

MPQ-100

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## POWER QUALITY METER



# MPQ-100

## Description

Electrical Power Quality Meters (PQM) are essential items for assessing whether the supply of electrical energy to an installation or specific equipment is suitable for the application. Through a systematic analysis of PQM, for example, overheating and accelerated wear of bearings and motors can be mitigated or eliminated, consequently reducing technical losses and asset replacement.

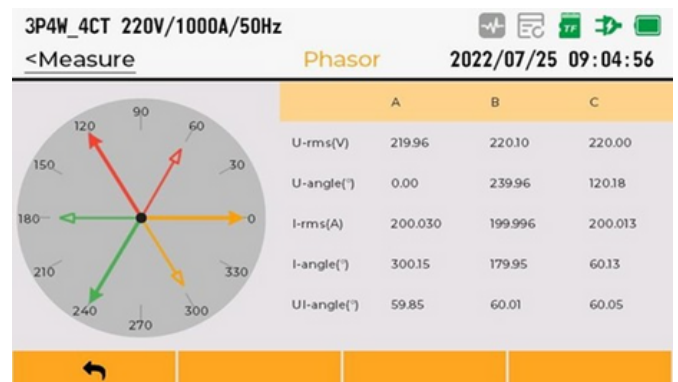
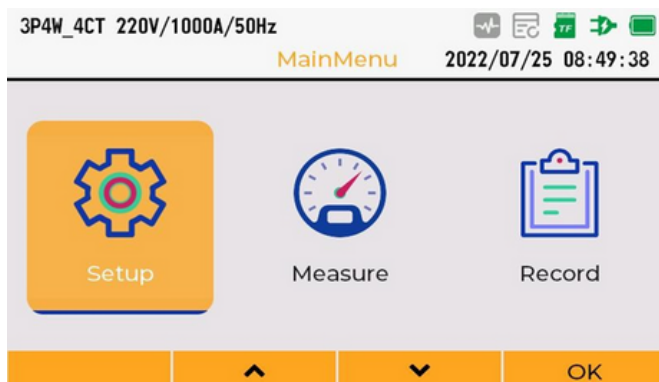
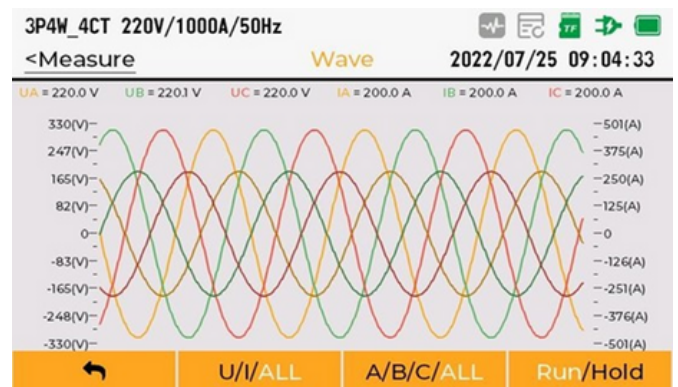
### Advantages:

- The MPQ-100 features a USB port for integration with a computer.
- The MPQ-100 allows for the choice between conventional CTs and flexible clamps for measurement and enables applications in production lines and in the field.
- Expandable internal flash memory up to 64GB for up to 1 year of data stored in continuous measurement.

The MPQ-100 is an ideal power quality meter for field measurements, from which it is possible to assess the situation of the electrical system in detail, whether industrial or power, to assist in decision-making aimed at increasing system quality and reliability.

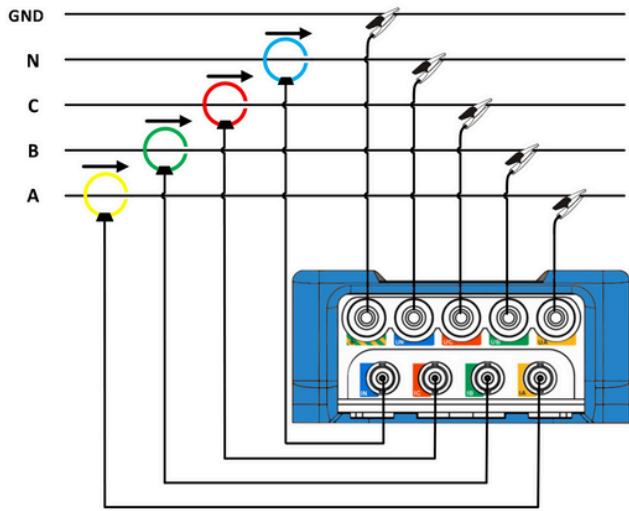
## Operation

The HVEX qualimeter is a multifunction meter capable of collecting various data regarding the operation of the grid, either in real-time or stored for a period of time. This equipment is connected to the grid through 5 voltage sensors (1 per phase + 1 neutral + 1 grounding) and 4 Rogowski current sensors (1 per phase + 1 neutral), allowing for the measurement or recording of voltage, current, power, energy, harmonic distortions, phasor diagrams, unbalance, demand, waveform (oscillography). The recorded files can be exported in CSV format for further computational analysis.

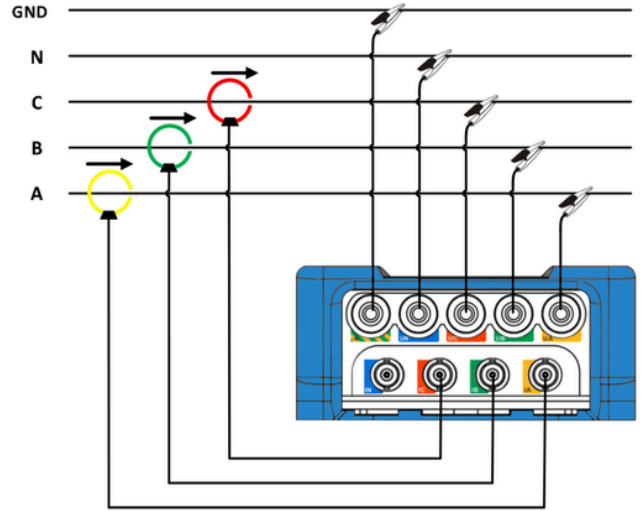


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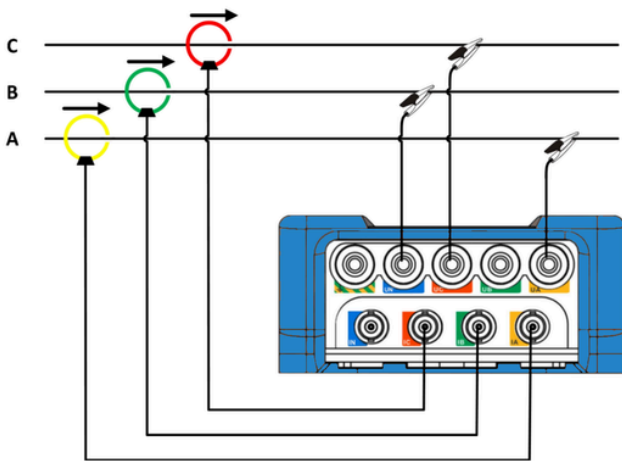
## Connection schemes



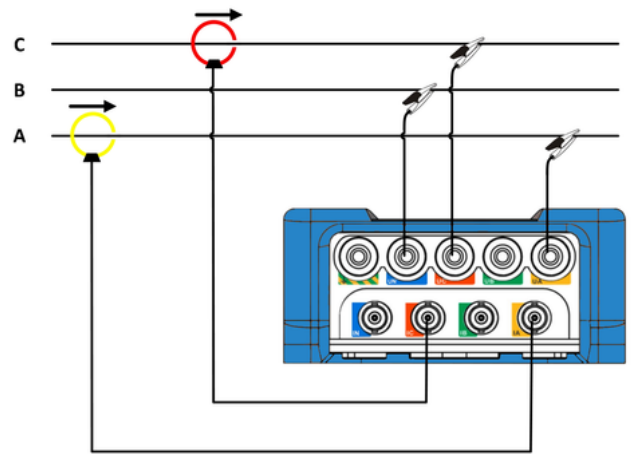
3P4W\_4CT



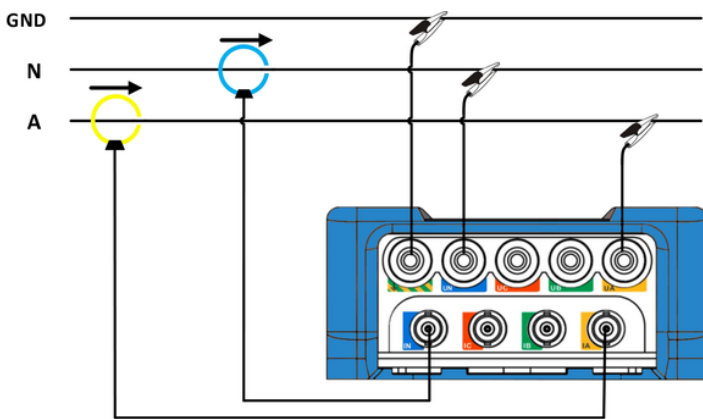
3P4W\_3CT



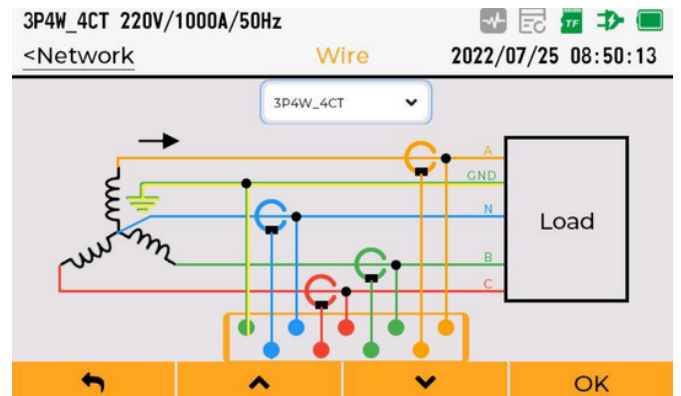
3P3W\_3CT



3P3W\_2CT



1P2W



Connection selection screen

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## Technical Specifications

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### General

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Meter Category	CAT III 600V
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IP Code	IP30
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Display size	3,97 "
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Type	IPS Display
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Resolution	480 x 800 p
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### Power Supply

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Input	5 VDC 2 A
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Battery	Lithium, rechargeable   Model N° 18650   4000mAh
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Battery working time	≥ 6h
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Battery charging time	≤ 5h
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Energy economy	Adjustable brightness and screen activity time
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### Storage

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Type	TF Card
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Storage capacity	32 Gb
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Export	U Disc (FAT32); CSV
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### Communication

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Interface	RJ45 (Ethernet)
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Protocol	Modbus - TCP
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USB	USB Port
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## Technical Specifications

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Voltage

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Current

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Active power

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Reactive power

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Apparent power

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### **Classical measured quantities**

Power factor

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Active energy

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Reactive energy

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Apparent energy

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Active demand

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Reactive demand

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Fundamental voltages and currents

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Voltage and current harmonics up to 35th order

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Powers

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Power factor

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### **Quantities defined by IEEE Std. 1459-2010**

Voltage and current harmonic distortions

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Voltage and current unbalances

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Harmonic pollution factor

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Load unbalance factor

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Positive, negative and zero sequence components of voltages and currents

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## Technical Specifications

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### Range and accuracy of input signals

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<b>Voltage</b>	Range	0 VAC to 600 VAC
	Accuracy	0,2%

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<b>Current</b>	Range	0 to 420 mVAC (Depends on the sensor)
	Accuracy	0,2% + Sensor accuracy

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<b>Frequency</b>	Range	45 Hz to 60 Hz
	Accuracy	$\pm 0,001$ Hz

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<b>Power factor</b>	Range	-1 to +1
	Accuracy	$\pm 0,005$

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<b>Power accuracy</b>	Active	0,5%
	Reactive	1%
	Apparent	0,5%

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<b>Energy accuracy</b>	Active	0,5%
	Reactive	1%
	Apparent	0,5%

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## Technical Specifications

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### Environmental Conditions

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Operating Temperature	-20 °C to +55 °C
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Storage Temperature	-40 °C to +70 °C
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Operating humidity	> 90%
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Storage humidity	> 95% (without condensation)
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Altitude	≤ 2000m
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### Dimensions

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Height	215 mm
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Width	130 mm
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Length	60 mm
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Weight	850 g
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We provide solutions for improvement of electrical energy generation, transmission and distribution efficiency, quality and reliability. With a highly specialized and experienced team in research, development and innovation, HVEX develops tailor-made solutions for Brazilian and foreign markets. Wide range of products with solutions focused on signal transduction, measurement, monitoring and protection.



Boosting the Innovation



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