

INTELLIGENT POWER METER

MP-1000

FEATURES



- * Class 0.5 bi-directional true RMS energy and full power parameters measurement.
- * Block or Rolling power demand measurement.
- * THD, individual harmonics, and sag/swell power quality records.
- * Data logging for alarm, sag, swell events with time-stamped.
- * Report generation for daily and regular power usage including Kwh, Demand, peak THD, peak voltage, max/min Kw...etc.
- * Communication interfaces : Ethernet, RS485
- * Communication protocol : Modbus over TCP/IP for Ethernet, Modbus for RS485
- * Up to 4 channels of re-transmission analog outputs for field integration.
- * 12 digital inputs for power system status monitoring.
- * 2 digital relays for Kwh pulse or alarm outputs.
- * Automatic detection of voltage & current wiring.
- * Automatic check the fault phase connection

SPECIFICATION

Power parameters(Energy) measure

Current : 3 phase, neutral, accuracy 0.1 %
 Voltage : 3 phase phase-phase, phase-neutral, accuracy 0.1%
 Frequency : 47~63Hz, accuracy 0.1%
 Total power : Active, reactive, apparent power, accuracy 0.5%
 Power per phase : Active, reactive, apparent power, accuracy 0.5%
 Power factor : Total, per phase
 Energy : Active, reactive, apparent energy, accuracy 0.5%
 Bi-directional energy : Deliver and receive KWh, KVARh, KVAh
 kWh : 999999999 kWh

Display and input/output

Panel display : Mono 128X128 STN-LCD
 Digital input : 12 channel dry contact inputs
 Digital output : 2 channel relay, for alarm or KWH pulse output
 Analog input : 4 channel 4-20mA input (OPTION)
 Analog output : 4 channel 4-20mA for V, I, KW, KVA, KVA, KVAR (OPTION)
 Voltage connection : not exceed AC 0-600V
 Current connection : AC 0-5A RMS
 Power supply : AC 86~242V or DC 100~125V
 Language : Original chinese character / English or Simplified chinese character / English

Environmental & Physical

Operation temperature: -20 °C ~ 60 °C
 Storage temperature : -25 °C ~ 80 °C
 Humidity : 20~90%RH(non-condensing)
 Ingress protection : Front panel : Equivalent to IP 54 IEC60529
 Terminal block housing : Equivalent to IP 20

Communication

Primary port : RS-485 Modbus
 Speed : 1200, 2400, 4800, 9600, 19200, 38400, 57200
 Secondary port : Ethernet, 10/100 Mbps, Modbus over TCP/IP protocol

Demand measure

Bi-directional Block / Rolling Demand

Power Quality measure

Harmonic : V, I THD and individual harmonics (up to 31 orders)
 Sag / Swell : Configurable setting points

Report and event logging

Report : Daily report : this day, yesterday
 Regular report : this period, last reset
 Event logging : Sag, swell, alarm logging

Alarm function(DO)

Unbalance Voltage Alarm, Unbalance Current Alarm,
 Total Harmonic Distortion Alarm, Over / Low Voltage Alarm,
 Over Current Alarm, Current Phase Shortage Alarm,
 Voltage Phase Shortage Alarm, Voltage adjustment setting

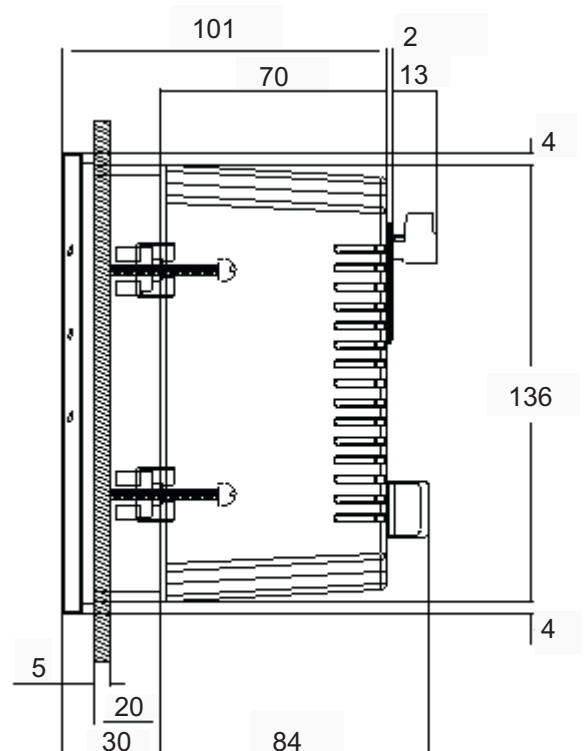
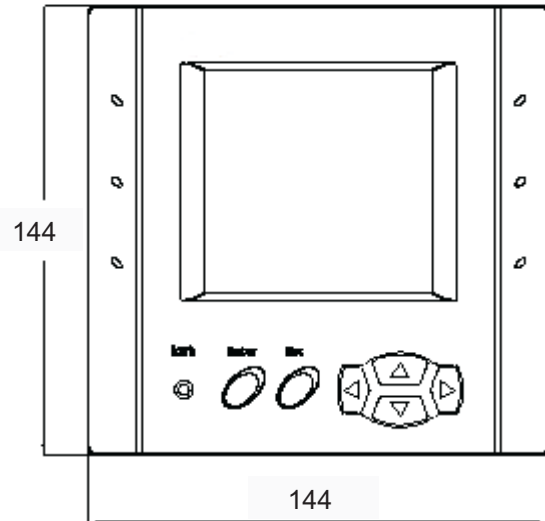
Both for DI & DO require Aux. Power source DI : 5-24VDC/40mA MAX
 DO : 12-240VAC-DC/120mA MAX

RUN HOUR

Automatic detection of voltage & current wiring
 Automatic check the fault phase connection
 Cut out? 138X138 mm±0.5mm
 Complies with :

LVD : EN61010-1
 CE EMC : EN61326
 EN61000-3-2 EN61000-3-3
 EN61000-4-2 EN61000-4-3
 EN61000-4-4 EN61000-4-5
 EN61000-4-6 EN61000-4-8
 EN61000-4-11
 FCC EMC : Class A
 CISPR 22

DIEMENSION(mm)

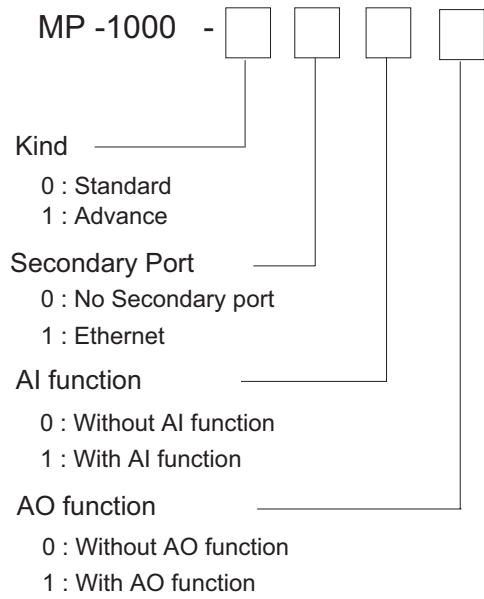


** RED MARKS ONLY IN ADVANCE MODEL **

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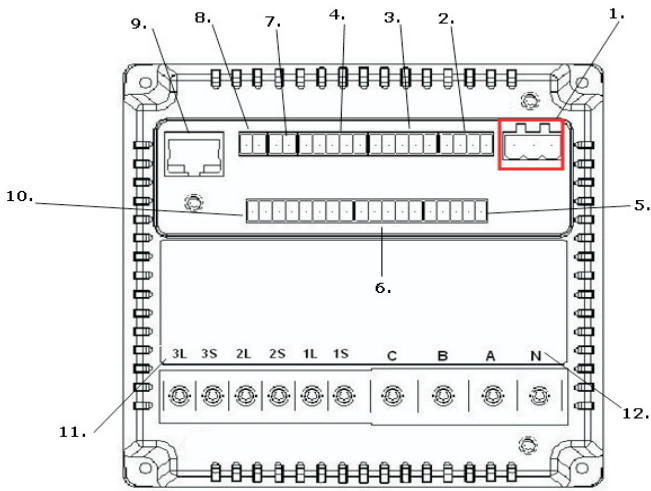
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ORDERING CODE



** AI, AO is OPTION FUNCTION **

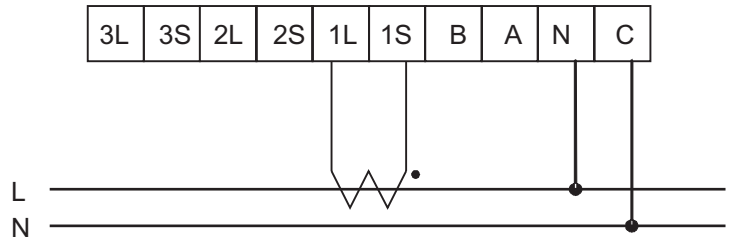
CONNECTION DIAGRAM



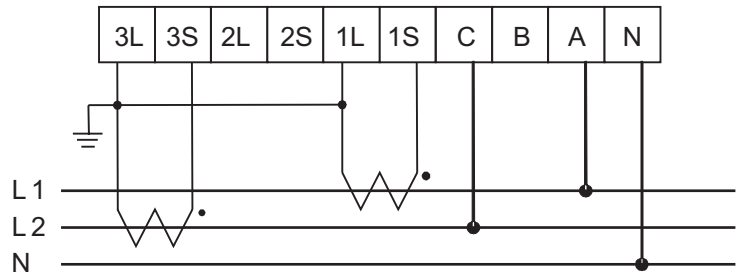
1. Aux.power(N, ,L)
2. Digital Output(Com1 DO1 Com0 DO0)
3. Analog Output(Com1 AO3 AO2 AO1 AO0)
4. Digital Input(Com1 DI13 DI12 DI11 DI10)
5. Digital Input(DI20 DI21 DI22 DI23 Com2)
6. Digital Input(DI30 DI31 DI32 DI33 Com3)
7. RS-485 port(D- D+)
8. LON Talks port(D- D+)
9. Ethernet port
10. Analog(AI0+ AI0- AI1+ AI1- AI2+ AI2- AI3+ AI3-)
11. Current Input Terminal(3L 3S 2L 2S 1L 1S)
12. Voltage Input Terminal(C B A N)

CONNECTION DIAGRAM

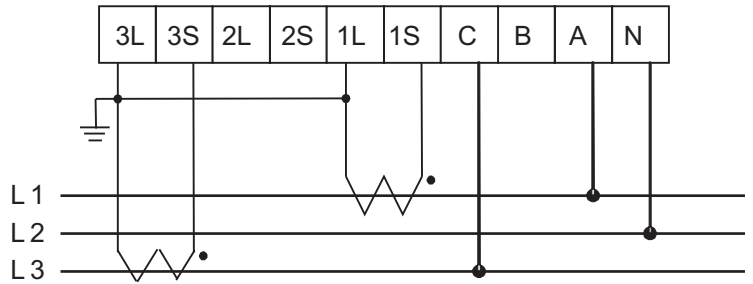
※ 1P 2W



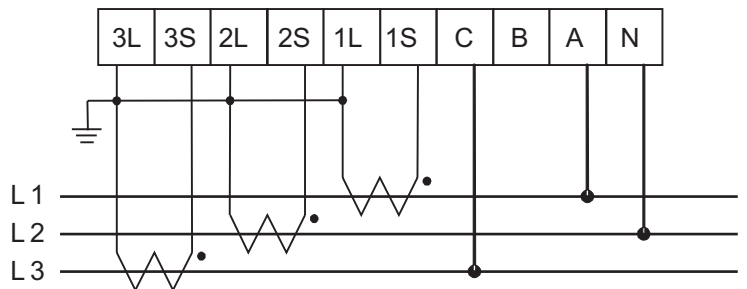
※ 1P 3W (2CT)



※ 3P 3W (2CT)



※ 3P 3W (3CT)



※ 3P 4W (3CT)

