

3 phase Power Meter



Starting from
US\$550



Model # CPW-503

■ Features

- Display of all electric parameters: V, A, W, Var, VA, PF, Hz, WH, VarH etc.
- True RMS conversion.
- Field programmable PT and CT ratio.
- Memory for all setup and energy data.
- 2 channels digital input
- 2 channels Relay output.

■ Specification

- Display: Red LED 0.4" high
- Over range Indication: " o.L "
- Conversion Rate: 1 / sec
- Isolation: Input / Output / Power / Case
- Operating Temp.: 0~60°C / Below 90%R.H.
- Storage Temp.: -10~70 / Below 80%R.H.
- Temp. Coefficient: ±0.1% F.S /°C
- CT, PT ratio: 1~9999
- Interface: RS-485
- Power Supply: 85-264 VAC / 120-370 VDC
- Option: DC 24V
- Power Consumption: Approx. 7VA
- Dielectric Strength:
 - DIN-IEC688, AC 2.3KV/1min, between terminal.
 - AC 2.8KV/1min, between terminal and case.
- Isolation Resistance: DC 500V, 100MΩ at above terminals
- Dimensions: 110mm(W) x 110mm(H) x 140mm(D)

■ Input

- Voltage: V1, V2, V3, (3 phase voltage)and Neutral
- Range : 600V_{L-L} / 347 V_{L-N}
- Current: 1S, 1L, 2S, 2L, 3S, 3L (3 phase current)
- Range: 0.05~1A, 0.5~5A
- Over load: Voltage.....750V continuous
1.25 x rated continuous.
Current.....3 x rated continuous
10 x rated for 10 sec.
- Burden: ≤0.2VA per Voltage circuit
≤0.2VA per Current circuit
- Frequency: 45~65Hz

■ RS-485 Interface

- Address: 1 ~ FF (16 HEX)
- Baud rate: 19200,9600,4800,2400,1200
- Protocol: Modbus RTU

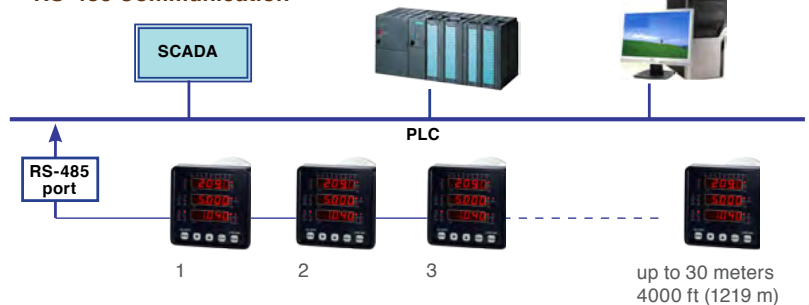
■ DO output

- 2 channel relay output
- Contact Capacity:
 - AC 250V, 1A resistive load
 - DC 30V, 2A resistive load

■ DI input

- Digital input: 2 point
- Output: RS-485

RS-485 Communication



■ Power Meter

| Measurement | Items |
|------------------|------------------------------------|
| V _{L-N} | V1, V2, V3, V _E |
| V _{L-L} | V12, V23, V13, V _E |
| A | A1, A2, A3, A _E |
| W | W1, W2, W3, ΣW |
| Var | Var1, Var2, Var3, ΣVar |
| VA | VA1, VA2, VA3, ΣVA |
| PF | PF1, PF2, PF3, ΣPF |
| Hz | |
| WH | ΣWH |
| VarH | ΣVarH |
| Demand W | DW, Max.DW (1~60min free setting) |
| RS-485 | |

■ Programmable Measurement & Indication

| Items | L1 | L2 | L3 | Total | Average | Accuracy (F.S) | Display (Max.) |
|-----------------------------------|------|----------------|------|--------------------------|----------------|----------------|------------------------|
| V _{L-N} | V1 | V2 | V3 | | V _E | ± 0.25% | 9999V / KV |
| V _{L-L} | V12 | V23 | V13 | | A _E | ± 0.25% | 9999A / KA |
| A | A1 | A2 | A3 | | | ± 0.5% | ±9999W / KW / MW |
| W | W1 | W2 | W3 | ΣW | | ± 0.5% | ±9999Var / KVar / MVar |
| Var | Var1 | Var2 | Var3 | ΣVar | | ± 0.5% | 9999VA / KVA / MVA |
| VA | VA1 | VA2 | VA3 | ΣVA | | ± 0.5% | ±0.999 |
| PF | PF1 | FP2 | FP3 | ΣPF | | ± 0.1% | 45.0 ~ 65.0 Hz |
| Hz | | | | | | ± 0.5% | 9999999999 KWH |
| WH | | | | WH | | ± 0.5% | 9999999999 KVarH |
| VarH | | | | VarH | | | |
| Accuracy performance range | | | | Measurement range | | | |
| V: 10 ~ 100 % | | PF: 0.5 ~ ±1.0 | | V: 10 ~ 120 % | | | |
| A: 5 ~ 100 % | | Hz: 45 ~ 65 Hz | | A: 5 ~ 120 % | | | |

$$V_E = (V_{12} + V_{23} + V_{13}) / 3$$

$$A_E = (A_1 + A_2 + A_3) / 3$$

$$\Sigma W = W_1 + W_2 + W_3$$

$$\Sigma PF = \Sigma W / [V_1 A_1 + V_2 A_2 + V_3 A_3]$$

$$\Sigma VAR = \sqrt{VA_1^2 - W_1^2} + \sqrt{VA_2^2 - W_2^2} + \sqrt{VA_3^2 - W_3^2}$$

Order Code

CPW -503 — —
 \$550.00

Input ACV

1 : **600V** L-L/347V L-N... \$0

Input ACA

1 : **AC 0.5~5A** ... \$0

2 : AC 0.05~1A ... \$45

Y : Option ... \$75

Interface

1 : **RS-485(standard)** ... \$0

Power Supply

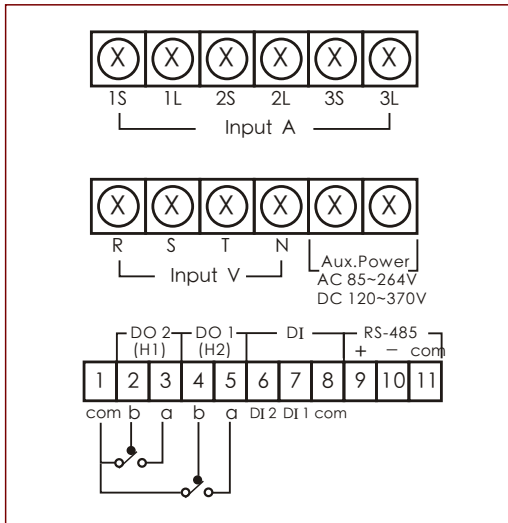
1 : **85~264 VAC / 120~370 VDC** ... \$0

2 : DC 24V ... \$45

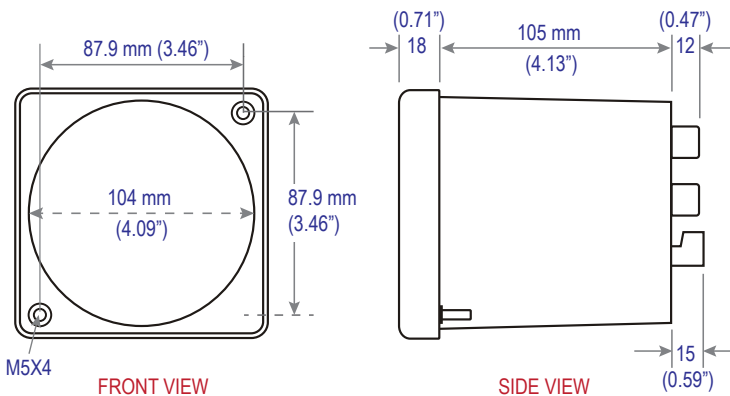
DI and DO

1 : **2 digital input (DI) + 2 Relay output (DO)** ... \$0

Connection Diagram

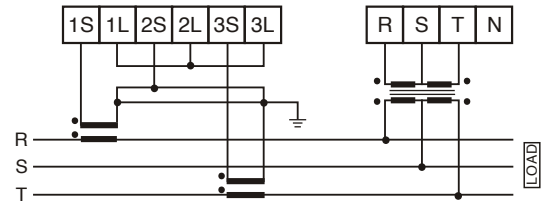


Case Dimension

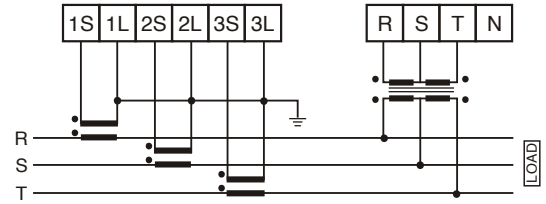


Input Wiring Diagram

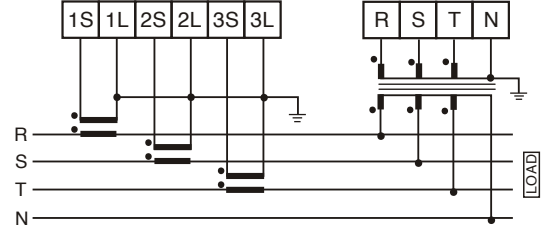
3 Phase 3 Wire (2 CT, 2 PT)



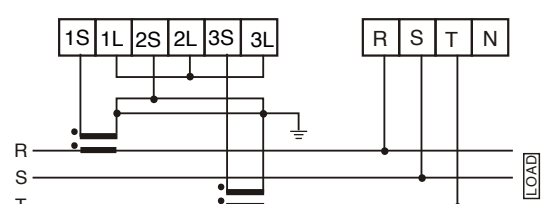
3 Phase 3 Wire (3 CT, 2 PT)



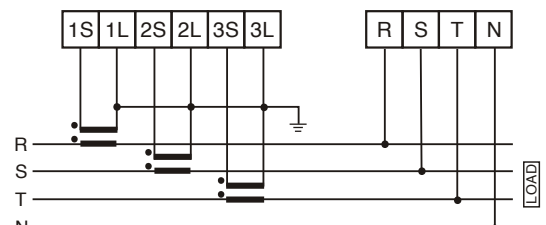
3 Phase 4 Wire



3 Phase 4 Wire (2 CT, no PT)



3 Phase 4 Wire (3 CT, no PT)



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