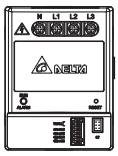
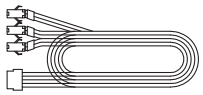
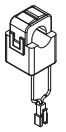
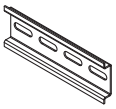
5013244301

# P3E Power meter
# Installation manual

**For safe installation and use, please observe the following notes and refer to the latest version of the installation manual.**

- Please refer to the installation manual for relevant information prior to commencement of work.
- If you encounter any difficulties during installation, please contact Delta for support.
- Please take note of all safety relevant notes included in this manual and refer to your local electrical safety guidelines.
- Accessories included in the package must be used during installation. If you intend to use other components please refer to the information provided in this manual.
- Maximum sensing current of supplied CT sensor is 120A.

## Scope of Delivery

| | | | |
|---|---|---|---|
| 1 | Power meter (Model no: P3E) |  | 1 PC |
| 2 | CT wire |  | 1 PC |
| 3 | CT (Current Transformer) (max sensing current 120A) |  | 3 PC |
| 4 | AC termainal |  | 5 PCS |
| 5 | AC termainal cover |  | 5 PCS |
| 6 | RS-485 connector |  | 1 PC |
| 7 | Din Rail |  | 1 PC |
| 8 | Din Rail Screw |  | 3 PCS |
| 9 | Din Rail Stopper |  | 2 PCS |

## Technical Data

| | |
|---|---|
| Communication | RS-485 |
| Nominal voltage | 220VAC / 380VAC<br>230VAC / 400VAC |
| Frequency | 50Hz / 60Hz ± 5% |
| Self - consumption | 3 W |
| Limiting current | 120A |
| Suitable Electrical wire (for AC terminal) | 16~20AWG |
| Screw Torque (for AC terminal) | 1 N.m |
| Weight (without current transformer) | 200g |
| Dimensions (H / W / D) | 93 mm x 70 mm x 66.5 mm |
| Ambient temperature in operation | - 20°C to 50°C |
| Ambient temperature during transport / storage | - 20°C to 60°C |

* in accordance with IEC 60950

## WARNING !

Do not open this product or insert tools due to shock and fire hazard which may cause injury.

When installing this product you must adhere to the following instructions:
- The product is intended to be installed and operated by qualified personnel or service personnel only.
- Do not power up the device before installation is complete.
- All circuit breakers must be in the OFF position before commencing installation.

Unsuitable installation locations which will void the product warranty:
- Do not install in direct sunlight.
- Do not expose to high humidity.
- Install in a safe place where it is inaccessible for children.
- Do not install in poorly ventilated area.
- Do not expose to water vapor, oil vapor, smoke, dust, salt, corrosive substances, explosive / flammable GAS, chemicals.
- Do not install above 1000m MSL.
- Do not expose to extreme temperature fluctuation.
- Do not expose to high levels of noise, electrical noise.
- Do not expose to vibration.
- Not suitable for installation in medical equipment, communication equipment, marine, automotive.

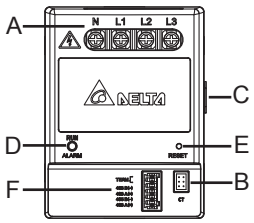
## DANGER!

Do not work on electrical installation when standing on wet ground.

Power meter is a precision electronics.
Please handle with care!

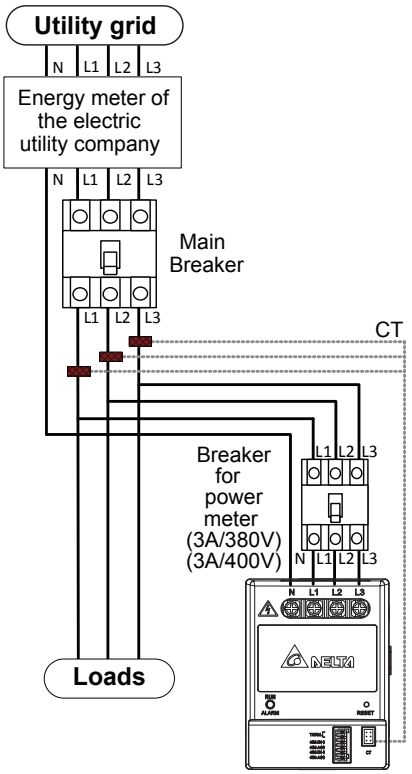
Do not use product if insulation of any wire is broken.

## Product Description




| | |
|---|---|
| A | Mains voltage connector block |
| B | CT wire connector |
| C | Connect with Wi-Fi module |
| D | Meter status LED |
| E | Wi-Fi reset button (if connect with Wi-Fi module) |
| F | RS-485 port & terminal resistor port |

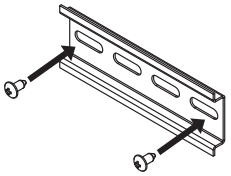
## Electrical Connection Applications (DANGER)



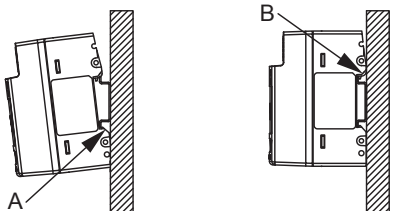

- All breakers must be OFF before start construction .
- Check voltage of inside Mainbreaker is ZERO.
- When start construction, must be wear isolate equipment. EX: the isolate gloves, the isolate shoes.
- The installer's body must be dry.
- Don't construct when power ON.

## Power meter setup (wall-mount)

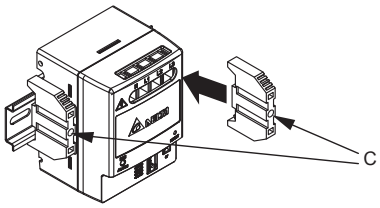
1. Use the supplied DIN rail and mount in distribution cabinet.



2. Take bottom of the meter (A) reach the Din Rail.
3. Take top of the meter (B) buckle the Din Rail.



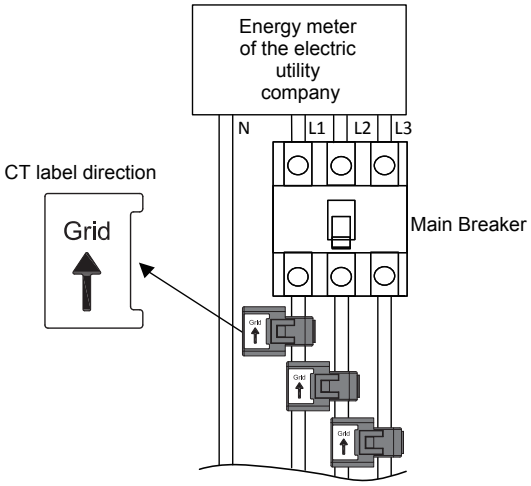

4. Put bolt for Din Rail into the sides of the meter , as below figure.
5. Lock in the screws that the bolt of Din Rail (C).



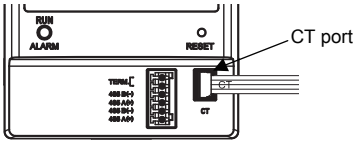

- All breakers must be OFF before start construction .
- Check voltage of inside Mainbreaker is ZERO.
- When start construction, must be wear isolate equipment.
  EX: the isolate gloves, the isolate shoes.
- The installer's body must be dry.
- Don't construct when power ON.

## Current Transformer Installation (DANGER)

1. The CT can be opened.
2. Take the CT clip on the Line conductor wire.
3. Take note of the direction of CT installation. Arrow symbol means utility grid.



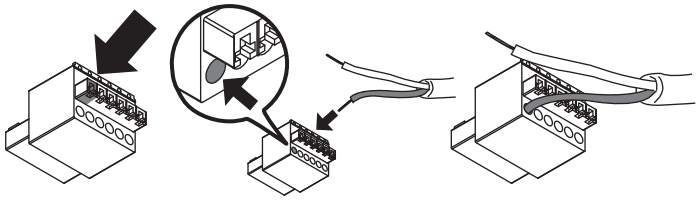

4. Connect the CT wires to the device.
5. Put in the CT wire into the CT port.



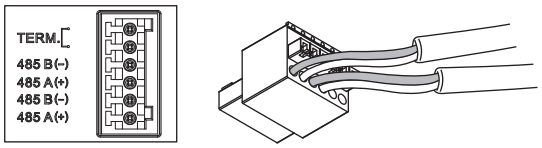

- All breakers must be OFF before start construction .
- Check voltage of inside Mainbreaker is ZERO.
- When start construction, must be wear isolate equipment.
  EX: the isolate gloves, the isolate shoes.
- The installer's body must be dry.
- Don't construct when power ON.

## Data communication setup

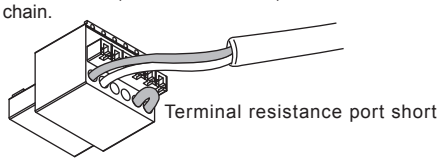
1. Put the signal wires of the monitor ( or the inverter ) into RS-485 connector.
   (The wire diameter is AWG20 ~ AWG24)



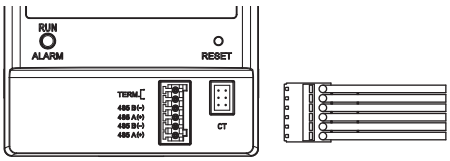
2. According to mark of the meter , put into the signal wires of the monitor.
   ( or the inverter )




3. Add the termination resistor (short the terminals) if this is the last device in the RS-485 chain.




4. Connect the RS-485 to the meter port.




5. You can now use the Delta monitor to access and display the data.
   Please refer to the user manual for more information.

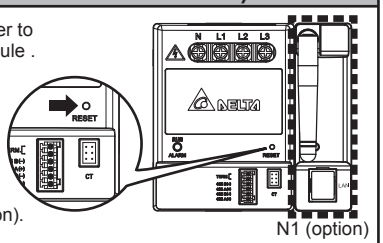
## LED Explanation

| LED | Status | Explanation |
|---|---|---|
| Red | On | Hardware failure |
| Red | Blink | No communication from other device |
| Green | On | Normal |
| Green | Blink | Wait for connection |

## WIFI re-config (if have WIFI module)

1. The WIFI detail config methods refer to the user manual of Delta WIFI module .
2. Use the paperclip (or small object) insert into "RESET" port , and push the button.

* If WIFI function is required, please operate with N1 device (option).




N1 (option)

## Troubleshooting

Q : If the meter is connected to ac input power, but the LED for of the meter does not show any output ?
A : Please check ac input power and follow the installation instructions as per 「Electrical Connection Applications」.

Q : If the meter can't connect with Delta monitor ?
A : Please check RS-485 connection and refer to the setup instruction in section 「Data communication setup」.

Q : If the Delta monitor is connected to the meter but does not show any metering data?
A : Please follow the instructions in section "Current Transformer (CT) setup", verify the max AC current and orientation.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