



T250 Power Meter

Measurement Monitoring Analysis Communication



TAIK ELECTRIC
Metering Solutions



ARTISTIC SCREEN

A clear and easy-to-read backlit LCD screen at a wide visible angle can be read at the different installed sites.

Features

- Energy-saved protection mode
- Large legend texts shown on backlit LCD
- Plug-in output modules
- Fully programmable VT&CT ratios
- True rms measurement
- THD measurement up to 31st harmonic
- Individual current/voltage harmonics
- Relay contact, analog and pulse outputs
- Modbus RTU 485 communication
- DIN 96x96 mm enclosure
- Digital inputs for input detecting status
- Actual demand/Max demand current/active power
- Vertical bargraph indication on the measured current

DIRECT READING

A quick browse through the measured electrical parameters can be accessed.

Characteristics

| | |
|---------------------------|--|
| Dielectric strength | IEC 688, AC 2.3KV 1 min. between input/output/power AC 3KV 1 min. between all terminals/case |
| Operating temperature | 0 ~ 60°C |
| Storage temperature | -10 ~ 70°C |
| Temperature coefficient | ≤ 100PPM/°C |
| Max. humidity | 95% |
| IP Enclosure | IP 52 (Front plate) IP 30 (Casing) |
| Sampling time | 1 sec. |
| Measurements | 1 φ 2W, 1 φ 3W, 3 φ 3W, 3 φ 4W |
| Actual demand | Amp, Watt |
| Max.demand | Amp, Watt |
| Demand time of period | 1 ~ 60 min. (programmable) |
| Total harmonic distortion | up to 31st |
| Harmonic analysis | Volt, Amp |
| Auxiliary power supply | AC/DC 85-265V DC 20 -60V (Option) |

Accuracy

| | |
|-----------------|----------------------------------|
| Current | 0.2 % |
| Voltage | 0.2 % |
| Active power | 0.5 % |
| Reactive power | 0.5 % |
| Apparent power | 0.5 % |
| Power factor | 0.5 % |
| Frequency | 0.05 % |
| Active energy | 0.5 % (IEC 62053-22, class 0.5S) |
| Reactive energy | 2 % (IEC 62053-23, class 2) |
| Harmonic | 2 % |

Accuracy performance range

| | |
|----------------------|--|
| Current range | 0.2 ~ 120 % |
| Voltage range | 0.6 ~ 120 % |
| Power & energy range | Amp. 0.2 ~ 120%, Volt. 0.6 ~ 120 % |
| Power factor range | cosθ (sinθ) 0.5 ~ 1 |
| Frequency range | 45 ~ 70 Hz |
| Distortion level | from 10% to 120% (Volt) from 1% to 120% (Amp) |

Input voltage

| | |
|---------------------------------|-------------|
| Voltage range (line to line) | AC 3 ~ 520V |
| Voltage range (line to neutral) | AC 2 ~ 300V |
| Maximum overload | AC 750V |
| Input impedance | ≥ 800KΩ |



Benefits

- User-friendly
- Cost effective
- Output modules on actual demand
- Direct access to the measured display
- Measurement in 1P/3P3W/3P4W systems

Standards

| | |
|---------------|----------------|
| IEC 62053-22 | IEC 61000-4-8 |
| IEC 61000-4-2 | IEC 61000-4-11 |
| IEC 61000-4-3 | IEC 55011 |
| IEC 61000-4-4 | IEC 61326-1 |
| IEC 61000-4-5 | IEC 61000-3-2 |
| IEC 61000-4-6 | IEC 61000-3-3 |

Certification

CE



EXTENDED MODULES

A extended function can flexibly be requested for installation in a way of the designed-pluggable modules.



FASTENED INSTALLATION

T250 is designed to be attached with flexible mounting clips for a secure installation onto all types of panels without using any hand tool.

Input current

| | |
|------------------|---|
| Current range | AC 5A (Standard) or 1A (Option) |
| Maximum overload | continuous AC 6A, AC 50A 5 sec. continuous AC 15A, AC 250A 1 sec. (Option) |
| Input burden | ≤ 0.1VA |
| Isolation | Each phase, AC 600V |
| Starting current | 0.2 % F.S. |

Display

| | |
|--------|---|
| Format | Backlit LCD display 4 rows of 4 digits (Electrical parameter measurements) One line of 9 digits (Energy) 3 vertical bargraphs at % for current |
|--------|---|

Pluggable modules (Option)

Relay contacts (Module)

| | |
|-------------------|--|
| Energized value | 1, 10, 100, 1000 pulses for 1KWH or 1KVARH |
| Alarm selected | V, A, W, demand A, demand Watt, Hz, THD-I, THD-V |
| Setting point | 2 programmable setting points |
| Max. installation | 2 pluggable modules |
| Relay contact | AC 240V 5A, DC 24V 5A |

RS 485 Communication interface (Module)

| | |
|-------------------|----------------------------|
| Protocol | MODBUS, RTU |
| Baud rate | 1200 ~ 38400 |
| Address range | 1 ~ 255 |
| Data format | N.8.1, N.8.2, O.8.1, E.8.1 |
| No. of meters | Up to 32 meters via RS 485 |
| Max. installation | 1 pluggable module |

Analog output (Module)

| | |
|-------------------|---------------------------|
| Output range | DC 4-20mA |
| Output resistance | 500Ω |
| No. of outputs | 2 programmable parameters |
| Max. installation | 2 pluggable modules |

Digital input (Module)

| | |
|---------------------------------------|--|
| Input detecting status on each module | Programming via RS 485 interface on T250 |
| Input format | SPST contact |
| Max. installation | 2 pluggable modules |

Electromagnetic compatibility (EMC)

| | |
|---|----------------|
| Electrostatic discharge | IEC 61000-4-2 |
| Electromagnetic field immunity | IEC 61000-4-3 |
| Electrical fast transient/burst immunity | IEC 61000-4-4 |
| Surge immunity | IEC 61000-4-5 |
| Immunity to conducted disturbances | IEC 61000-4-6 |
| Power frequency magnetic field immunity | IEC 61000-4-8 |
| Short interruptions and voltage variations immunity | IEC 61000-4-11 |
| Harmonic current emissions | IEC 61000-3-2 |
| Voltage changes, voltage fluctuations and flicker | IEC 61000-3-3 |

PRODUCT CODE

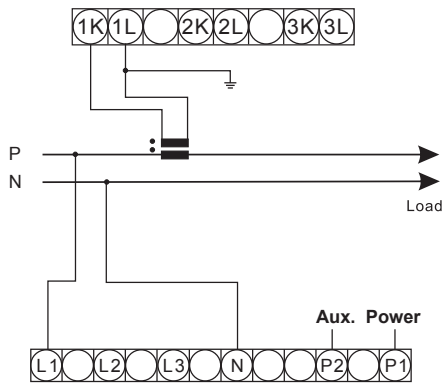
| Product | Code No. |
|------------------|----------|
| T250 Power Meter | T250 |

Options

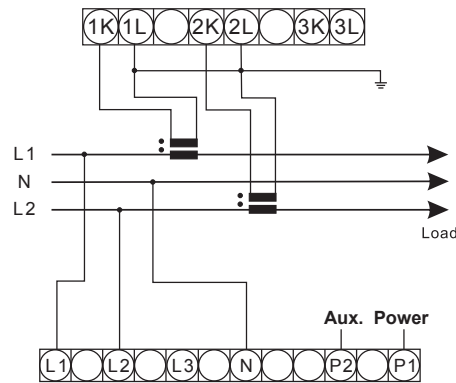
| | |
|------------------|------|
| RS 485 interface | MD01 |
| Relay contacts | MD02 |
| Dual analog | MD03 |
| Digital inputs | MD04 |

CONNECTIONS

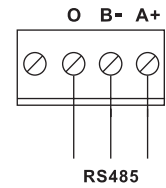
1 Phase 2 Wire



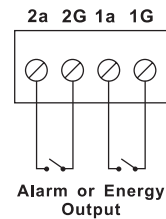
1 Phase 3 Wire



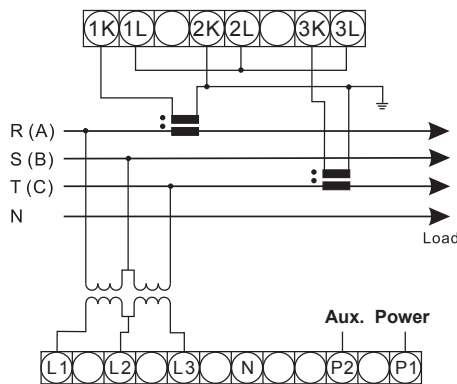
RS485 Output



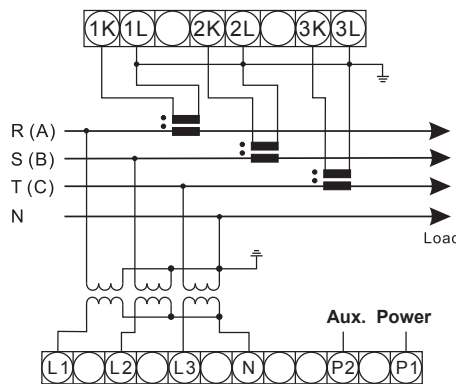
Relay Contacts



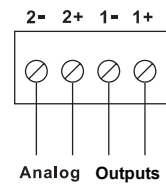
3 Phase 3 Wire (2CT)



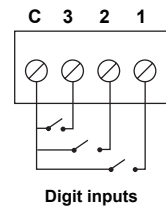
3 Phase 4 Wire



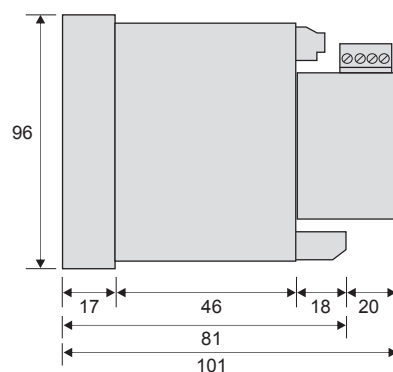
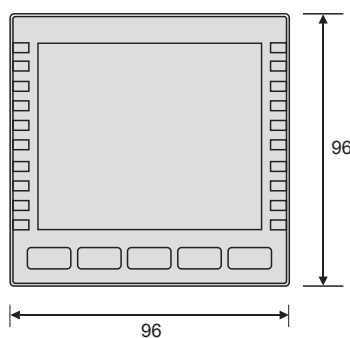
Analog Outputs



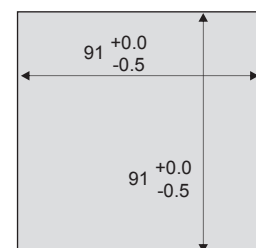
Digit Inputs



DIMENSIONS (Unit: mm)



PANEL CUT-OUT



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