

PM96



MULTIFUNCTION POWER METER

FEATURES

- Designed from the users' perspectives and needs.(Made in Taiwan)
- Measurement of 1 ϕ 2W、1 ϕ 3W、3 ϕ 3W, and 3 ϕ 4W systems.
- Programmable for PT and CT ratio, unit, and output control functions.
- Auto detects the bi-directional WATT and VAR.
- Surge protection for input PT and CT (Up to 6KV 1.2 $\times$ 50Us)
- TRMS smpling, 128 sections per cycle
- Built-in RS-485 Modbus RTU; Dual RS-485 (Optional)
Ethernet TCP IP (Optional)
- Password-protection prevents meter from unauthorized alterations.
- 2 sets DO, 4 sets AO, 4 sets RO output functions.
- 10 digits display for WH and VARH (1999999999 Count)
- Other available sizes: 144 $\times$ 144 and 284 $\times$ 186 (12 screens) (mm)



SIGNAL	ACCURACY	RANGE	UNIT
V	0.2% FS	0-9999	V/KV
A	0.2% FS	0-9999	A
Σ W	0.5% FS	0-9999	KW/MW
WH	0.5% FS	1999999999	KWH/MWH
Σ Q	0.5% FS	0-9999	KVar/MVar
VarH	0.5% FS	1999999999	KVarH/MVarH
PF	0.5% FS	± 0.500	COS θ
HZ	0.02 HZ	45~70	HZ

FUNCTIONS

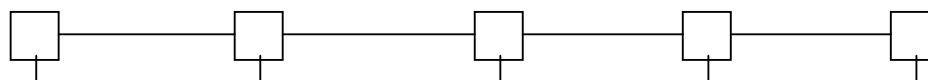
<u>Display</u> 0.4" High brightness red LED display. Clear display of numbers and units. <u>Harmonic Analysis</u> (Optional) Voltage / Current / odd harmonic / total harmonic. Voltage and Current harmonic variation rate. 31 times of harmonic analysis Display 15 times of odd harmonic. <u>Alarm Setting</u> (Optional) Function : ON / OFF and DELAY TIME Set for : 3V, 3A, W, Var, PF, Hz ... 10 signals. Panel has relay state indicator.	<u>Demand Control</u> (Optional) Demand Control & Management Max. Demand Time/Date Target / Contract / Estimate / Remaining Demand. 4 Relays For Controlling Energy. <u>Analog Output</u> (Optional) 4 Sets of DC 4~20mA output Correspond to: 3V, 3A, W, Var, PF, Hz ... Output $\geq 500 \Omega$ <u>Communication</u> Comply with EIA RS-485. Baud rate : 1200~38400 Protocol : Modbus RTU Address : 1-255 Optoelectronic isolating. Dual RS-485 (Optional) Ethernet TCP IP (Optional)	<u>Pulse Output</u> (Optional) 2 Sets Pulse output (WH / VARH) Optical coupler type. Applied voltage: DC 5~30V 5~100mA Protection for open-circuit & short-circuit. <u>Paperless Record</u> (Optional) Programmable for interval time (Min). Record up to 10000 data (3V、3A、 W、Var、WH、VarH、PF、Hz) Permanent power-off memory. <u>Period Charge</u> (Optional) Programmable for 3 periods: Peak / Half-peak / Off-peak Set each hour as Peak, Half-peak or Off-peak according to your requirements, electricity consumption of different periods will be accumulated respectively.
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TYPE-FUNCTION REFERENCE LIST

Function	Parameter	Standard	Harmonic	Demand	Period charge
		PM96	PM96H	PM96D	PM96R
Phase V Line V Current VA Watt Var Power Factor Frequency Watt hour Var hour	V1、V2、V3 V12、V23、V31 A1、A2、A3 VA1、VA2、VA3、ΣVA W1、W2、W3、ΣW Var1、Var2、Var3、ΣVar PF1、PF2、PF3、PF Frequency (HZ) ±WH (Bi-directional) ±VarH (Bi-directional)	●	●	●	●
3 phase unbalanced V 3 phase unbalanced A	U-unbl % (MAX-MIN)/MAX*100% A-unbl % (MAX-MIN)/MAX*100%		●	●	●
Max value record Date / Time	V1、V2、V3 (MAX) A1、A2、A3 (MAX)			●	●
Port 1	RS 485 Modbus RTU	●	●	●	●
Harmonic Analysis	V,A total harmonic, variation rate up to 31times. Display 15 times of odd harmonic.		●	●	
Built-in clock	Display week/year/month/date/hr/min/sec			●	●
Demand control	Max、Target、Present、Remaining Demand			●	
Period charge	Peak / Half-peak / Off-peak				●
Port 2	RS 232 MODBUS RTU	(Optional function)			
Port 3	2 nd RS 485 Modbus RTU (optional)				
Port 4	Ethernet TCP_IP (optional)				
Pulse input	DO1(+WH)、DO2(+VarH)				
4 sets of 4-20mA Relay Alarm	AO1、AO2、AO3、AO4 (Set up to 10 signals) RY1、RY2、RY3、RY4 (Set up to 10 signals)				

TYPE SELECT

PM96-

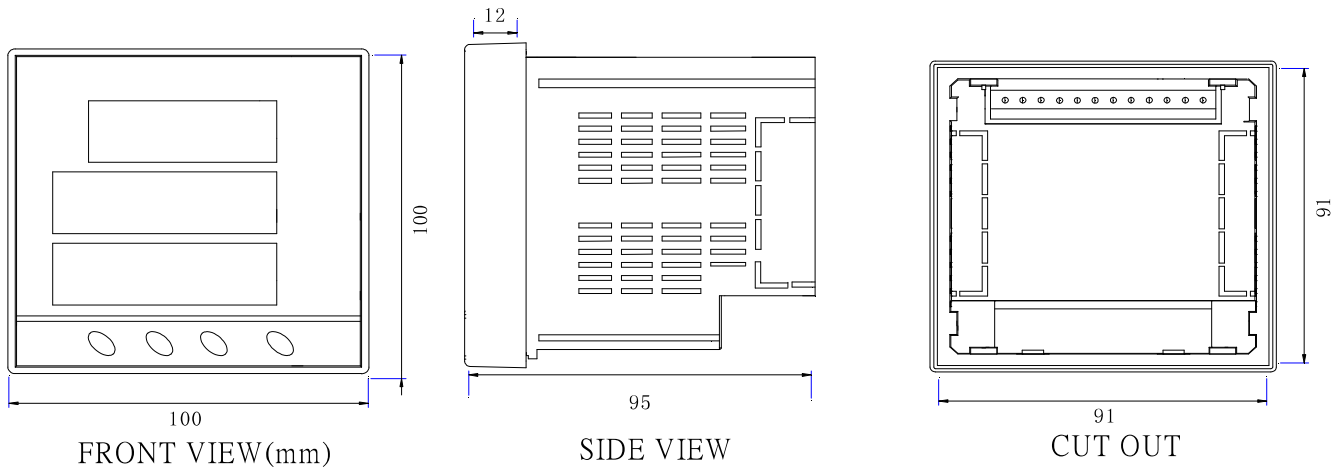


MODEL	Input Voltage		Input Current		Output Signal		Alarm Setting		Aux. Power	
PM96	1	55-440V (L-L)	1	1A	1	4 sets of 4~20mA	1	4 Alarm setting	1	AC 110V
PM96H	3	55-600V (L-L)	2	5A	2	2 sets of Pulse			2	AC 220V
PM96D					3	4~20mA and Pulse			3	DC 22~72V
PM96R					4	Dual RS-485			6	AC/DC85~265V
					5	Ethernet TCP_IP	0	None		
	Y	Other	Y	Other	Y	Other	Y	Other	Y	Other

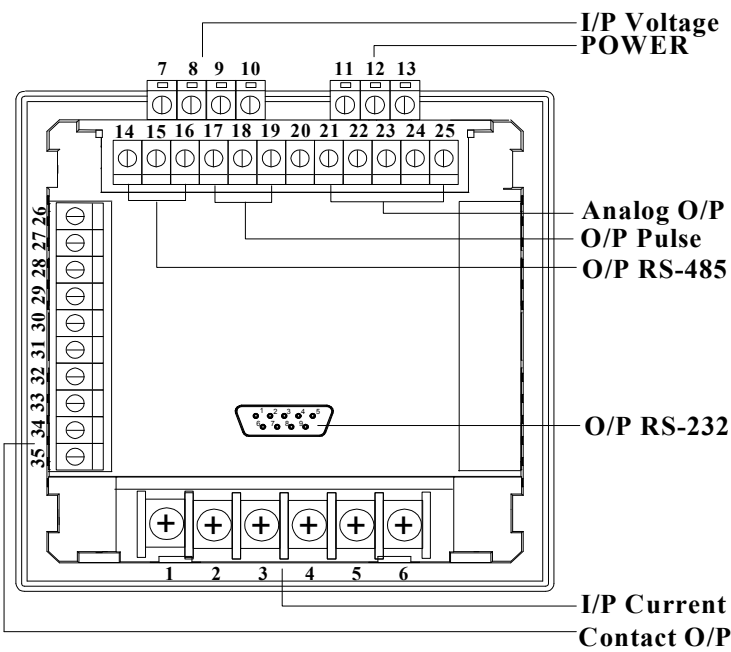
SPECIFICATION

Response Time	: ≤1 sec.	Dielectric Strength	: AC 2.8KV / Min, among Input/Power/Case, DIN IEC 688
Input Range	: Effective Voltage 55~440 (L-L) & 55~600V(L-L) 5A Current, Effective Range AC 0~6A. 1A Current, Effective Range 0~1.2A.	Surge	: 6KV 1.2x50 uS, ANSI C37.90a / 1983 DIN IEC 255-4, IEC 688-1992
Input Burden	: Current 0.2VA/Units at 50/60Hz Voltage 0.25V A/Units at 50/60Hz.	Magnetic Field Effect	: DIN- IEC688 ≤ 0.005% According to 10 inches 100A Coil
Input Frequency	: 45 ~ 70HZ	Stability	: ≤ 0.2% year
Input Over Current	: Normal AC 5A, Over Current 15A Continuously 50A 10 Sec/Hr;250A 1 Sec/Hr;400A 0.5 Sec/Hr	Temp. Coefficient	: ≤60ppm/°C From 0~ 60°C ; ≤50ppm/25°C ±5°C
Input Over Voltage	: Voltage 600V Continuously ; 1000V 10Sec/Hr.	Operating Condition	: - 20°C~75°C 20~95% RH Non-Condense
Digital Output	: RS-485 Modbus RTU	Storage Condition	: - 40°C~75°C 20~95% RH Non-Condensed
Harmonic Analysis	: 15 times for Voltage and Current	Power Supply	: AC 85~265V or DC 100~300V , 50 / 60Hz
Transmission	: Up to 1.2KM	Mounting	: Panel Flush Mounting
Baud rate	: 1200,2400,4800,9600,19200,38400 (selectable)	Case Material	: ABS Plastic/Self-Extinguishing Comply with UL 94 Class V-O

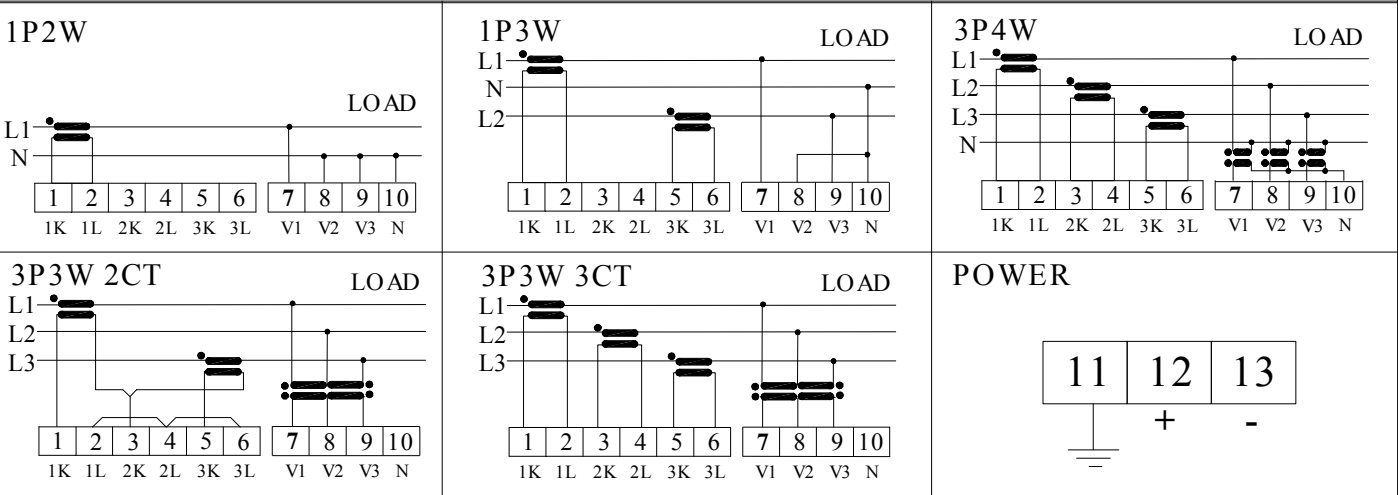
OUTLINE DIMENSION mm (inch)



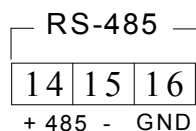
CONNECTION DIAGRAM



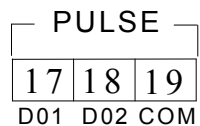
INPUT VOLTAGE & CURRENT



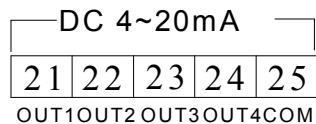
RS-485輸出



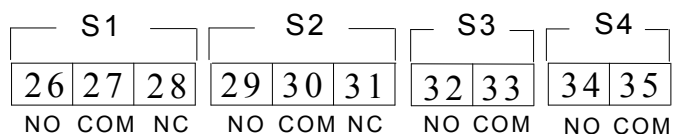
脈波輸出



類比輸出



RELAY OUTPUT



RS-232輸出

