

APM SERIES MULTI-FUNCTION DIGITAL PANEL METER

DIGITAL PANEL METER



Introduction

APM series advanced multifunction digital panel meter. It is the perfect choice for monitoring and controlling power distribution systems, with 4 direct access keys and high-definition LCD display to showing all parameters of 3P3W or 3P4W low voltage installation.

The panel meter can be used as a data acquisition device for an intelligent power distribution system or a factory automation system, and can remote obtain all monitoring data through digital RS485.

Main Features

- PMD measurement accuracy class 0.2.
- Current measurement.../5 or.../1 A.
- Universal series power supply (85-265VAC/DC).
- 1.6-inch dot matrix LCD display.
- LCD liquid crystal display, with backlight.
- Provides load alarms and time stamps.
- SOE record, virtual alarm function.
- ITF technology: input and output current insulation protection.
- Optional 128MB data logger memory.
- Optional expansion I/O, ethernet connection port.
- With RS-485 Modbus RTU communication.
- 128 samples per cycle, 0.5s screen refresh rate.
- Universal series power supply (85-265VAC/DC), 20-60VDC optional.
- Various advanced electrical parameters can display grid status on site (maximum demand/unbalance degree/crest factor/K factor...).
- 1KHz waveform snapshot, captures voltage, current power flickers/drops with a length of 1 second for event tracking.

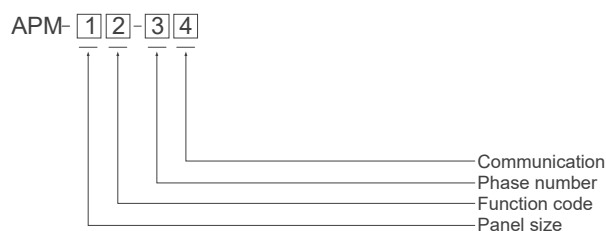
Measurement Function

Model	APM-96Z	APM-96Y	APM-96J	APM-96Q	APM-4MJ
Parameters					
Basic parameters ⁽¹⁾	●	●	●	●	●
Time of use (TOU)	○	●	●	●	●
Harmonic distortion	-	●	●	●	●
Individual harmonic	-	2~31th	2~31th	2~63th	2~31th
Current imbalance	-	-	●	●	●
Voltage imbalance	-	-	●	●	●
Max demand	-	-	●	●	●
Voltage deviation	-	-	●	●	●
SOE record	-	-	●	●	●
Voltage drop / flicker	-	-	-	●	●
Waveform capture	-	-	-	●	●
128MB memory	-	-	-	○	○
Expansion module					
AO (0/4~20mA;0~5V)	○	○	○	○	○
DI/DO	○	○	○	○	○
Communication port					
RS485	●	●	●	●	●
Ethernet 10/100MB	-	○	○	○	○
Profibus	○	○	○	○	○

●With this function ○Optional function -Without this function

(1) Basic parameters: Voltage, Current, Frequency, Total power factor, Active power, Reactive power, Apparent power, Active energy, Reactive energy, Individual harmonic.

Ordering Information



Num.	Code	Description
1	96	96(W)x96(H)x71(D)mm
	72	72(W)x72(H)x71(D)mm
	80	80(W)x80(H)x71(D)mm
	XM	Module width of Din-rail mounting
2	Z	Economic power meter
	Y	Multifunction power meter
	J	Smart power monitor
	Q	Intelligent power analyzer
3	1	Single-phase
	3	Three-phases
4	Blank	Default: With RS485 interface, Modbus-RTU
	Eth	Ethernet interface, Modbus-TCP & Modbus-RTU

Technical Characteristics

Model	APM-4MJ	APM-96Z	APM-96Y	APM-96J	APM-96Q
Current measurement (TRMS)					
CT secondary	1 or 5 A				
Measurement range	0...11 KA				
Input consumption	<0.1 VA				
Voltage measurement (TRMS)					
Measurement range	18...400 VAC				
PT secondary	100 VAC/400 VAC				
Frequency	50 / 60 Hz				
Input consumption	<0.1 VA				
Electrical power measurement					
Accuracy (V,I)	0.20%	0.50%	0.20%	0.20%	0.20%
Accuracy (P,Q)	0.50%	0.50%	0.50%	0.50%	0.50%
Frequency measurement					
Measurement range	45...65 Hz				
Accuracy	±0.02 Hz				
Energy accuracy					
Active energy	Class 0.5 (IEC 62053-22)	Class 1.0 (IEC 62053-21)	Class 1.0 (IEC 62053-21)	Class 0.5s (IEC 62053-22)	Class 0.2s (IEC 62053-22)
Reactive energy	Class 2.0 (IEC 62053-23)	Class 2.0 (IEC 62053-23)	Class 2.0 (IEC 62053-23)	Class 1.0 (IEC 62053-24)	Class 1.0 (IEC 62053-24)
Power supply					
AC voltage	DC/AC 85~265 ± 10 %				
Consumption	< 10 VA				
I/O ports					
Pulse output (PO)	1* Pulse, 1600imp/kWh	2* Pulse, 1600imp/kWh			
Pulse constant	5000imp/kWh,20000imp/kVarh				
Relay output (DO)	2* 5A@250Vac / 5A@30Vdc				
Digital Input (DI)	4* Dry contact,Ri<500Ω ON, Ri>100kΩ OFF				
Analog output (AO)	/	1* 4~20mA, load <390Ω,or 0~10V, load >100KΩ			
Communication					
Link method	RS485 (2/3 wires half duplex)				
Protocol	Modbus RTU				
MODBUS speed	4800/9600/19200bauds				
Others					
Calibration environment	27°C ± 5°C				
Operation environment	0 to 50°C, RH < 70%				
Storage environment	-10 to 60°C, RH < 70%				
Dielectric strength (Voltage sampling)	2 kV at 50Hz for 1 min				
Dielectric strength(AUX terminal)	2 kV at 50Hz for 1 min			2 kV at 50Hz for 1 min (Optional:4kV)	