1. Cautions

The proper and safe operation of the device assumes that the operating instruction is read carefully and safety warnings given in the various sections. Mountings and electrical connections sections are observed.

The device should only be handled by appropriately trained personnel who are familiar with it and authorized to work in electrical installations. Unauthorized repair or alternation of the unit invalidates the warranty.

The sign indicates there is potential electrical power danger, which might result in the harm if not following the rule.

For your safety reason, please properly use our products. It is strongly recommended that you follow the instructions:
1. Please connect to the power and load as rated in label.
2. Please confirm that the wire is connected correct, to avoid the harm resulted from the wrong connection.
3. Please turn off the power system before releasing the transducer from DIN rail.

2. Brief description

The transducer PRO P31/Q31 converts to active or reactive power of a 3 phase 3 wire or 3 phase 4 wire system.

The output signal is proportional to the measured value of the active or reactive power and is either a load independent DC Current or a load independent DC Voltage.

3. Technical Data

Frequency: 50Hz, 60Hz
Accuracy: Class0.2, Class0.5
Auxiliary Power Supply: 24~80VAC/DC, 85~265VAC/DC
Stability: Annual Change Rate ≤ ± 0.2%

Input:
Input Voltage: 100VAC, 220VAC, 380VAC, 600VAC
Input Current: 0~1A, 0~2A, 0~5A
Continuous Overload Capacity: ≤ 2X
Transient Overload Capacity: Voltage Limit 3X, Current Limit 50X

Output:
4~20mA, 4~12~20mA, 0~±20mA, 0~±1mA, 0~±10mA, 0~±1V, 0~±5V, 0~±10V
Constant Voltage Output, Load Resistor $R_{load} \geq 250 \Omega$ (output 5V)
Constant Current Output, Load Resistor $R_{load} \leq 500 \Omega$ (output 20mA)
$R_{load} = \infty$, Voltage ≤ 20V
Alternating Wave: 18mV (Peak-Peak)

Own power consumption: <2VA
Striking Voltage: 2.9kV
Response Time: ≤ 300ms
Housing: PC
Operating Temperature: -10°C~55°C
Storage Temperature: -40°C~85°C
Humidity: ≤ 90%RH
Installation: DIN 35mm Rail
Size: 105mm x 69mm x 110mm

Measuring input and output are specified and labeled on the nameplate according to the different type ordered.

4. Mounting and Releasing the transducer

4.1 Installing the transducer
Simply clip the transducer onto the DIN rail as shown in fig.1

4.2 Releasing the transducer
Release the transducer from a DIN rail as shown in fig.2.

5. Commissioning and maintenance

Switch on the power supply and the measuring input. It is possible during the operation to disconnect the output line and to connect a check instrument, e.g. For a functional test.

No maintenance is required.
6. Electrical connections in 3 phase 4 wire system

Make sure that all the cables are not live when making the connections.

Connect the leads acc. to the instructions on nameplate.

7. Dimensional drawing

Unit: mm

Declaration

This manual represents your PRO transducer as manufactured at the time of publication. Every effort has been made to ensure that the information in this manual is complete and accurate. We reserve the right to make changes and improvements to the product without obligation to incorporate these changes and improvements into units previously shipped.

Note: when in the DC power supply system, no polarity need to be considered for power supply connection.