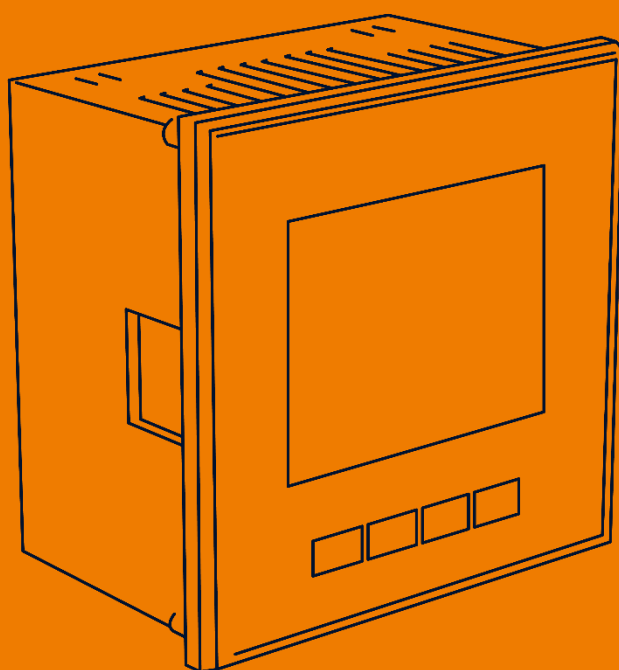


wöhner



MIEZ

Multifunctional measuring
device

ALLES MIT SPANNUNG

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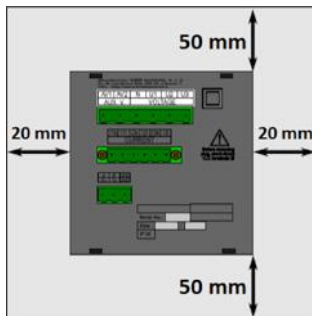
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1 Installation

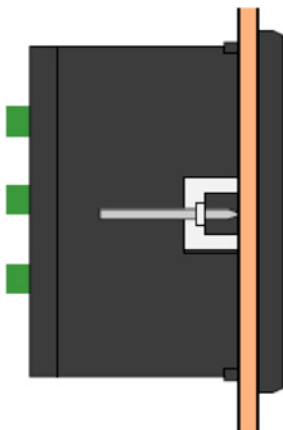
1.1 Mounting

The multifunction measuring device is suitable for installation in control panels and requires a **cut-out dimension of 92⁺¹ x 92⁺¹ mm**.

There must be a distance of 20 mm and 50 mm respectively to adjacent devices to ensure sufficient ventilation.



To fix the multifunction measuring device in the control panel, use the enclosed fixing clips. These are placed on the side of the device and fastened using a screwdriver.

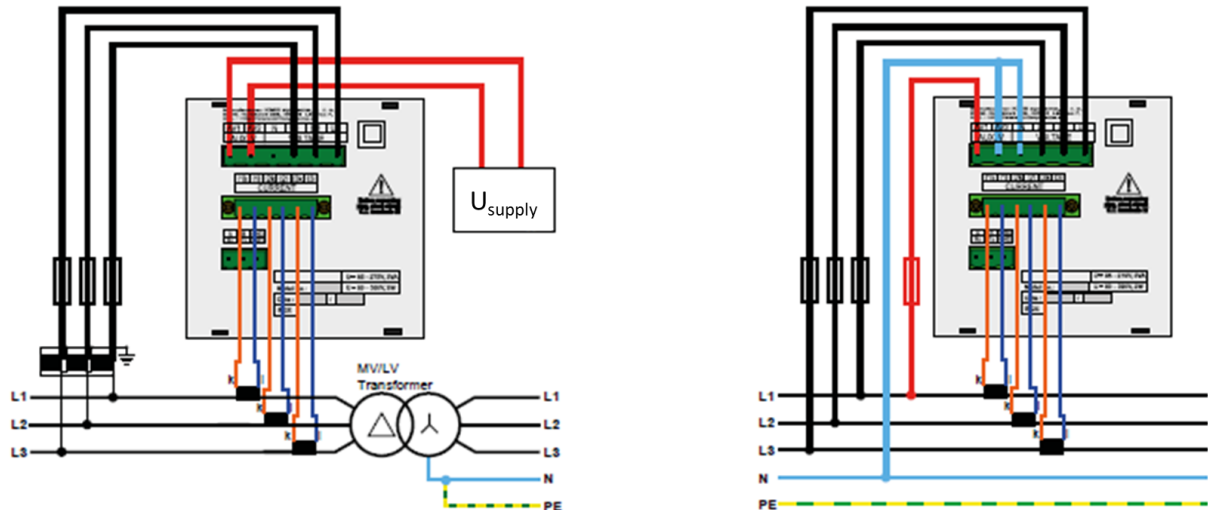


1.2 Voltage supply

Following table specifies power supply according to model number:

Modell	37000, 37001	37002
Voltage range	85 ÷ 275 VAC / 40 ÷ 100 Hz 80 ÷ 350 VDC	20 ÷ 50 VAC / 40 ÷ 100 Hz 20 ÷ 75 VDC

The connections for this are located at the bottom of the multifunction measuring devices and labelled AV1 (9) and AV2 (10). It is recommended to protect the voltage supply with a 1 A circuit breaker.



1.3 Voltage measurement

The multifunction measuring device has 3 voltage inputs that are suitable for both direct and current transformer measurements. The phase voltages are measured via the terminals 12 (L1), 13 (L2), 14 (L3), and the common neutral conductor connection N (terminal 11). It is recommended to protect the voltage paths with a 1 A circuit breaker.

1.4 Connecting a current transformer

The multifunction measuring devices are not designed for direct current measurement. The connections of the required current transformers are located at the bottom of the device and labelled as follows:

Variante 1 A // 5 A:

- I11 and I12 for the current transformer on phase 1
- I21 and I22 for the current transformer on phase 2
- I31 and I32 for the current transformer on phase 3

The current transformer connection terminals are designed for secondary signals of 1 A or 5 A.

1.5 RJ45 interface

The multifunctional measuring devices 37001 and 37002 have a standard RJ45 connection for the LAN. The connection is located on the back of the device.

2 Commissioning

2.1 Factory communication settings

The multifunctional measuring devices 37001 and 37002 are delivered with the **IP address 10.0.0.1** by default. The serial interface is pre-set to the device address 1 and a baud rate of 9600 baud.

2.2 Manual network settings

To change the IP address, the subnet mask and the default gateway manually, proceed as follows:

1. Use the **P** button to access the parameter selection.
2. In the first line you will find the parameters P00 - P19. Use the arrow buttons **▲** and **▼** to navigate to parameter "P15".
3. Press the **P** button again to mark the second line with a "-".
4. Press and hold the **P** button until "On" or "OFF" flashes.
5. you can now switch DHCP on or off using the arrow buttons **▲** and **▼**.
6. Once you have made your settings, confirm with the **P** button and exit the configuration with the **M** button to save the settings.

If you want to set a fixed IP address:

(DHCP must be deactivated)

1. Use the **P** button to access the parameter selection.
2. In the first line you will find the parameters P00 - P19. Use the arrow buttons **▲** and **▼** to navigate to parameter "P15".
3. Press the **P** button again to mark the second line with a "-".
4. Press the **▼** button to go to the first part of the IP address (IP1).
5. Press and hold the **P** button until the number in line 3 flashes.
6. You can now set it with the arrow buttons **▲** and **▼** (e.g. 192) and confirm this with the **P** button.
7. Press the **▼** button to go to the next part of the address (IP2). This must be changed as described in points 5 and 6.
8. Repeat steps 5 - 7 several times to set the IP address, the subnet mask (NA1 - NA4) and the gateway (GT1 - GT4).

9. Once you have made all the settings, confirm with the **P** button and exit the configuration with the **M** button to save the settings.

The multifunction measuring device 37001 or 37002 can now be reached at the set IP address.

2.3 Setting the current transformer

1. Use the **P** button to access the parameter selection.
2. In the first line you will find the parameters P00 - P19. Use the arrow buttons **▲** and **▼** to navigate to parameter "P01".
3. Press the **P** button again to mark the second line with a "-".
4. Press and hold the **P** button until the transformer ratio flashes.
5. Now you can set the desired primary current using the arrow buttons **▲** and **▼**. With the 5 A version, you can use the **M** button to change the secondary current between 1 A and 5 A.
6. Once you have set the desired ratio, confirm with the **P** button and exit the configuration with the **M** button to save the settings.

2.4 Checking the connection and settings

The connection and settings of the universal measurement device can now be reviewed via the device display.

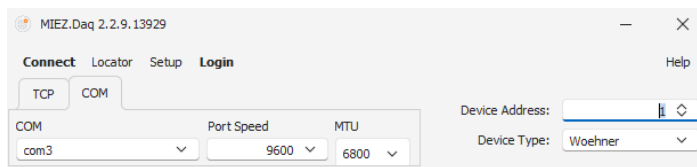
- The display of the currents can be used to review plausibility. If you do not know the current, we recommend comparing the current with a current clamp.
- When displaying the individual active powers, consumption is displayed without a prefix and supply with a negative prefix. This permits verification of the correct installation and connection of the current transformers.
- The display of the currents can be used to check whether any one current transformer is connected to the correct current input by short-circuiting an individual current transformer. The respective value should become "0" if there is a short circuit.

2.5 Connecting to a PC

You can use a LAN cable to connect the multifunctional measuring device to a PC.

If you want to connect to the device by LAN cable, you need to either adjust your device's IP address to your network or the IP address of your computer. The multifunctional measuring device 37001 and 37002 is delivered with the **IP: 10.0.0.1**

- Open the MIEZ.Daq and select the item "COM" for a USB connection and the item "TCP" for Ethernet.



- Open the drop-down menu and select the COM interface or enter the IP address of the multifunctional measuring devices in the field provided for this.
- Clicking "Connect" establishes a connection to the device. You can make all further settings of the device here.

3 Technical data

Model	37000	37001	37002
Voltage supply	230 V: 85 ... 275 V _{AC} ; 80 ... 350 V _{DC}		24 V: 20 ... 50 V _{AC} ; 20 ... 75 V _{DC}
Voltage measurement	6 ... 375 V _{L-N} ; 8 ... 660 V _{L-L}		
Frequency	40 ... 70 Hz		
Sampling rate	25,6 kHz		
Power consumption	3 VA / 3 W		
Ambient temperature T_{Operation}	-20 ... 60 °C		
Protection type front / rear	IP40 (Opt.: IP54) / IP20		
EMC	Class A: Industrial area according to IEC 61326-1		
Overvoltage category	CAT III / 300 V		
Overload (permanent)	U: 600 V _{L-N} I: 7,5 A _{AC} I _{333mV} : 666 mV		
Overload (1s)	U: 1200 V _{L-N} I: 70 A _{AC} I _{333mV} : 3,33 V		
Mechanical data			
Mounting	Front panel installation 96 x 96 (opt.: DIN rail with adapter)		
Dimensions WxHxD	96 x 96 x 80 mm		
Weight	Ca. 300 g		
Installation cut-out	92 ⁺¹ x 92 ⁺¹ mm		
Interfaces			
Digital in/output	Max. 100 V _{DC} ; 100 mA		
RJ45	-	Max. 100 MBit/s	
Protocols	-	Modbus TCP, DHCP, SMTP, NTP	

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