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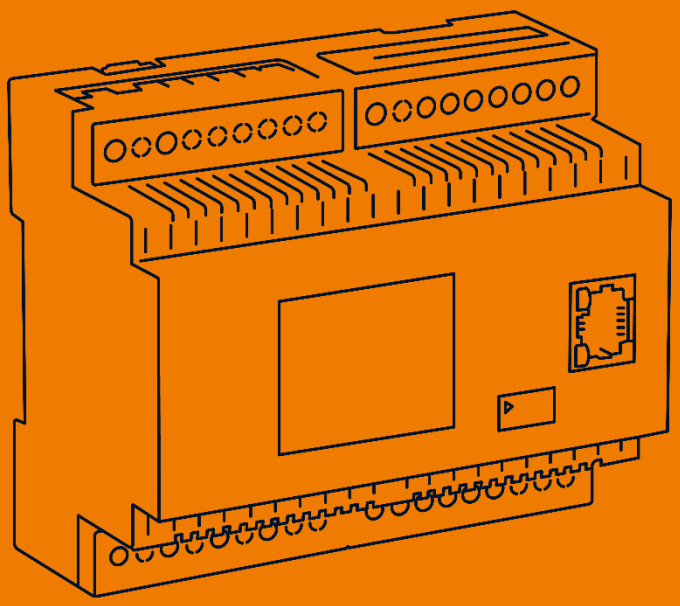

MIEZ Power analyzer

ALLES MIT SPANNUNG

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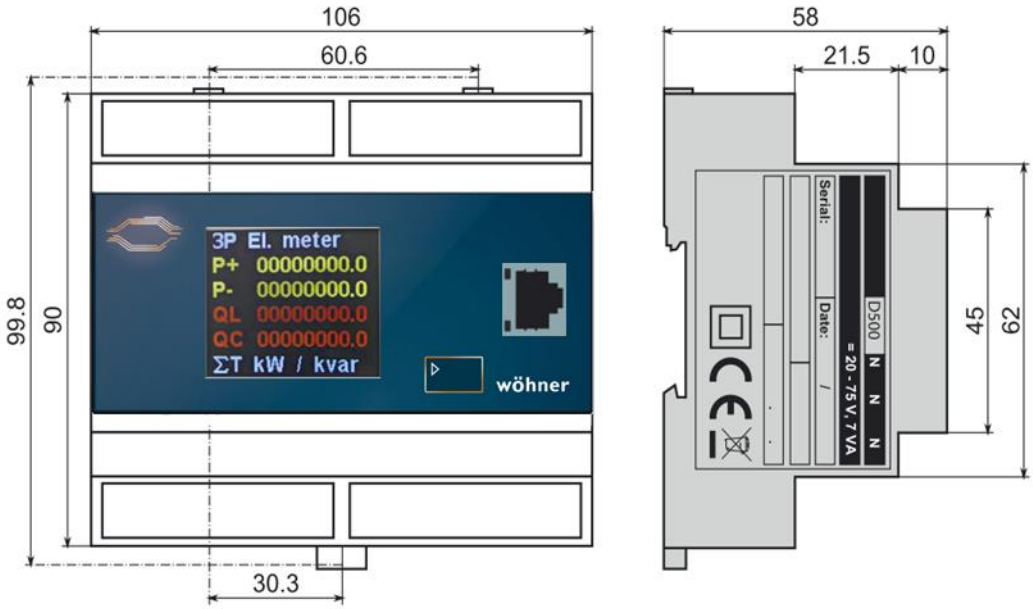
1 Installation

1.1 Mounting

The 37020 Power analyzer is intended for mounting on the DIN top-hat rail.

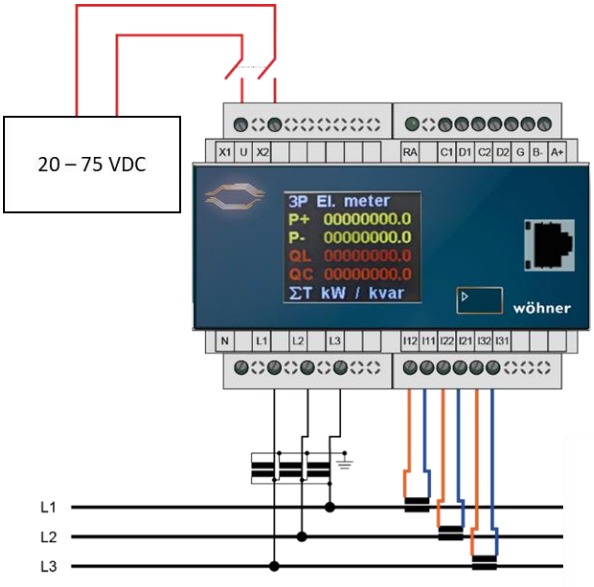


1.2 Voltage supply

The 37020 Power analyzer is operated with the following supply voltage:

➔ 20 … 75 V_{DC}

The connections for this are located at the bottom of the Power analyser and labelled X1 and X2. It is recommended to protect the voltage supply with a 1 A circuit breaker.



1.3 Voltage measurement

The 37020 Power analyzer has 3 voltage inputs that are suitable for both direct and current transformer measurements. The phase voltages are measured via the terminals L1, L2, L3 and the joint neutral conductor connection N. It is recommended to protect the voltage paths with a 1 A circuit breaker.

1.4 Connecting a current transformer

The Power analyzer is not designed for direct current measurement. The connections of the required current transformers are located on the rear of the device and labelled as follows:

- 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 37020 Power analyzer has a standard RJ45 connection for the LAN. The connection is located to the right of the display.

1.6 RS485 interface

The 37020 Power analyzer is equipped with an RS485 interface that communicates via the Modbus RTU protocol. The connections are located on the top of the device and labelled “A+”, “B-”, and “G”.

2 Commissioning

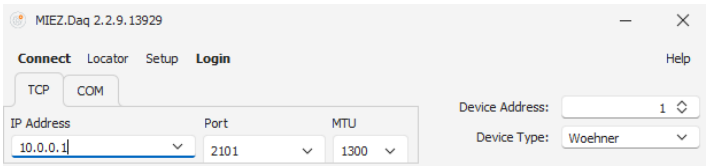
2.1 Factory communication settings

The 37020 Power analyzer is 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 Connecting to a PC

To connect the 37020 Power analyzer to a PC, you must use a LAN cable.
LAN: 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 37020 Power analyzer 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 37020 Power analyzer in the field provided for this.
- Clicking "Connect" establishes a connection to the device. You can make all further settings of the device here.

2.3 Setting the current transformer

Once you have connected to the device in the software, select the item 

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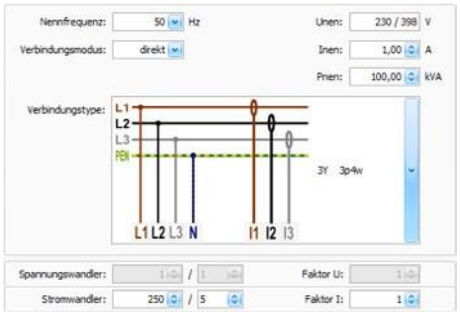
You can configure the measurement under the tab "Install":



Nominal values, network configuration, current transformer ratios, …

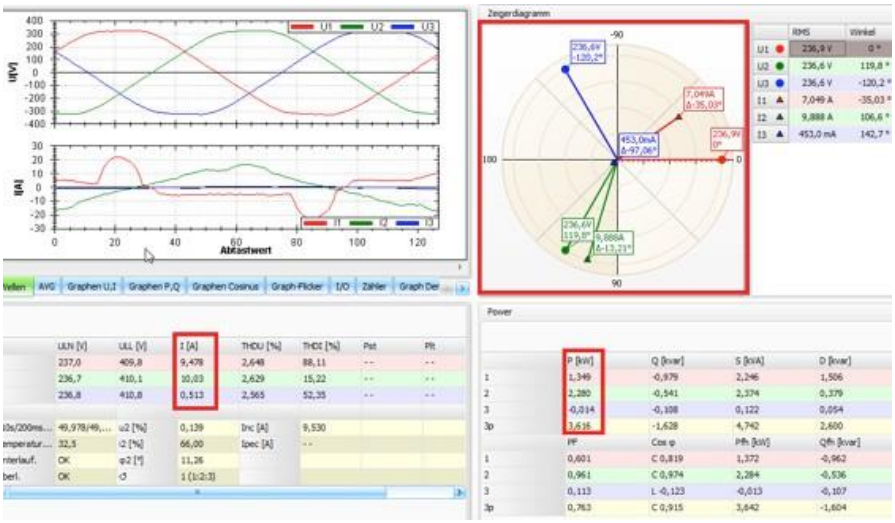
2.4 Setting communication parameters

All communication parameters of the 37020 Power analyzer can be set under the item "Communication".

2.5 Checking the connection and settings

The connection and settings of the universal measurement device can now be reviewed via the device display or the “Act Data” in the MIEZ.Daq.

- 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. Only the total power can be checked on the 37020 Power analyzer display!
- The pointer diagram can be used to check the rotating field and assignment of the current and voltage paths. Observe the phase shift of current and voltage for this.



3 Technical data

Voltage supply	20 … 75 V_{DC}
Voltage measurement	4 … 420 V_{L-N}; 7 … 720 V_{L-L}
Frequency	40 … 70 Hz
Sampling rate	25,6 kHz
Power consumption	7 VA / 3,5 W
Ambient temperature $T_{Operation}$	-25 ... 70 °C
Protection type front / rear	IP40 / IP20
EMC	Class A: Industrial area according to IEC 61326-1
Overvoltage category	CAT IV / 300 V
Overload (permanent)	U: 1252 V_{L-N} | I: 10 A_{AC}
Overload (1s)	U: 2800 V_{L-N} | I: 90 A_{AC}
Mechanical data	
Montage	35 mm DIN rail
Maße BxHxT	106 x 90 x 58 mm
Weight	Approx. 200 g
Interfaces	
RJ45	Max. 100 MBit/s
RS485	2400 … 1382400 Baud
Protocols	Modbus RTU / TCP, DHCP, SMTP, NTP, SNMP

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