

Multifunction power meter

MPM8000

Profile

MPM8000 is a powerful multifunction power meter with modular design, which can be applied for monitoring and controlling of the electrical system. MPM8000 can measure and analyze real time data, such as U, I, P, Q, S, $\cos\Phi$, F, kWh, kVar, etc. MPM8000 has the following functions: RS-485 communication port, 2 energy pulse output (include active energy and reactive energy), Max/min data record, and SOE event record. MPM8000 can extend functions by choosing the external optional modules: harmonic analysis, 8 remote signals on/off mode, programmable 4 analog outputs (0~5V or 4~20mA optional), data storage, Profibus Com. protocol, Ethernet communication functions. The multi-tariff function allows the user to measure energy in any interval (the min. interval is 30min.), which can read the sum, sharp, peak, valley, flat energy data in 30 days, and measure 2nd to 63rd harmonics in statistics.



EMC and safety standard

IEC61000-4-2 (GB/T17626.2)

IEC61000-4-4 (GB/T17626.4)

IEC61000-4-8 (GB/T17626.8)

IEC61010-1 (GB/T4793.1)

Measured Scope

The meter MPM8000 can be applied in single phase, 3-Ph 3Wire, 3-Ph 4Wire system. It can be applied vastly in the field of secondary measurement in high Voltage, low Voltage system, or transmission of measured data.

Measured accuracy

Parameters	Display	Direction	Accuracy
Voltage	0~9999.9kV		Class 0.2 scope:5%~100%V
Current	0~9999.9kA		Class 0.2 scope: 5%~100%A
			Zero sequence Current Class 0.5
Power factor	-1~+1	Directional	Class 1
Frequency	45~65Hz		±0.01Hz
Active Power	-9999~9999MW	Directional	Class 0.5
Reactive Power	-9999~9999MVA _r	Directional	Class 0.5
Apparent Power	0~9999MVA		Class 0.5
Active Demand	-9999~9999MW		Class 1.0
Reactive Demand	-9999~9999MVA _r		Class 1.0
Active Energy	0~9999999.99Mwh	Directional	Class 1.0
Reactive Energy	0~9999999.99MVA _r h	Directional	Class 2.0
Phase Angle	0.0°~359.9°	Directional	Class 2.0
Current total harmonic %	0~100%		Class 2.0
Voltage total harmonic %	0~100%		Class 2.0

Technical Specification

Input Current	
Input Current: 5A (Current value can be set up)	
Measurement scope: 0.5%~120%	
Overload capacity: 2 X rated continuously, 100A/1s non continuously	
Power consumption: ≤0.2VA per phase	
Voltage Input	
Input Voltage: 400VAC (L-N) , 693VAC (L-L) (Voltage value can be set up)	
System frequency: 45~65Hz	
Measurement scope: 3%~120%	
Overload Capacity: 2 X rated continuous, 2500V/1s non continuous	
Power consumption: ≤0.5VA per phase	
Switch Status (Optional)	
Input Channels	8 channels
Input Type	Dry contact
Isolated Voltage	2500VAC
Relay Output (optional)	
Output Channels	4 channels programmable
Output Type	Mechanic contact, constant on output
Contact Capacity	5A/250VAC

Analog output (optional)	
No. of outputs	4 channels programmable
Output signal	4~20mA or 0~5V
Response time	≤400ms
Pulse output (standard)	
No. of outputs	2 channels (active/reactive energy each)
Serial com. port (standard)	
NO. of outputs	1 RS-485 port
Communication protocol	Modbus-RTU protocol
Baud rate	2400/4800/9600/19200/38400bps
Profibus com. module (optional)	
No. of channels	1
Communication protocol	Profibus-DP protocol
Ethernet networking module (optional)	
No. of channels	1channel 10M/100M adaptive
Communication Protocol	TCP/IP protocol
Other parameters	
Auxiliary Power	85~265VAC/DC Used DC power, as23is+, as24is-
Display module	LCD Display 76mmx66mm luminosity can be adjusted
Storage Capacity	2GB
Temp. drifting factor	<100PPM/℃
Withstand Voltage (Input against output)	2500V/1 min
Total power consumption	<8VA
Operation temperature	-20℃~60℃
Storage temperature	-40℃~85℃
Operation humidity	5~95% RH
Pollution Class	Class 2
Material of Housing	Flammability acc. to UL94V0
Exterior Size: Front panel+ main unit, front + main +optional module	96x99x78mm, 96x99x121mm
Exterior Size: Main unit, main + module	92x112x74mm, 92x112x114mm (+module)
Exterior Size: Front panel	96x99x41mm
Installation Size: Front panel +main unit (+module)	91×91mm
Wire connection	3P3L,3P4L,1P2L,3P3B,3P4B

Module code

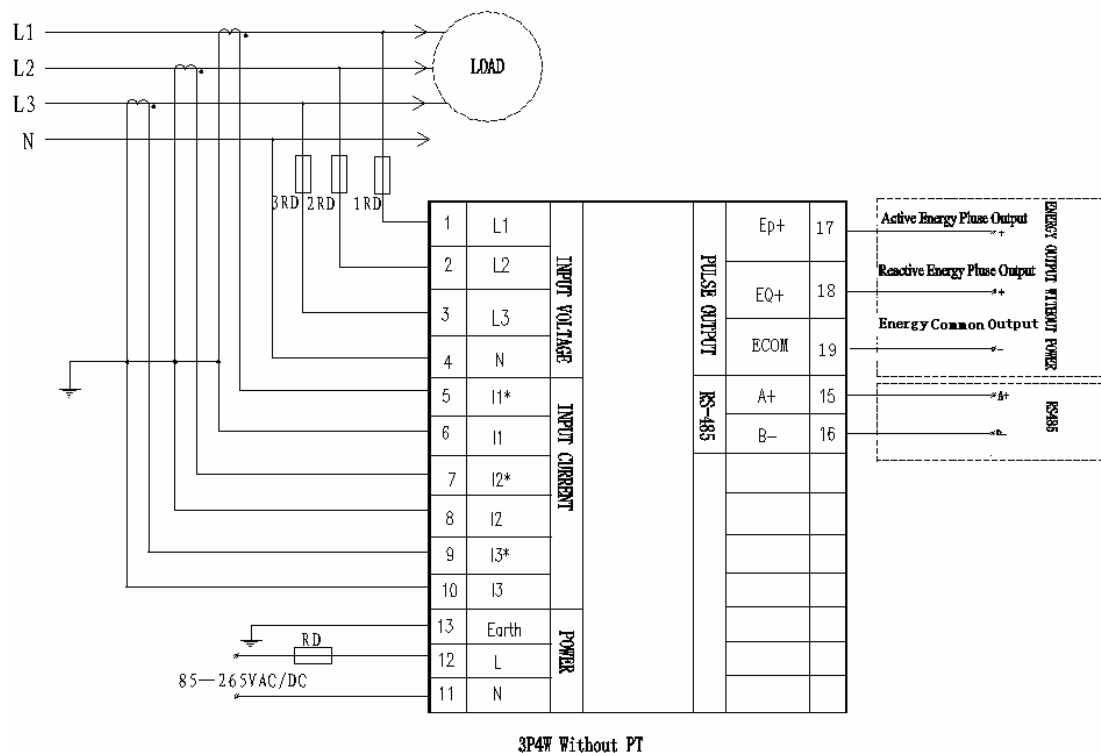
Module Name	English code for ordering module with standard unit	Order code for ordering module alone
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8 remote input signals module	S	MPM8000-101
4 relay output module	R	MPM8000-102
4 analog output module (4~20mA)	C	MPM8000-103
4 analog output module (0~5V)	V	MPM8000-104
Data storage module	M	MPM8000-105
Harmonic analysis module	H	MPM8000-106
Data storage and harmonics analysis module	B	MPM8000-107
Profibus communication module	P	MPM8000-108
Ethernet communication module	E	MPM8000-109

Note: A max. of 4 modules can be applied to 1 main unit, and the same type of modules can't be selected together. C and V can't be selected at the same time; B can't be selected with M or H.

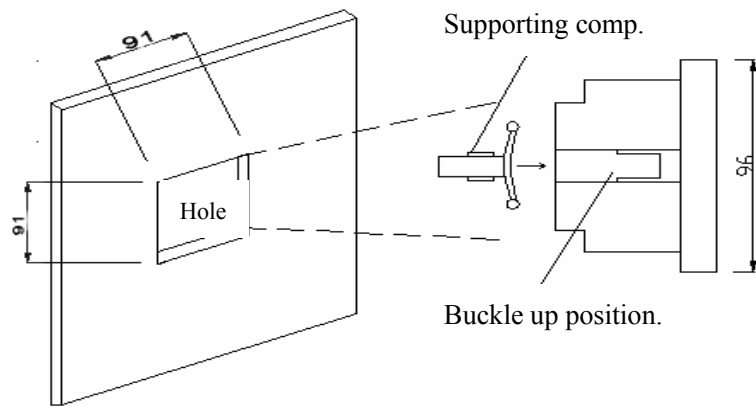
For a example: MPM8000 SHP, which means 8 remote signals input module, harmonics analysis module, Profibus com. module, integrated front and main unit connection.

Typical Wiring Diagram



Installation

1. Exterior size: 91 mm×91 mm×72mm
2. Installation size: 91 mm×91mm



During the installation, please insert the meter in the hole of the cabinet, then push and buckle up the meter with the installation accessories. It is strongly recommended there should be 20mm space around the surface of the meter for ventilation purpose.



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