

iUniQ180

Multi Function Power Meter



- Very Competitively priced Multi Function power meter
- Measures V/I/ P/Q/S/F/PF– 28 parameters
- With 2 programmable Alarms – 3 A / 250V ac or 5A / 30 V dc
- With 2 Energy Pulse Outputs
- With RS 485 / MODBUS RTU (optional)
- With Analog Output 4-20mA (optional)
- TRMS, 4 Quadrant Energy measurement
- Wide Power supply 100-240 V ac/dc , electrically isolated
- Non-Volatile Memory to store KWH, KVARH, display/ menu selected
- Ideal replacement for individual Electric Meters





Technical Parameters

Connection	3 Phase 3 Wires, 3 Phase 4 Wires
Rated voltage value	AC 450V (Please indicate when order)
Voltage overload	Continuous: 1.2 times Instantaneous: 2 times/10S
Consumption of voltage	<1VA (each phase)
Voltage impedance	≥300KΩ
Voltage accuracy	RMS measure, accuracy class 0.5
Rated current value	AC 5A (Please indicate when order)
Current overload	Continuous: 1.2 times Instantaneous: 10 times/10S
Consumption of current	<0.4VA (each phase)
Current impedance	<20mΩ
Current accuracy	RMS measure, accuracy class 0.5
Frequency	45~60Hz, accuracy 0.1Hz
Power	Active / Reactive / Apparent power, accuracy 0.5%
Energy	4 quadrant calculation, Accuracy (active) 0.5%, Accuracy (reactive): 1%
Display	Programmable setting, switching, circularly 3 lines LED display
Power supply range	AC/DC 100V ~ 240V
Power supply consumption	≤5VA

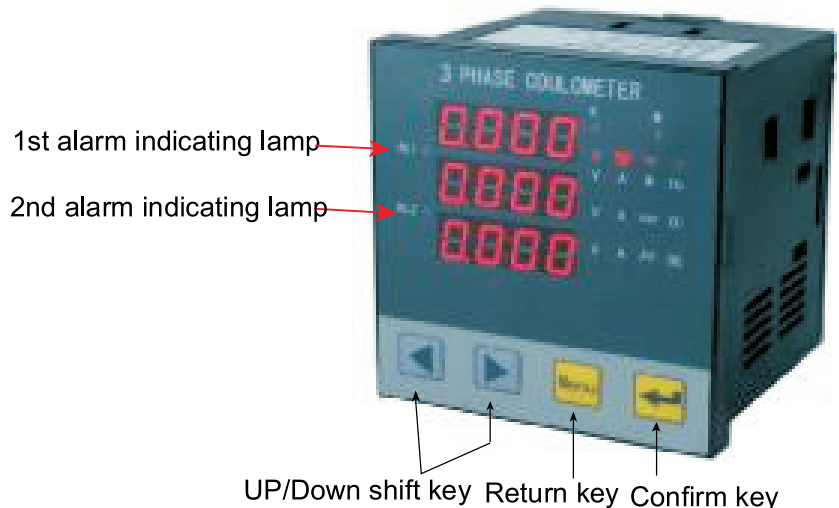
Panel illustration

Panel indication (indicating lamp):

K: Kilo unit	M: Million unit	V: voltage
A: current	W: active power	Var: reactive power
Pf: power factor	Hz: frequency	DI: On-Off value input
Wh: KWH	DIO: On-Off value input / output	Varh: K varH
DO: On-Off value output or alarm		

Press  key to show the next group value. Press  key to show the previous group value. The small red triangle points at the value group which is currently shown.

iUniQ180



UP/Down shift key Return key Confirm key
6 group display value:
Voltage: U_a, U_b, U_c :
Current: I_a, I_b, I_c :
Power & power factor: W, Var, Pf:
Frequency & On-Off value input / output: Hz, DI, DO
KWH: KWh (press key to display):
KvarH: KVarh (press key to display)

Output function

1. Energy pulse

iUniQ180 provides the function of 4 quadrant energy calculation, 2 energy pulse output and RS485 interface for display and transmit of energy data.

Coulomter has 3 lines 4 digit LED to display the 2nd coil active energy and reactive energy.

The energy pulse of optical couple relay wth open collector enables the long distance transmit of active & reactive energy.

Remote PC terminal, PLC, DI On-Off output and collector module are applied to collect the pulse of coulometer to enable the energy cumulation calculation Besides, this output mode is also the energy accuracy check way (National metrology regulations: Standard meter pulse tolerance comparison method.)

(1) Electrical characteristic: the output of optical couple relay with open collector, $V \leq 48V$, $I_z \leq 50mA$.

(2) Pulse constant: 7200imp/KWh. It means: The impulse output no. is 7200 when the coulometer counts up to 1KWH.

The point should be emphasized is that the above 1kWh is for the 2nd coil energy. Supposed that PT and CT is connected, the primary coil energy that 7200 pulse refers to is equal to 1kWh X voltage transform PT X current transform CT.

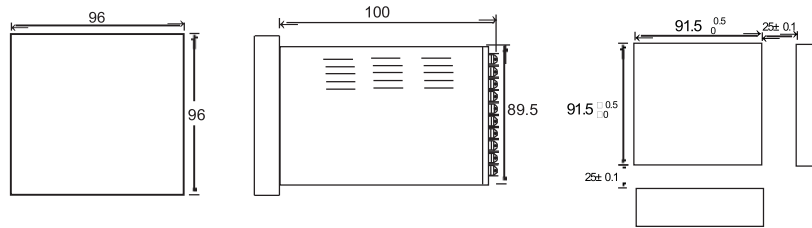
2. DI/DO function 2 DI is used to remote measure electrical on / off status. 2 DO is used to remote control electrical devices. When DO function is used, alarmo mode is set as "O", control value is written via RS485 interface.

3. Communication function Please refer to the Communication protocol)

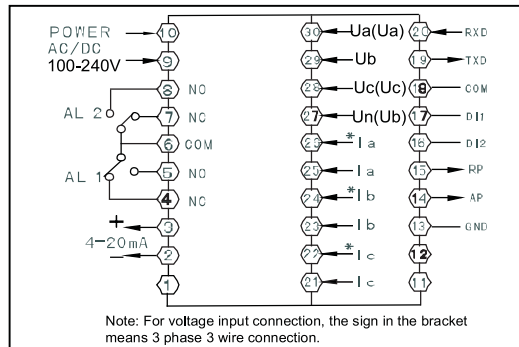
4. Transform output Please refer to Table(on page 1)

5. Alarm function Please refer to Table(on page1)

Installation mounting dimension

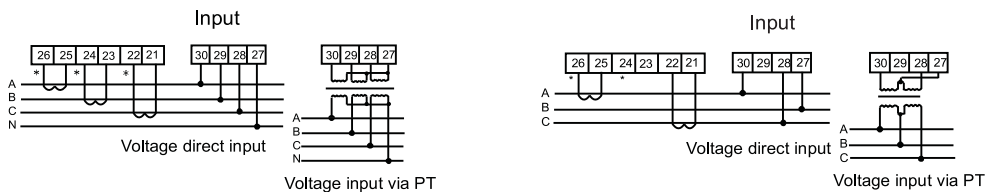


Connection drawing



Mode 1 (3 pcs CT): 3 phase 4 wire working mode with central line

Mode 2 (2 pcs CT): 3 phase 3 wire working mode



Explanation:

- A.Voltage input : Input voltage should not be higher than the rated input voltage of meter (400V), otherwise a PT should be used.
- B.Current input : Standard rated input current is 5A. A CT should be used when the input current is bigger than 5A. If some other meters are connected with the same CT, the connection should be serial for all meters.
- C.Please make sure that the input voltage is corresponding to the input current, they should have the same phase sequence and direction, otherwise data and sign error may occur (power and energy).
- D.The connection mode of meter which is connected to power network should depend on the CT quantity. For 2pcs of CT, it should be 3 phase 3 wire connection. For 3 pcs of CT, it should be 3 phase 4 wire connection.
Meter wire connection, the input network Link setting in the software menu should accord to the connection mode of the measured load. Otherwise, the measured voltage or power is incorrect.
- E. Please pay high attention on the difference between 3 phase 3 wire and 3 phase 4 wire connection. Because wrong connection may lead to incorrect calculation of power factor, power and energy.

ORDER FORM

iUniQ180 – Analog O/P, RS 485 – 4 Options

- Basic – No analog output, no RS485 communication 180-NC 30B
- With RS485, MODBUS, RTU 180-NC 38B
- With 1 analog output 4-20mA, no RS 485 180-DC 30B
- With 1 analog output & RS485, MODBUS RTU 180-DC 38B
 - To specify Input, Normal – 5 A, 450 V
 - To specify : 5 A, 220 V or 1 A, 220 V