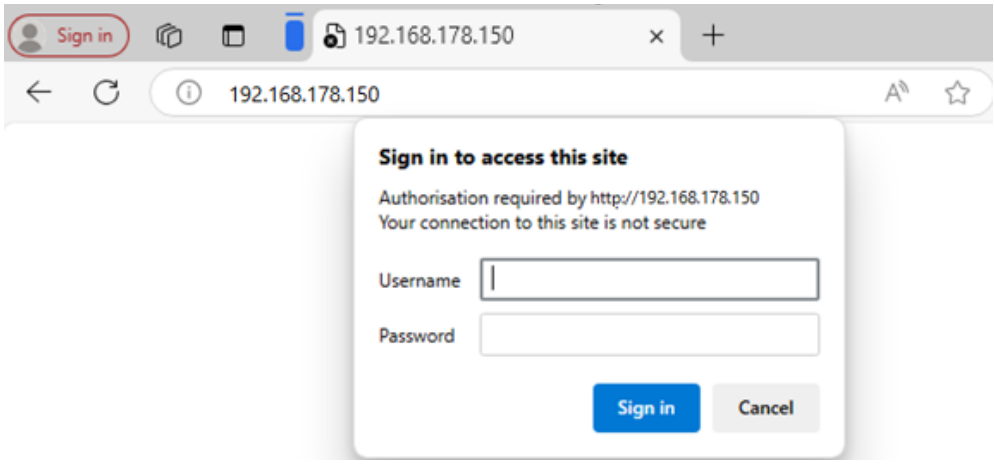
The KCP commands JNEA (IP address), JNEK (subnet mask) and JNEG (gateway) can be used to configure the IP address, subnet mask and gateway.

Please note that all three commands, JNEA, JNEK and JNEG, be entered in strict succession must to complete the Ethernet interface setting.

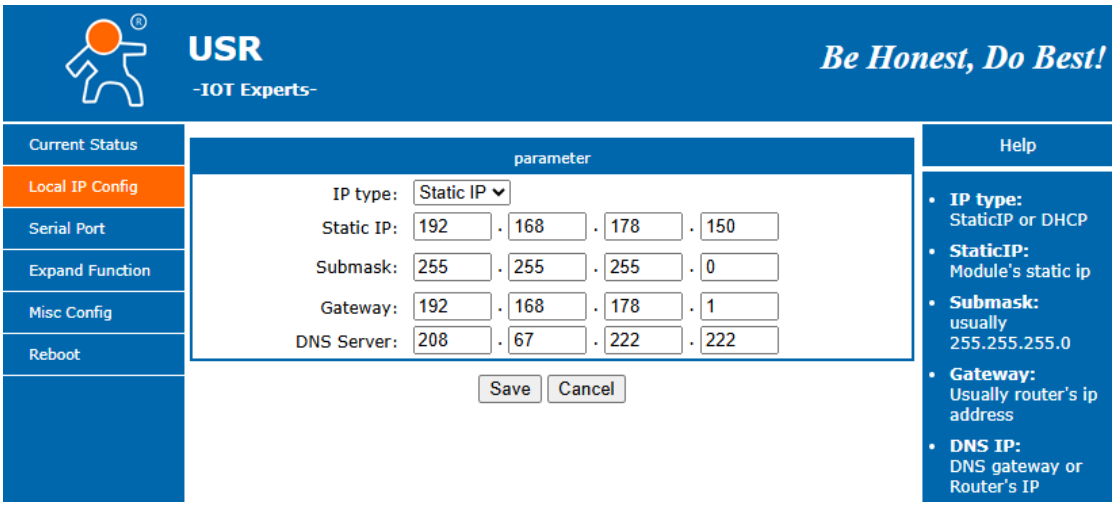
A detailed description can be found in the manual "KERN Communications Protocol", available in the download area on our KERN homepage (www.kern-sohn.com)

5.4.2 Via the configuration page

The configuration page can be accessed in the address bar under the module's IP address.



After entering the user name and password (see section 4), the default settings can be changed.



NOTE

- ⇨ Username and password can also be changed on the configuration page under "Misc Config".
- ⇨ **There is no reset function** for the password. If this has been changed, it must be kept in a safe place.

5.5 Establish a direct PC connection with a static IP address

5.5.1 Equipment required

- Windows PC with Ethernet interface
- Administrator rights on the Windows PC
- Ethernet cable (straight through)

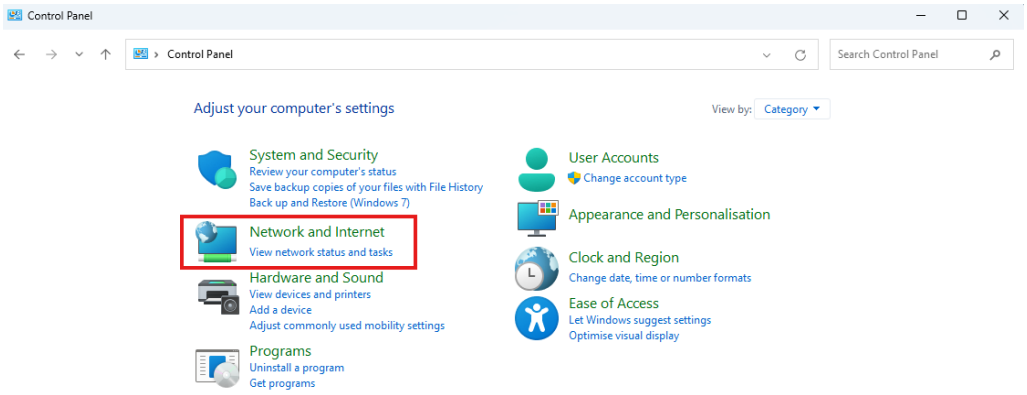
5.5.2 Procedure

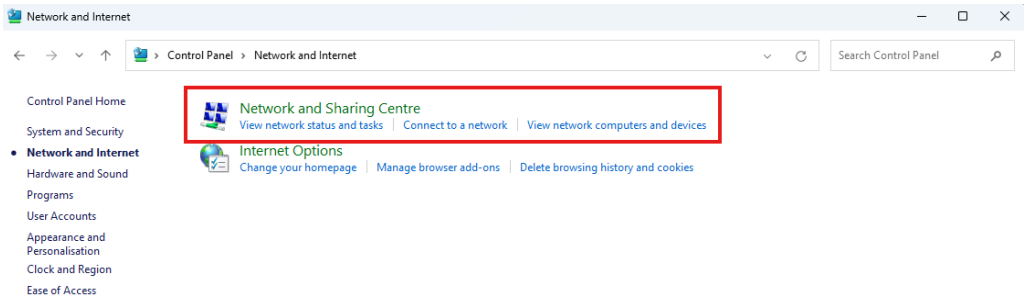
1. Install the KUM-04-EX2 interface (chapter 5.2).

2. Use an Ethernet cable to establish a direct connection between the PC and the scale/evaluation device.

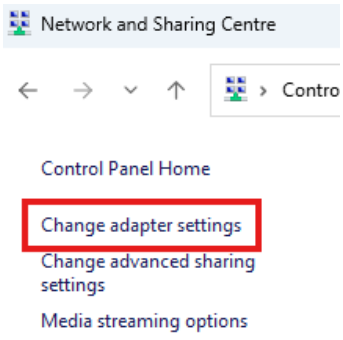
3. Switch on the scale.

4. Open "Control Panel" on the PC. Then navigate to "Network and Internet" in "Network and Sharing Center."



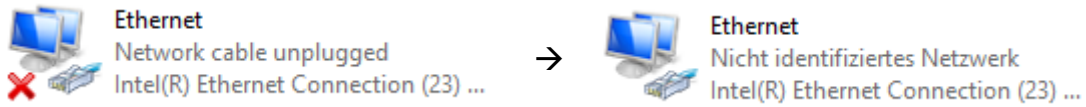


5. Open "Change adapter settings".

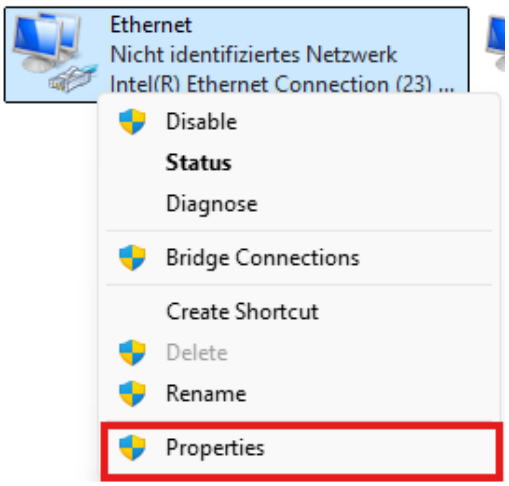


6. All network connections will appear.

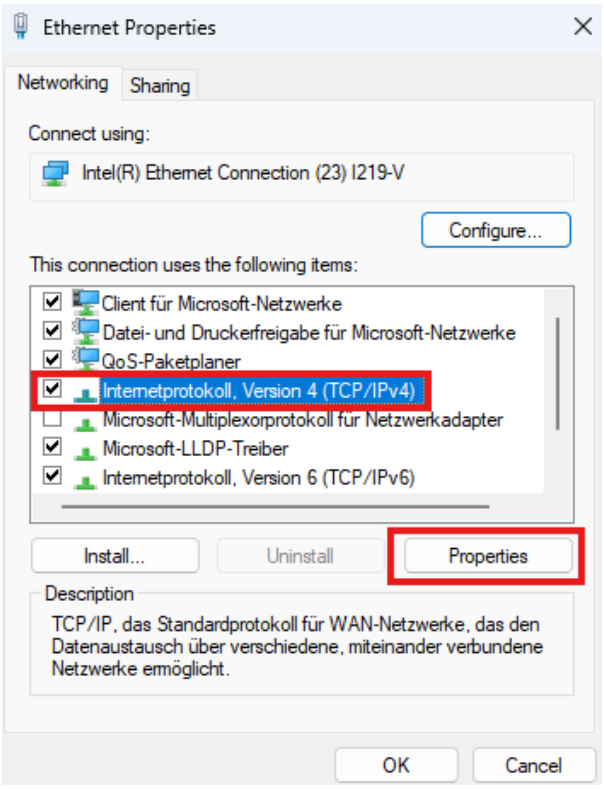
Note: If the Ethernet connection cannot be identified, disconnect the Ethernet plug from the PC and plug it back in again. The connection symbol will lose the red X shortly after plugging it in.



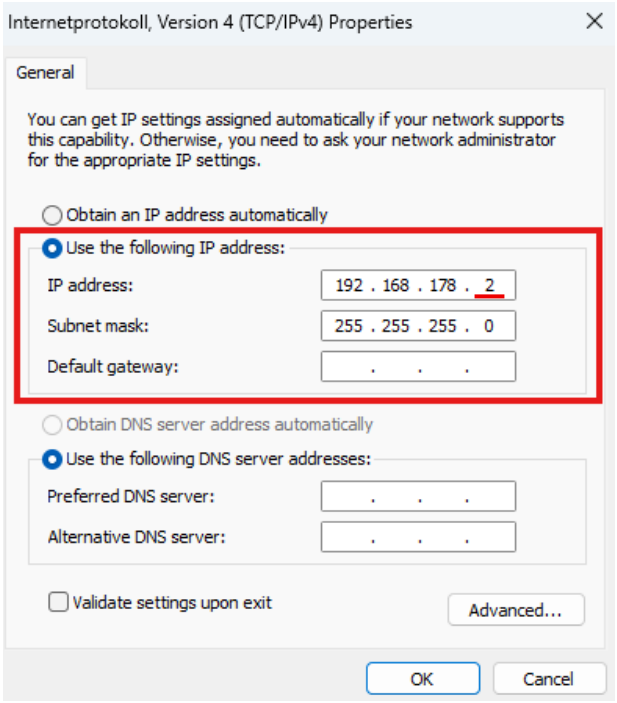
7. Right-click on the Ethernet connection and open the properties.



8. Activate Internet Protocol Version 4 (TCP/IPv4) (check the box) and then open the properties.



9. Select "Use the following IP address" and enter the IP address and subnet mask as follows, then confirm with OK



Note: Do not select the same host ID (*here:* 2 at the end) as the KUM, and do not select 1 or 0 at the end (this is usually the router).
➔ Possible host IDs: from 2 to 255

10. Enter the IP address 192.168.178.150 of the KUM in the address bar of the browser and follow the information described in chapter 5.4.2 via the configuration page.

6 Small breakdown service

Error	Remedy
Connection cannot be established	• Ensure that the scales are switched on • Ensuring the cable connection • Check wiring at the plug
No communication possible after changing the IP address via KCP commands	• Disconnect and restartthe scales from the power supply for a few minutes (mains + battery)
Loss of IP address	• Querying the IP address from the scale with a serial second interface via KCP command JNEA