

## PQ PLUS UMD 705 Digital Measuring Device User Guide

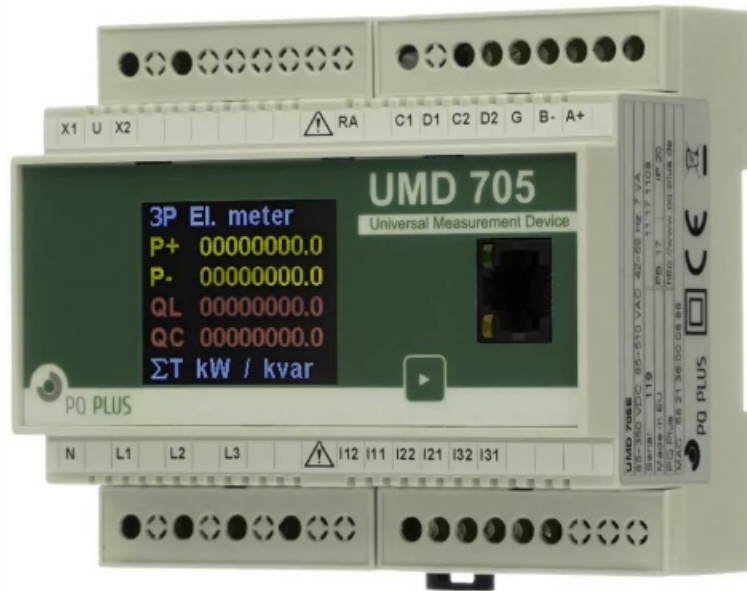
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**PQ PLUS UMD 705 Digital Measuring Device**



## Specifications

- **Dimensions:** 106 x 90 x 58 mm
- **Weight:** Approximately 200 g
- **Max. Data Transfer Rate:** 100 MBit/s
- **Baud Rate:** 2400...1382400 Baud
- **Operating Voltage Range:**
  - 20-50VAC, 20-75VDC
  - 85-510VAC, 85-350VDC
- **Supported Protocols:** Modbus RTU/TCP, DHCP, SMTP, NTP, SNMP

## Installation

### Mounting

- The UMD 705 is intended for mounting on the DIN top-hat rail.



## Connecting a current transformer

The universal measurement 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:

- 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.

## RJ45 interface

The UMD 705E has a standard RJ45 connection for the LAN. The connection is located to the right of the display.

## RS485 interface

The UMD 705E 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”.

## Commissioning

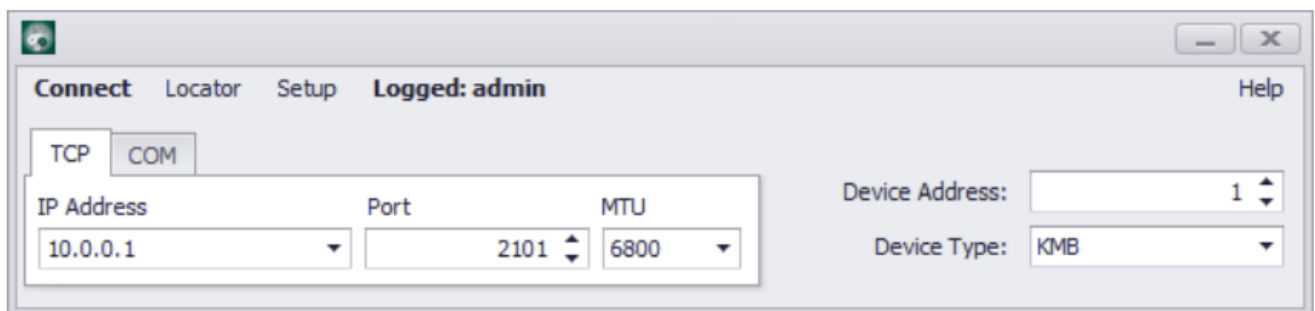
### Factory communication settings

The UMD 705E 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.

### Connecting to a PC

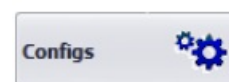
You can either use an interface converter (e.g. RS485 to USB) or a LAN cable to connect the UMD to a PC.

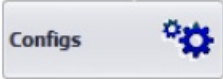
- **Converter:** The associated USB driver of the interface converter must be installed on the PC for this.
- **LAN:** If you want to connect to the device by LAN cable, you need to either adjust your device's IP address to your network or the IP address of your computer. The UMD 705E is delivered with the IP: 10.0.0.1.
- Open the ENVIS.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 UMD in the field provided for this.
- Clicking “Connect” establishes a connection to the device. You can make all further settings of the device here.

## Setting the current transformer



Once you have connected to the device in the software, select the item . You can configure the measurement under the tab “Install”: Nominal values, network configuration, current transformer ratios, ...

Nominal Frequency: 50 Hz Unom: 230 / 398 V

Connection Mode: Direct Inom: 230,00 A

Phom: 160,00 kVA

Connection Type:

VT Ratio: 1 / 1 Multiplier U: 1

CT Ratio: 250 / 5 Multiplier I: 1

## Setting communication parameters

All communication parameters of the UMD can be set under the item “Communication”.

Locked: ☐ Device Address: 1

**COM 1**

Port Speed: 9600

Protocol: KMB

Parity: None

Data Bits + Parity: 8

Stop Bits: One

**ETH (MAC: 58-21-36-00-08-7C)**

☐ From DHCP

IP Address: 192.168.37.250

Net Mask: 255.255.255.0

Default Gateway: 192.168.37.254

DNS: 208.67.222.222

**Ports:**

KMB Long: 2101

Modbus: 502

Web Server: 80

**ETH to Serial: COM 1**

Enabled: ☒

Modbus RTU <-> TCP: ☒

Port: 4001

**ETH to Serial: Locator**

Address Range: 1 - 255

Port Speed: Auto

Status: Stopped Search

**E-mail**

Enabled: ☐

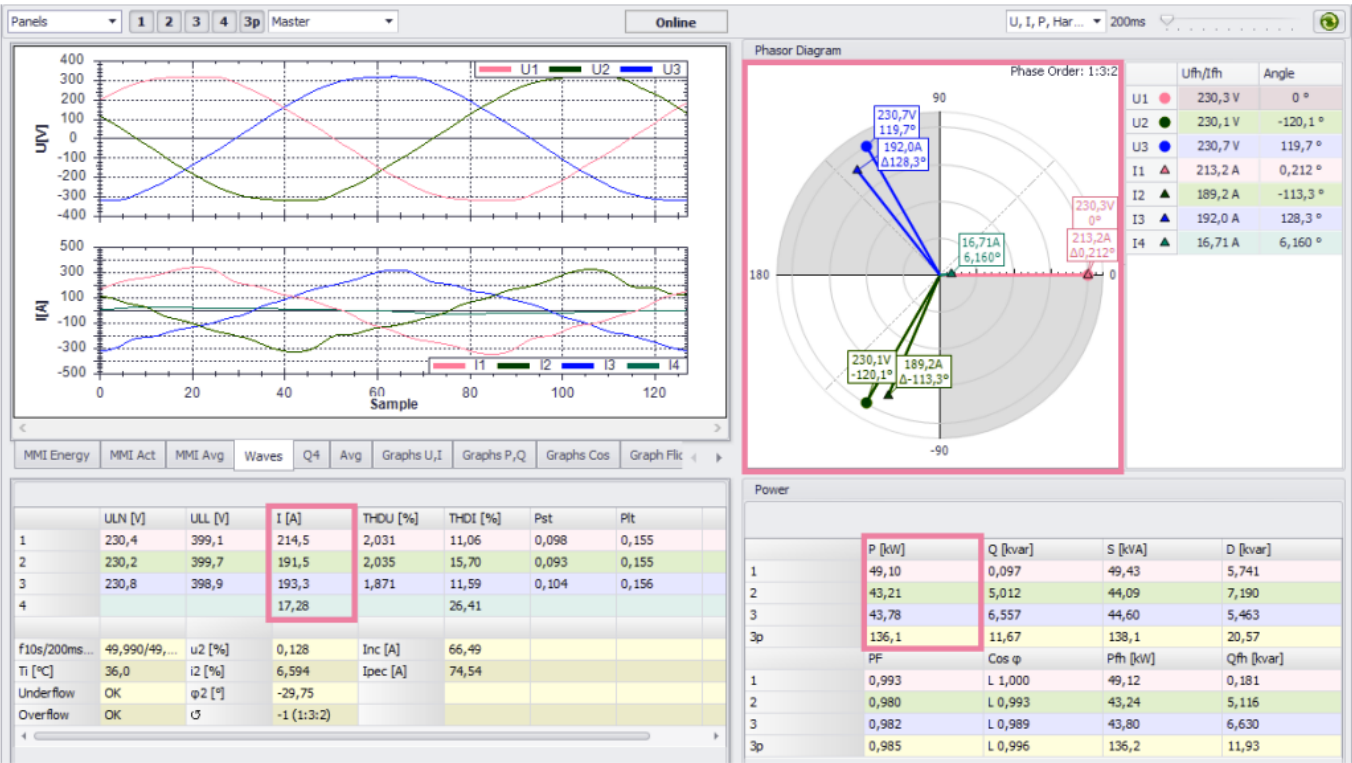
Serial interface, network interface,  
gateway, email, ...

## 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 ENVIS. 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 UMD 705 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.



Voltage supply	230 V: 85 ... 510 VAC; 85 ... 350 VDC
	24 V: 20 ... 75 VDC
Voltage measurement	4 ... 420 VLN; 7 ... 720 VLL
Frequency	40 ... 70 Hz
Sampling rate	25.6 kHz
Power consumption	7 VA / 3.5 W
Ambient temperature Toperation	-25 ... 70 °C
Protection type front / rear	IP40 / IP20
EMC	Class A: Industrial area according to IEC 61326-1
Overvoltage category	230 V: Category III; 24 V: Category IV
Overload (permanent)	U: 1252 VLN   I: 10 AAC
Overload (1s)	U: 2800 VLN   I: 90 AAC
Mechanical data	
Mounting	35 mm DIN rail
Dimensions WxHxD	106 x 90 x 58 mm
Weight	Approx. 200 g
Interfaces	
RJ45	Max. 100 MBit/s
RS485	2400 ... 1382400 baud
Digital in/output	Max. 60 VAC / 100 VDC
Protocols	Modbus RTU / TCP, DHCP, SMTP, NTP, SNMP

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- For further information and the current catalogue, see our website.
- <https://www.pq-plus.de>
- Fra og med / As of: 2024.01 Med forbehold for tekniske ændringer. Technical changes reserved.

## FAQs

**Q: Where can I find detailed instructions for the UMD 705?**

**A:** Detailed instructions can be found on our website at <https://www.pq-plus.de/en/media-downloads/>.


**Q: How do I set the communication parameters for the UMD 705?**

**A:** Communication parameters can be set under the Communication section of the device.

**Q: What are the dimensions of the UMD 705?**

**A:** The dimensions of the UMD 705 are 106 x 90 x 58 mm.

## Documents / Resources

	<p><b><a href="#">PQ PLUS UMD 705 Digital Measuring Device</a></b> [pdf] User Guide 1672246, UMD 705, UMD 705 Digital Measuring Device, UMD 705, Digital Measuring Device, Measuring Device</p>
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## References

- [User Manual](#)

### Manuals+, Privacy Policy

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