Data sheet

# Power Meter
# Nexus II

Nexus II is a power meter for electrical parameters with local indication and communication, capable of measuring instantaneous values, cumulative, predictive and power quality. It has a LED display with seven segments and keyboard with 4 keys, in which you can navigate through the measured quantities and configure the instrument locally. Through its serial interface it is possible to read the measurements, configure the meter and update the firmware.


## Characteristics

- Electrical quantities measured: voltage, current, frequency, power, power factor, energy, demand, Total Harmonic Distortion and voltage and current unbalance.
- Bright LED display with four digits for clear visualization of the values.
- Navigation via keyboard with four keys.
- RS485 serial port with Modbus RTU protocol, which allows to read the measurements and set parameters.
- Firmware upgrade via serial communication, which allows to have a product always updated.
- Compliance with IEC 61557-12.
- IBIS_BE is the software that allows configuration, which allows to configure the meter, view the measurements and update the firmware.
- Universal configurable network: unbalanced three-phase with neutral, three-phase balanced or unbalanced and single-phase.

## Instantaneous value:

| | |
|---|---|
| Phase voltage | ✓ |
| Line voltage | ✓ |
| Phase current | ✓ |
| Neutral current | ✓ |
| Frequency | ✓ |
| Active power | ✓ |
| Reactive power | ✓ |
| Apparent power | ✓ |
| Power Factor | ✓ |

## Energy:

| | |
|---|---|
| Forward and reverse Active energy | ✓ |
| Forward and reverse Reactive energy | ✓ |
| Apparent energy | ✓ |

## Demand:

| | |
|---|---|
| Current | ✓ |
| Active power | ✓ |
| Reactive power | ✓ |
| Apparent power | ✓ |

## Power Quality:

| | |
|---|---|
| THD of voltage and current | ✓ |
| Displacement PF | ✓ |
| Unbalance | ✓ |

## Technical Data

| | |
|---|---|
| Samples per cycle | 64 |
| Harmonics | Up to 31 |
| Voltage range | 50...300VFN, 86…515VLL |
| Current | 1A, 5A |
| Current range | 50mA…6A |
| Consumption | Voltage input: ≤ 1mA.<br>Current input: ≤ 0,2VA. |
| Frequency | 50; 60 Hz ±10% |
| Communication | Serial interface RS485 Protocol Modbus RTU |
| Standards | IEC 61557-12<br>IEC 61010-1 |

## Power supply

| | |
|---|---|
| Range | 85 … 265Vac/90…300Vdc |
| Consumption | 3VA |

## Serial interface

| | |
|---|---|
| Type | RS485 |
| Protocol | Modbus RTU |
| Firmware upgrade | Encrypted |

## Accuracy class:

| | |
|---|---|
| Current | Class 0.5 according IEC 61557-12 |
| Voltage | Class 0.5 according IEC 61557-12 |
| Active Power (kW) | Class 1 according IEC 61557-12 |
| Reactive Power (kVAR) | Class 2 according IEC 61557-12 |
| Apparent Power (kVA) | Class 1 according IEC 61557-12 |
| Power Factor | Class 1 according IEC 61557-12 |
| Demand of Current | Class 1 according IEC 61557-12 |
| Demand of Active power | Class 1 according IEC 61557-12 |
| Demand of Reactive power | Class 2 according IEC 61557-12 |
| Demand of Apparent power | Class 1 according IEC 61557-12 |
| Frequency | Class 0.2 according IEC 61557-12 |
| Active Energy | Class 1 according IEC 61557-12 |
| Reactive Energy | Class 2 according IEC 61557-12 |
| Apparent Energy | Class 1 according IEC 61557-12 |

## Electrical test

| | |
|---|---|
| High voltage | IEC 61010-1 |
| Pollution degree | IEC 61010-1 |

## Mounting

| | |
|---|---|
| Enclosure | 96 x 96, 112 mm depth |
| Fixation | Two clips |
| Protection degree | IP50 Enclosure<br>IP20 Terminal |
| Weight | 0,35 kg |

## Mechanical requirements

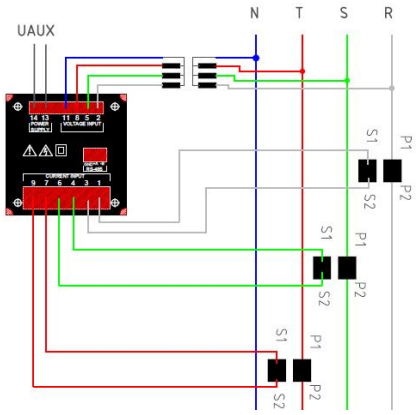
| | |
|---|---|
| Vibration | Amplitude: 0,35 mm; frequency = 25 Hz according IEC61557-12 |

## Environment conditions (IEC 61557 -12)

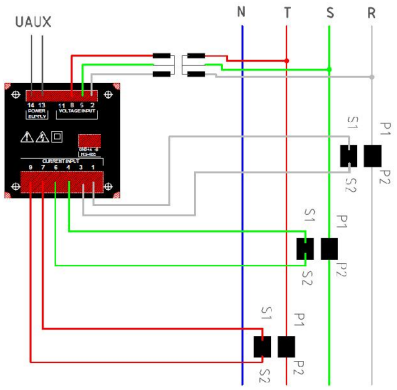
| | |
|---|---|
| Rated operating range | -25...+70°C |
| Limited range of operation | -25...+70°C |
| Limit range for storage and shipping | -40...+85°C |
| Humidity | 75% |
| Altitude | 2000m |
| Measuring category | CAT III |
| Pollution degree | II |
| Protection degree | II (double isolation) |

## Wiring Diagrams

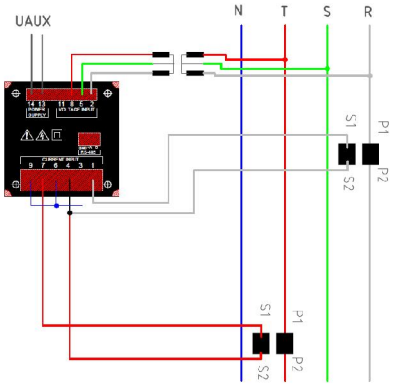
### Three phase system with neutral



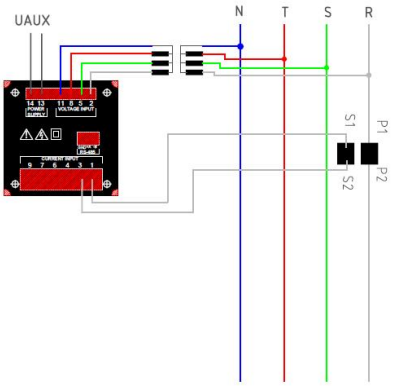

### Three phase system without neutral



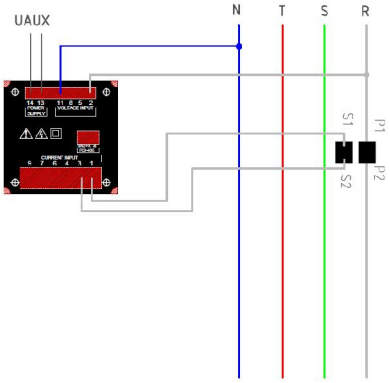

### Three phase system without neutral and 2 CTs



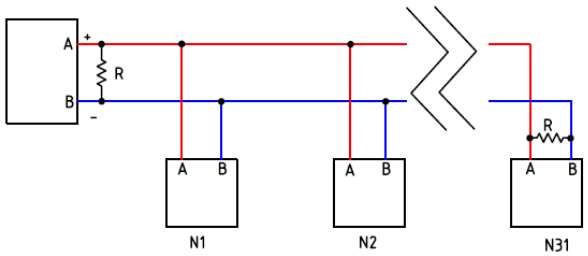

### Three phase system without neutral and 1 CT




### Single-phase system

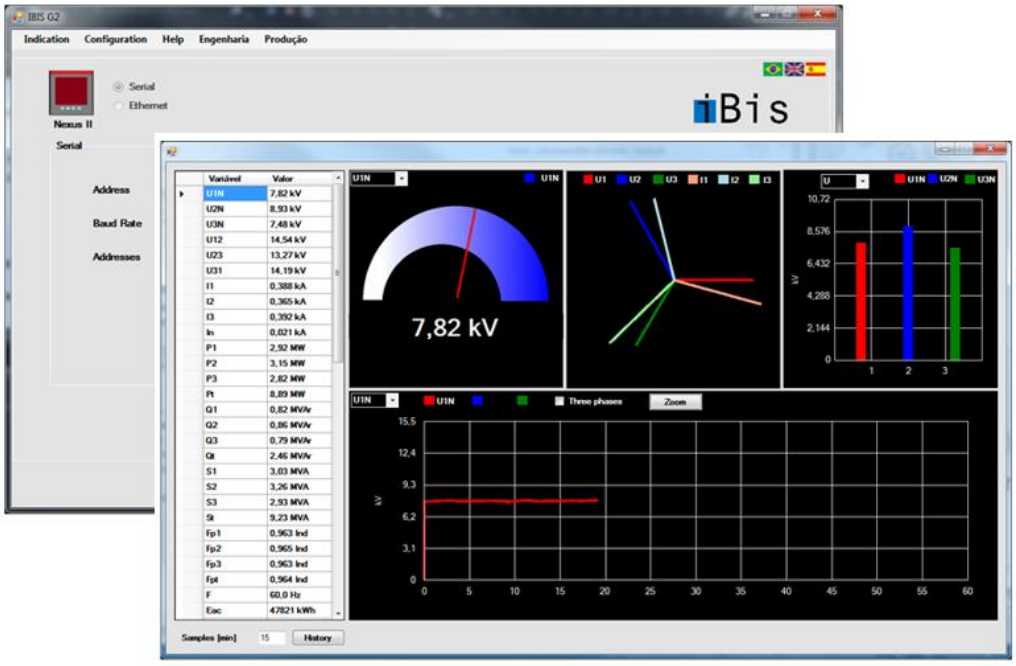


## Diagrams for installation serial interface RS485




## IBIS_BE configuration software

IBIS_BE is the software that allows configuration, display and update the product firmware.



## Precautions

Make sure that the voltages and currents to be connected to the instrument are compatible with the specifications and that the connections are according to the diagrams.

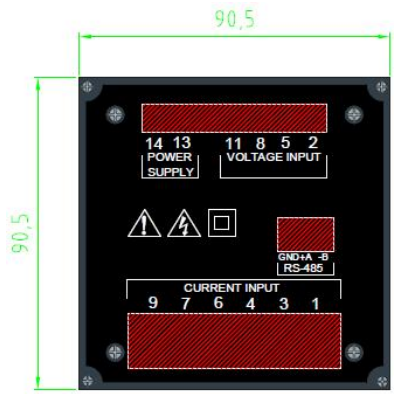
## Instruction Set

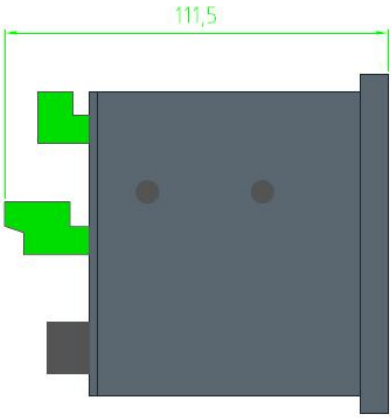
Respect the ambient temperature range. In the installation area it must be observed values for vibration, dust and humidity, altitude, which must remain within the limits determined by the type of housing and protection of the climate group, listed on this data sheet. A pair of metal clips does fixation. The connections have be done using terminals.

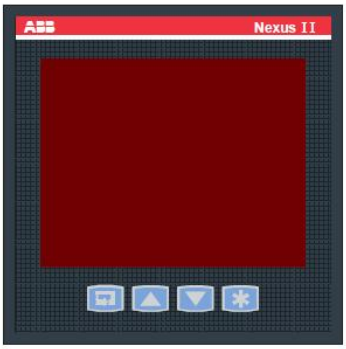
## Instruction of Use

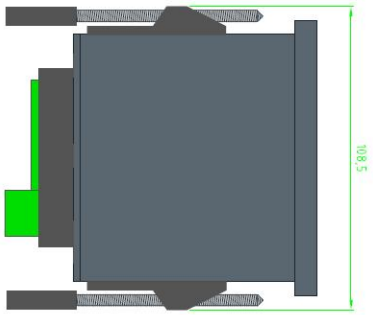
Check the connection diagrams and the user manual. Configure the PT and CT ratio, network type and the communication parameters (address, baud rate and byte format) according to the application.

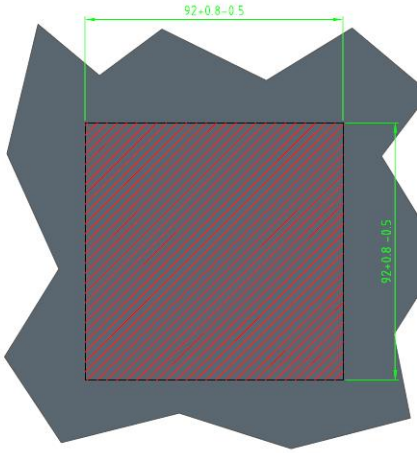
## Dimensions (mm)



## Contact

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Rev. 1.00