

Multi-Function Power Meter



AVAILABLE FROM
NEPEAN ELECTRONICS

NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.

Three-phase multi-function power meter that provides the most affordable metering solution with reliable power metering features for voltage, current, power, THD, demand, RS485 and bi-directional energy.

Functions

- Voltage - $U_a, U_b, U_c, U_{ab}, U_{bc}, U_{ca}, U_{L-L}$ avg. U_{L-N} avg.
- Current - I_a, I_b, I_c, I_n, I avg.
- Current Unbalance Rate - I unbal.
- Active Power - $P_a, P_b, P_c, \sum P$
- Reactive Power - $Q_a, Q_b, Q_c, \sum Q$
- Apparent Power - $S_a, S_b, S_c, \sum S$
- Power Factor - $PF_a, PF_b, PF_c, \sum PF$
- Frequency - F
- Active Energy - Total kWh (import/export)
- Reactive Energy - Total kvarh (import/export)
- Apparent Energy - kVAh
- Demand (I, P) and Max. Demand record for i, P
- **31st Harmonic analysis**, THD, THDu, THDi
- Setpoint Alarm - over voltage, under voltage, over current, under current, frequency too high, frequency too low, overload, over demand, phase loss, status input OFF
- 2 Relay Outputs

Features

- Suited for Panel mount
- Suited for distribution system under 650kV (PT value setting available)
- True RMS measuring parameters
- Setpoint alarm for over/under limit
- **31st Harmonic analysis**, THD
- Status input and relay output function (optional)
- High accuracy, class 0.5s for kWh
- Small size: 72*72mm
- One RS485, support MODBUS-RTU protocol

Ordering Information

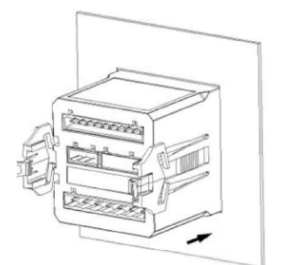
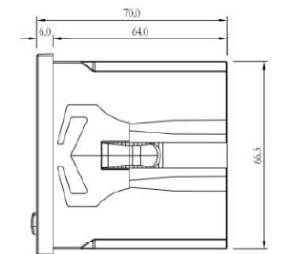
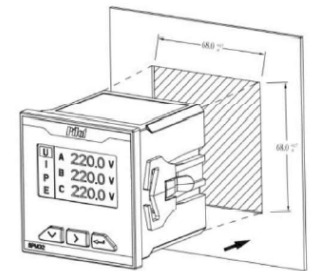
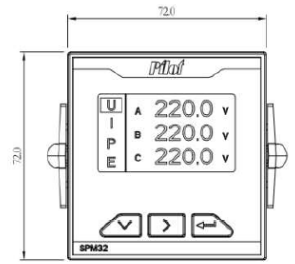
Part Number	Description
SPM32-R-V1*	Multifunction Power Meter, Two relay output, 5Amp
SPM32-R-V2	Multifunction Power Meter, Two relay output, 1Amp
SPM32-S-V1	Multifunction Power Meter, Two status input, 5Amp
SPM32-S-V2	Multifunction Power Meter, Two status input, 1Amp

*Stocked Items

Power Meters

Technical Specifications

Connection Mode	3 phase 3 wires, 3 phase 4 wires
Metering	True RMS, 1 sec refresh time
Input	Rated Current: 5A Rated Voltage: 57V ~ 300V(ph-N), 35Hz~65Hz
Status Input (optional)	Rated Voltage 220V, 2 channel active status input. Lower than 60V is open, higher than 178V is closed. Max. Input is 300V
Relay Output (optional)	Rated contact capacity: AC 250V/5A or DC 30V/5A
Power Supply	AC 85~265V or DC 100~300V
Power Loss	<4VA
Power Frequency Withstand Voltage	AC 2KV/minute
Insulation Resistance	≥ 100MΩ
Impulse Withstand Voltage	6KV
Communication	RS485 serial, Modbus-RTU, Address: 1~247 Baudrate: 4800, 9600, 19200bps
Dimensions (L x W x D)	Panel Mount: 72*72*70mm
IP Index	IP52 (front panel) and IP20 (case)
Environment	Operating Temperature: -10°C~+55°C Limit operating temperature: -25°C~+55°C Storage Temperature: -40°C~+70°C Humidity: 5%~95% RH, non-condensing
Standard (EMC)	Electrostatic discharge immunity test IEC 61000-4-2, Level 4 Radiated immunity test IEC 61000-4-3, Level 4 Electrical fast transient/burst immunity test IEC 61000-4-4, Level 4 Surge immunity test (1, 2/50μs~8/20μs) IEC 61000-4-5, Level 4 RF field immunity induced mass IEC 61000-4-6, Level 3



Measurement Parameter	Accuracy	Measuring Range
Voltage	0.2%	10V~500V (PT Secondary Side)
Current	0.2%	5A or 1A (5%~120% of rating) (CT secondary side)
Power Factor	0.5%	-1.000~1.000
Active Power	0.5%	Per phase: 0 ~ ± 26MW Total 0 ~ ± 78MW
Reactive Power	1.0%	Per phase: 0 ~ ± 26Mvar/VA
Apparent Power	1.0%	Total 0 ~ ± 78Mvar/VA
Active Energy	0.5%	0 ~ 99,999,999.9 kWh
Reactive Energy	2.0%	0 ~ 99,999,999.9 kvarh
Apparent Energy	2.0%	0 ~ 99,999,999.9 kVAh
Three-phase current unbalance	1.0%	0%~100%
Harmonic	Class B	0%~100%



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Power

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