

Operating Instructions

Transducer for active and reactive power PRO P31/Q31

ARTEL

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 $\leq \pm 0.2\%$

Input:

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

Output:

4~20mA, 4~12~20mA, 0~ ± 20 mA, 0~ ± 1 mA, 0~ ± 10 mA, 0~ ± 1 V, 0~ ± 5 V, 0~ ± 10 V
Constant Voltage Output, Load Resistor $R_{out} \geq 250 \Omega$ (output 5V)
Constant Current Output, Load Resistor $R_{out} \leq 500 \Omega$ (output 20mA)
 $R_{out} = \infty$, Voltage $\leq 20V$

Alternating Wave: 18mV (Peak-Peak)

Own power consumption:	<2VA
Striking Voltage:	2.5kV
Response Time:	≤ 300 ms
Housing:	PC
Operating Temperature:	-10°C~55°C
Storage Temperature:	-40°C~85°C
Humidity:	$\leq 90\%$ RH
Installation:	DIN 35mm Rail
Size:	105mm×69mm×110mm

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



PRO P31 PRO Q31

4. Mounting and Releasing the transducer

4.1 Installing the transducer

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

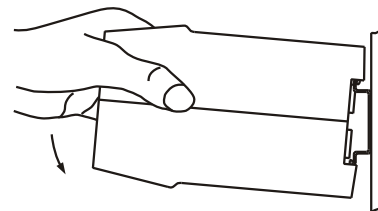


Fig1. Mounting onto a DIN rail 35mm.

4.2 Releasing the transducer

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

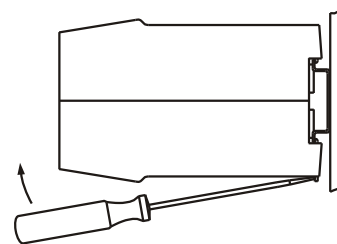


Fig.2. Release from a DIN rail 35mm

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

7. Dimensional drawing

Unit: mm



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

Connect the leads acc. to the instructions on nameplate.

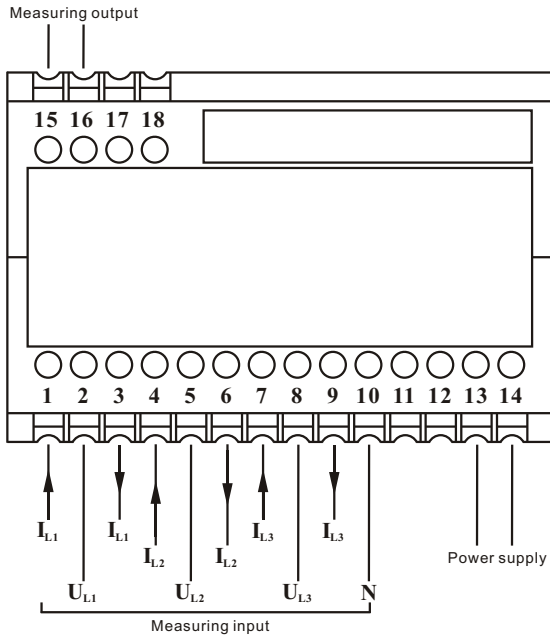


Fig.3. Declaration to the label for PRO P31/Q31

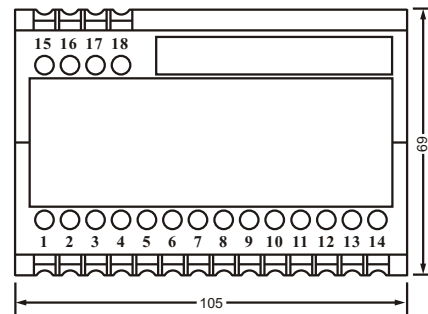
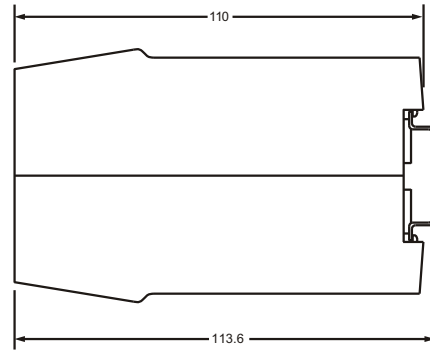


Fig.5. Dimensional Size

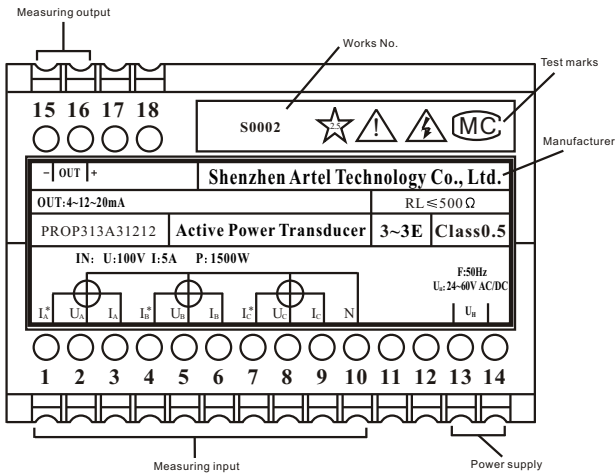


Fig.4. Declaration to the label for PRO P31/Q31

Declaration

This manual represents you 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.