



# 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 60688, 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 ~ 500V
Voltage range (line to neutral)	AC 2 ~ 288V
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

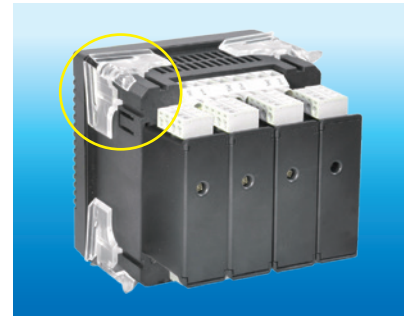
## Certification

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

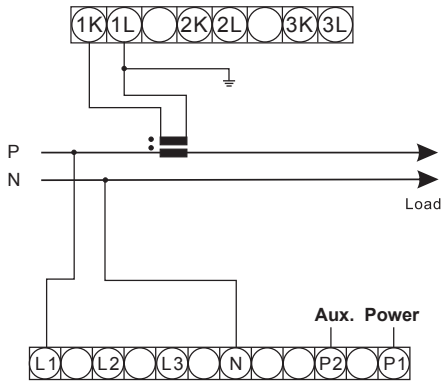
Product	Code No.
T250 Power Meter	T250

## Options

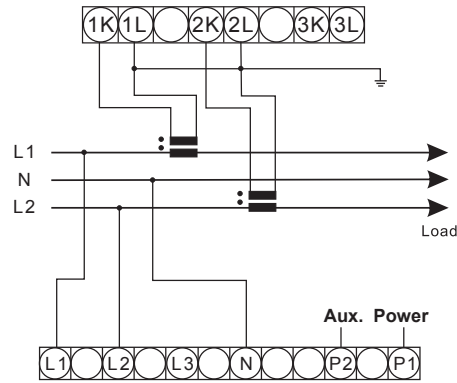
RS 485 interface	MD01
Relay contacts	MD02
Dual analog	MD03
Digital inputs	MD04

## CONNECTIONS

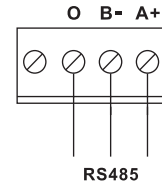
### 1 Phase 2 Wire



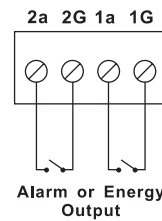
### 1 Phase 3 Wire



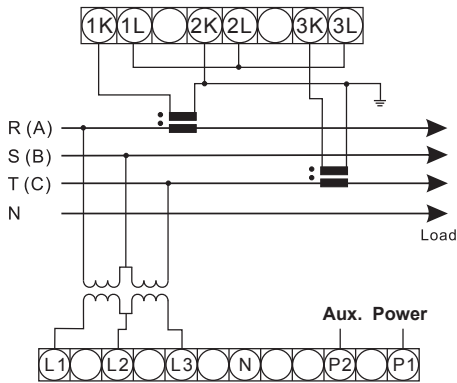
### RS485 Output



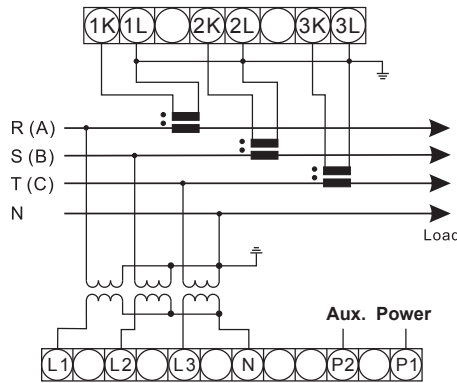
### Relay Contacts



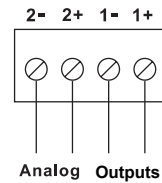
### 3 Phase 3 Wire (2CT)



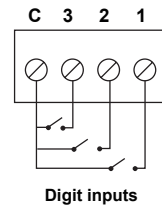
### 3 Phase 4 Wire



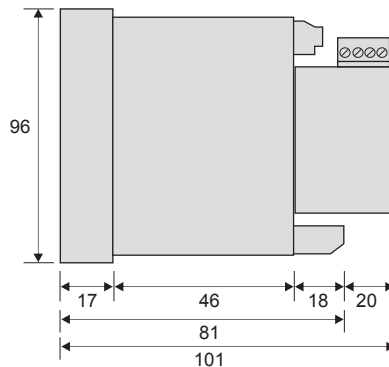
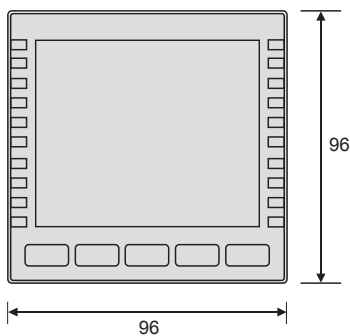
### Analog Outputs



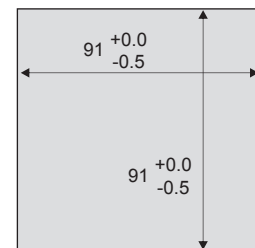
### Digit Inputs



## DIMENSIONS (Unit: mm)



## PANEL CUT-OUT



**TAIK ELECTRIC CO., LTD.**

4TH FL., NO. 5, ALLEY 11, LANE 327, CHUNGSHAN RD.,  
SEC. 2, CHUNGHE DISTRICT, NEW TAIPEI CITY, TAIWAN, R.O.C.  
TEL: (02)2242-6825 <http://www.taik.com.tw>  
FAX: (02)2242-6827 E-mail: taikco@ms15.hinet.net



FM 40649

