# PM-3133/PM-3133i Quick Start

**v1.5, October 2025**

## Packing List

In addition to this guide, the package includes the following items:



PM-3133
PM-3133i



Screw Driver * 1



Cable ties * 3

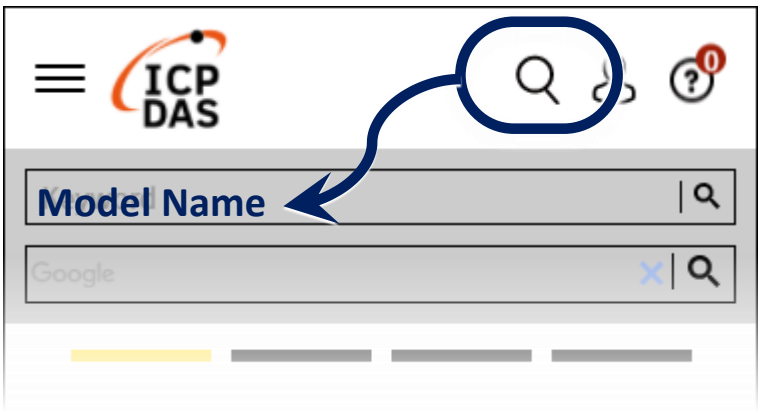
## Technical Support

service@icpdas.com
www.icpdas.com

## Resources

How to search for drivers, manuals and spec information on ICP DAS website.

- For Mobile Web




- For Desktop Web






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# 1. Caution & Warning



The meter contains hazardous voltages, and should never be disassembled. Failing to follow this practice will result in serious injury or death. Any work on or near energized meters, meter sockets, or other metering equipment could induce a danger of electrical shock. It is strongly recommended that all work should be performed only by qualified industrial electricians and metering specialist. ICP DAS assumes no responsibility if your electrical installer does not follow the appropriate national and local electrical codes.

ICP DAS assumes no liability for any damage resulting from the use of this product. ICP DAS reserves the right to change this manual at any time without notice.

# 2. Installation

## 2.1.

- Products come with external split type clip-on CT's. Disconnect the CT's or use other CT's is highly prohibited.
- Please read this operation manual carefully before using.
- Please re-confirm the measure position.
- Reconfirm the RST (ABC) phase sequence of the power system.
- Meter auxiliary power: DC +12V to +48V.

## 2.2.Voltage Input

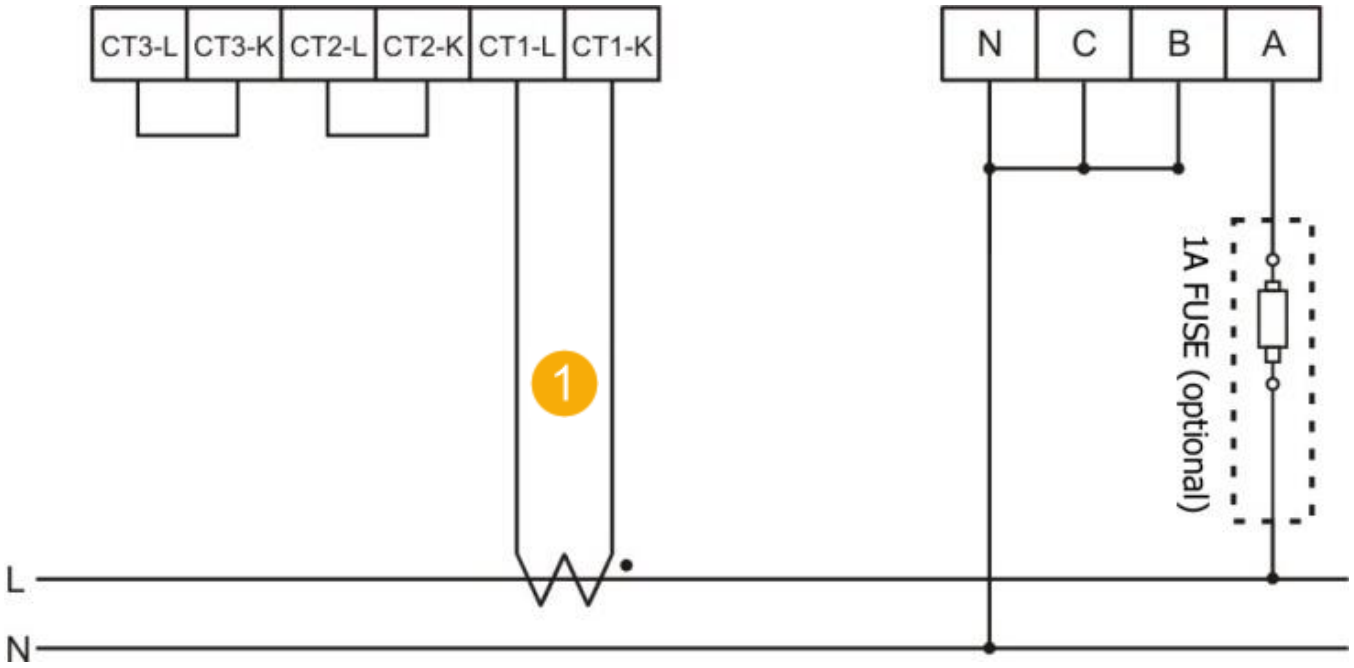
1. PM-3133 series: Input Voltage up to 500V.
   PM-3133**i** series: Input Voltage up to 600V.
   For any input voltage greater than the meter rating, please add a PT (Potential Transformer) and update the PT RATIO setting.
2. Confirm the RST (ABC) phase sequence.



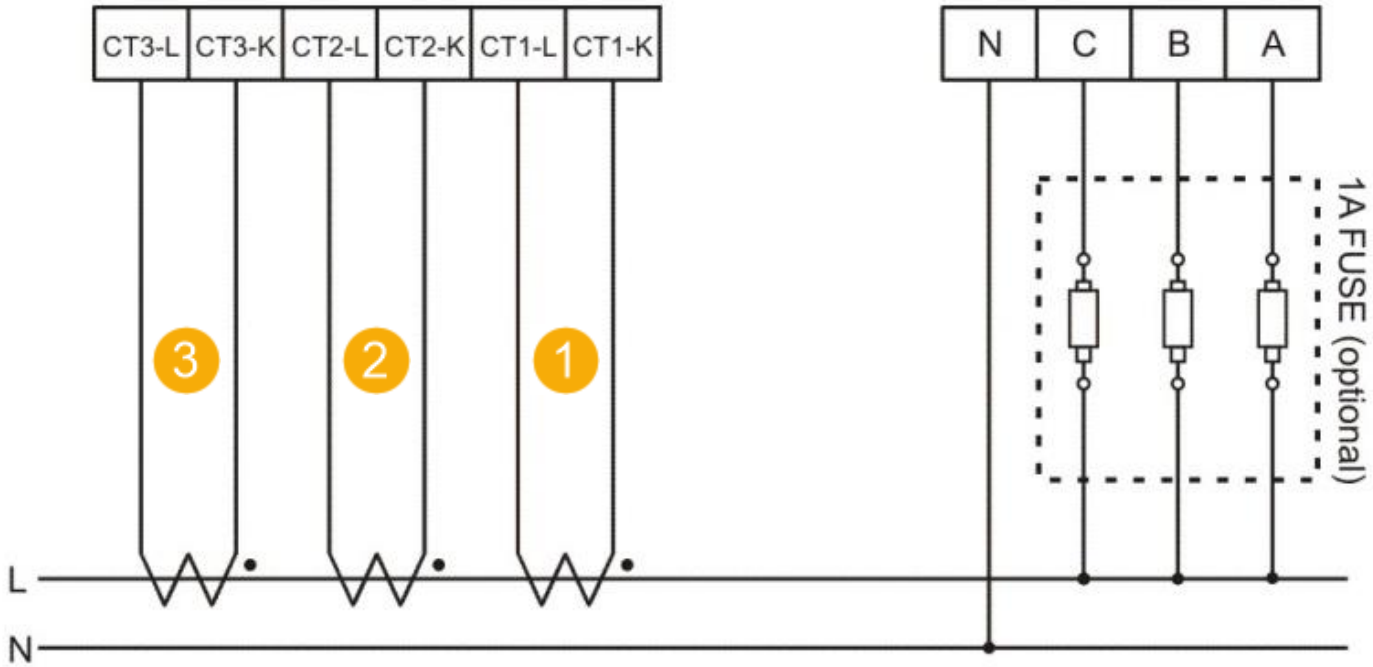
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## 2.3.Wiring

- 1P2W-1CT
  (Single-phase, Single-circuit) (Configuration required via software)



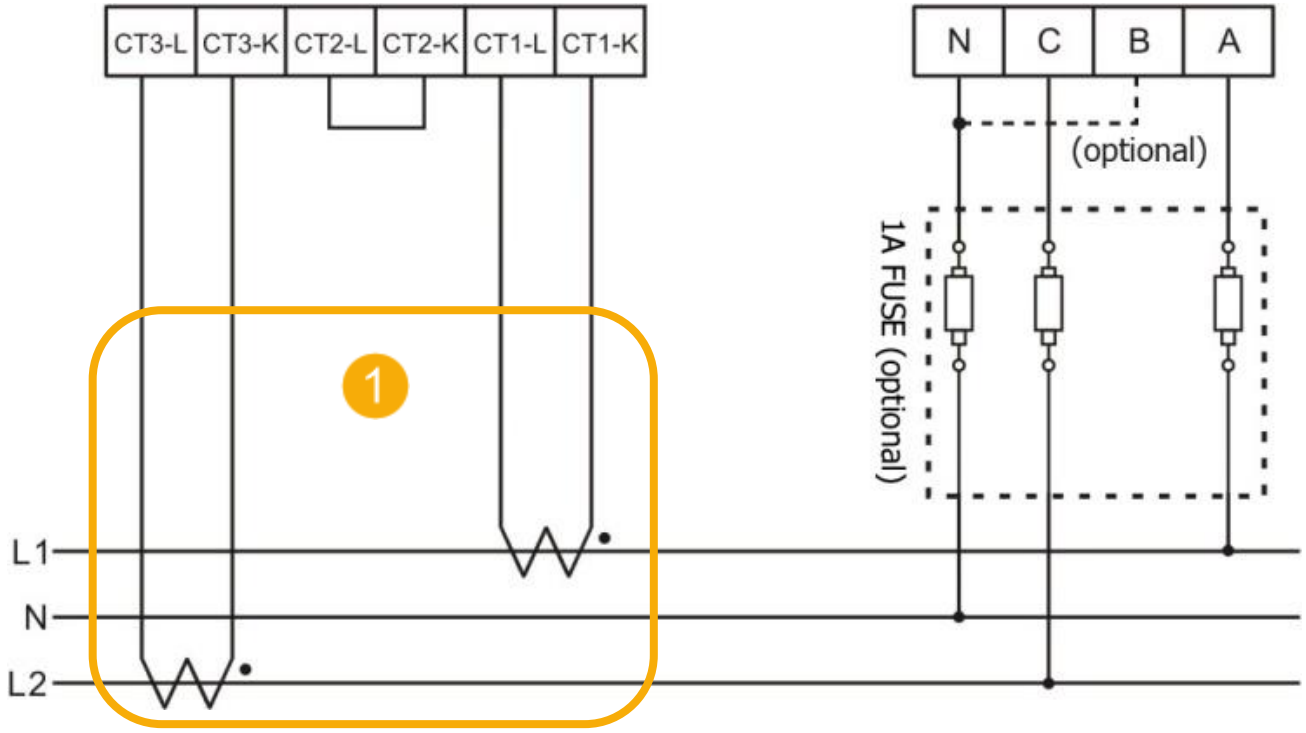

- 1P2W-3CT
  (Single-phase, 3-circuit) (Configuration required via software. Select "1P2W-1CT" as the wiring configuration.)



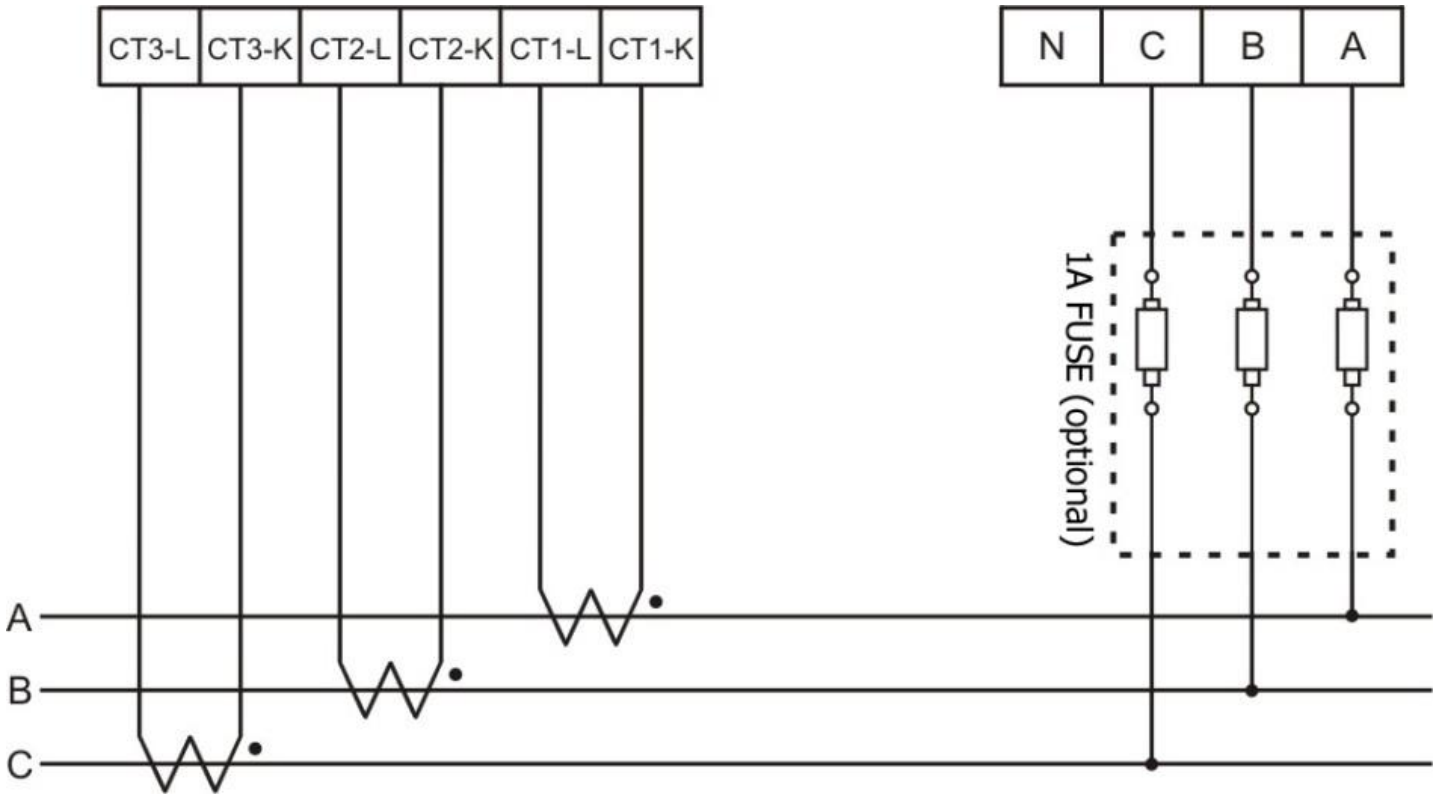



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- 1P3W-2CT
  (Single-phase, Single-circuit) (Configuration required via software)



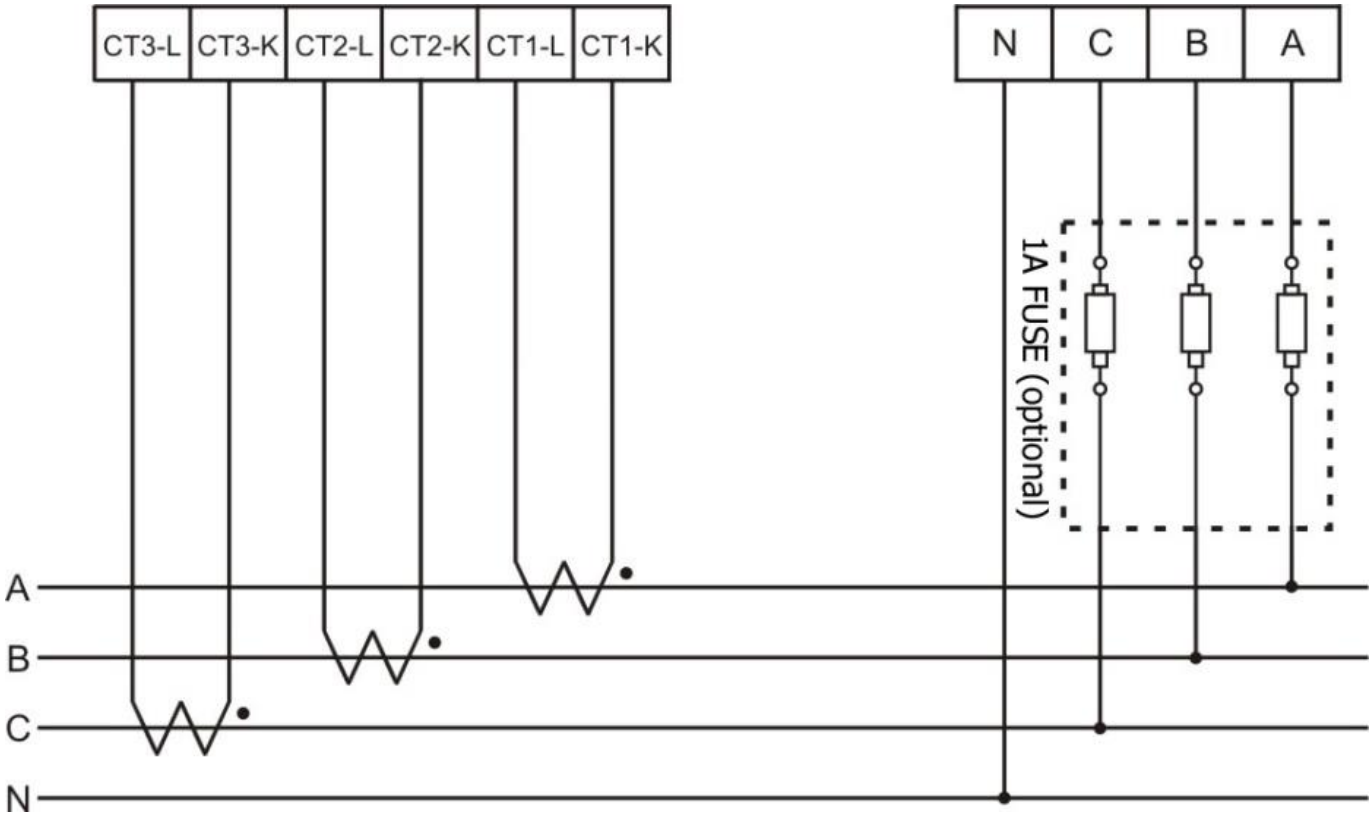

- 3P3W-3CT (Can be configured via software or DIP switch)






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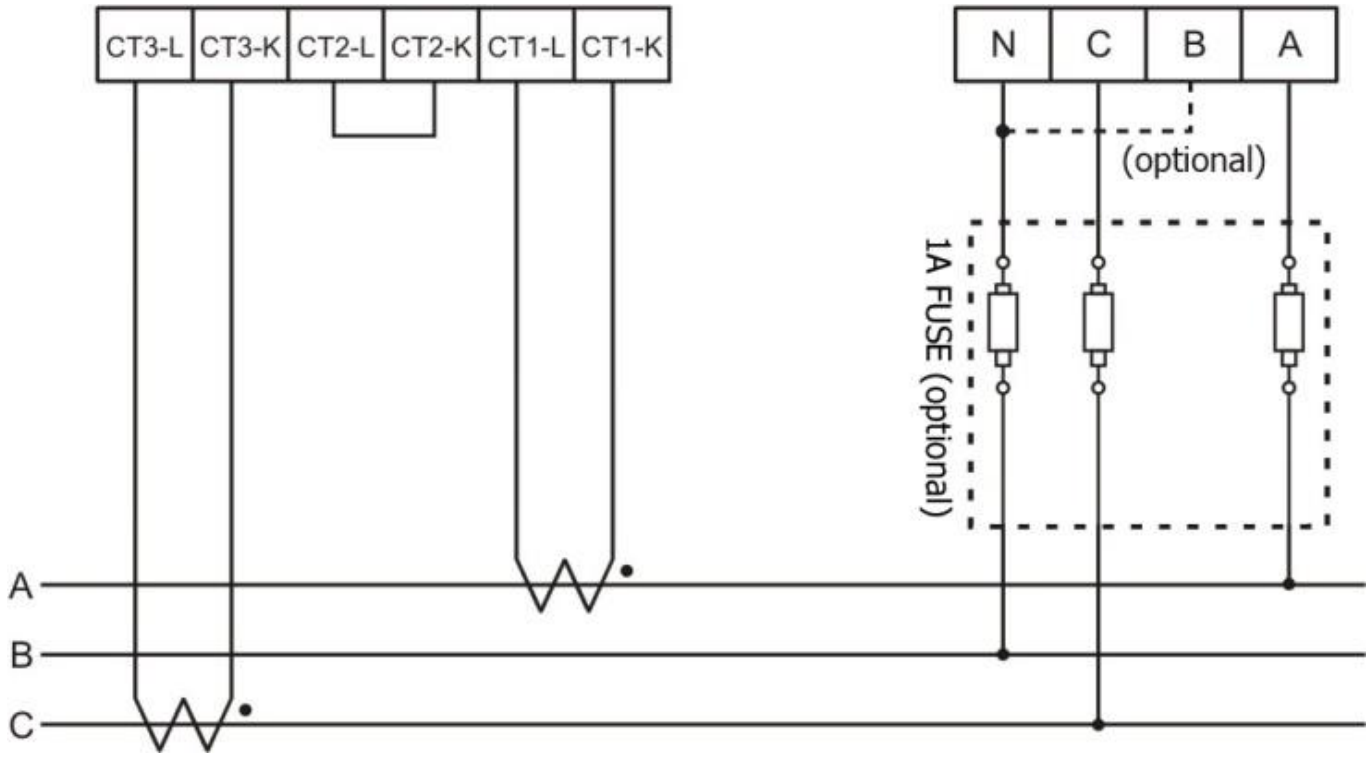
- 3P4W-3CT (Can be configured via software or DIP switch)






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- 3P3W-2CT (Can be configured via software or DIP switch)




Notes:

1. If phase B is in a floating state, it may pick up induced voltage signals. To avoid this, phase B can be connected to the neutral (N) line.

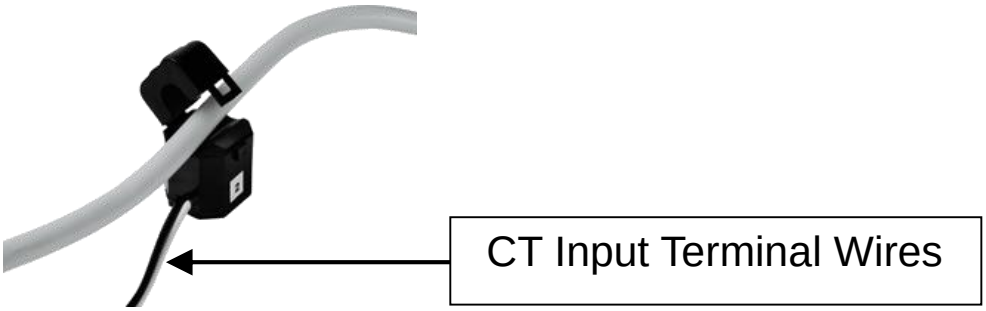
2. The 3P3W 2CT method is only suitable for **balanced three-phase systems with low harmonic distortion**. For unbalanced loads or systems with significant harmonics, the **3P3W 3CT method** is recommended for accurate measurement.
For detailed information, please refer to the Appendix “Questions and Answers” section of the manual.



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## 2.4. Wire Disconnection

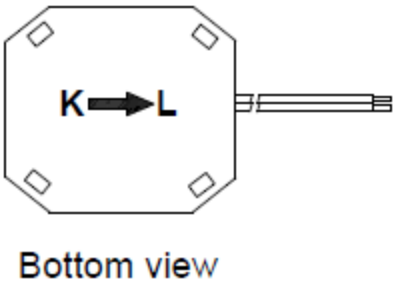
1. Unlock the CT clip and remove the CT from the power cable, avoiding disconnecting the CT terminal wires if possible (do not disconnect the terminal wirers first).
   Warning! If you need to remove the CT terminal wires, make sure to first detach the CT before removing the CT terminal wires. This is to prevent high open-circuit secondary voltage being generated on the secondary side of the CT, which could cause electric shock or damage to the CT and connected equipment in the secondary circuit.
2. Disconnect the voltage input wires from the terminals and wrap the wire ends with insulating tape.
3. Disconnect the communication wires from the terminal.
4. Disconnect the auxiliary power from the terminal, then wrap the wire ends with insulating tape.






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## 2.5.CT Installation Steps




Bottom view



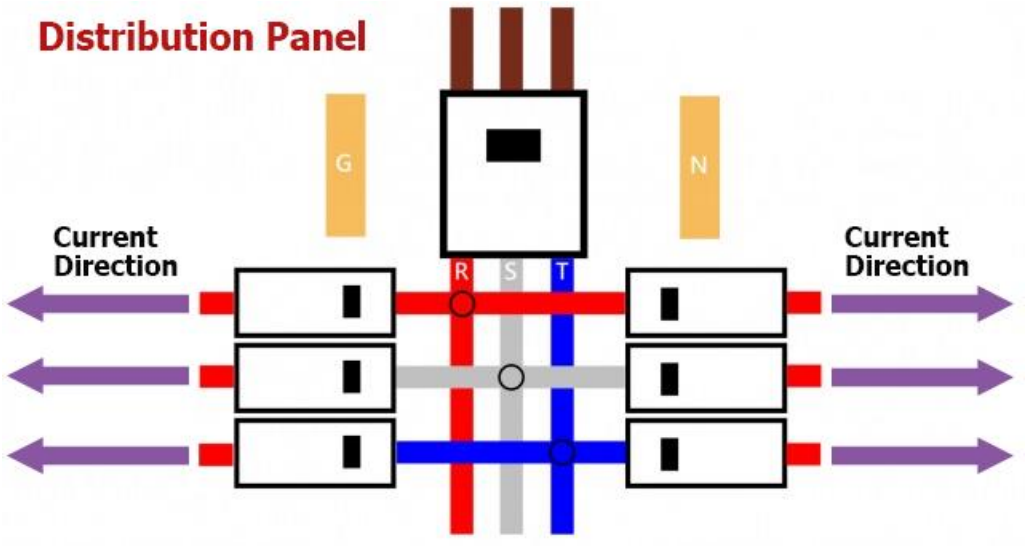
- At the bottom of the CT, there is a "K→L" mark.
- Open the CT clip.







- Make sure the power current direction follow the "K→L" marking on the CT and then close the CT clip.
- Complete the Installation.

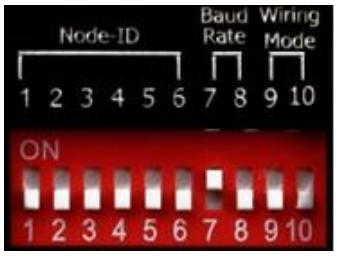





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# 3. Communication

## 3.1.RS-485 & CAN setting




- Default setting for RS-485: **19200, n, 8, 1** ,for CAN: **125K bps**
- DIP switch (SW1-SW6) is used for Modbus address(or CANopen Node ID) setting, default is 1, i.e. all OFF

  **For example:** Modbus address(or CANopen Node ID) is 10 ， find the table of DIP switch 1-6 is **ON, OFF, OFF, ON, OFF, OFF**

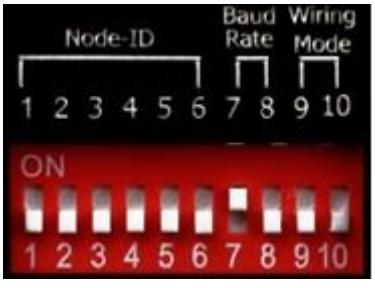
- SW1－SW6 setting

  Setting Modbus-RTU address/CANopen Node ID for communication (1-64)

| Modbus Address | SW 1 | SW 2 | SW 3 | SW 4 | SW 5 | SW 6 |
|---|---|---|---|---|---|---|
| 1 | OFF | OFF | OFF | OFF | OFF | OFF |
| 2 | **ON** | OFF | OFF | OFF | OFF | OFF |
| 3 | OFF | **ON** | OFF | OFF | OFF | OFF |
| 4 | **ON** | **ON** | OFF | OFF | OFF | OFF |
| 5 | OFF | OFF | **ON** | OFF | OFF | OFF |
| 6 | **ON** | OFF | **ON** | OFF | OFF | OFF |
| 7 | OFF | **ON** | **ON** | OFF | OFF | OFF |
| 8 | **ON** | **ON** | **ON** | OFF | OFF | OFF |
| 9 | OFF | OFF | OFF | **ON** | OFF | OFF |
| 10 | **ON** | OFF | OFF | **ON** | OFF | OFF |

- SW7－SW8 For Baud Rate Setting

| RS-485 | CAN | SW 7 | SW8 |
|---|---|---|---|
| **9600 bps** | **125k (Default) bps** | OFF | OFF |
| **19200 (Default) bps** | **250k bps** | **ON** | OFF |
| **38400 bps** | **500k bps** | OFF | **ON** |
| **115200 bps** | **1M bps** | **ON** | **ON** |




- Select the different wiring mode

  (Please select the Software setting, if 1P2W-1CT or 1P3W-2CT is used)



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| Models | PM-3133<br>PM-3133i | | PM-3133 -MTCP/<br>PM-3133i -MTCP | |
|---|---|---|---|---|
| Wiring | SW 9 | SW 10 | SW 1 | SW 2 |
| Software setting | OFF | OFF | OFF | OFF |
| 3P3W-2CT | **ON** | OFF | **ON** | OFF |
| 3P3W-3CT | OFF | **ON** | OFF | **ON** |
| 3P4W-3CT | **ON** | **ON** | **ON** | **ON** |




**Ethernet default settings**：

| IP Address | 192.168.255.1 |
|---|---|
| Subnet mask | 255.255.0.0 |
| Gateway | 192.168.0.1 |
| Port | 502 |

For recovering to default settings, dip Init/Run Switch (SW 4) to Init position for 10 seconds after power on, the settings will be changed as default values. Must dip back to Run position and repower on after settings changed. User also can recover settings to default value by Modbus command.

# 4. Common Malfunction Analysis:

## 4.1. PC and meter cannot make the connection with RS-485 ?

Add the Bias Resistor on RS-485 Network for stable signal
The RS-485 master is required to provide the bias for PM-2133D series. Otherwise, the tM-SG4 or SG-785 should be added to provide the bias. All ICP DAS controllers and converters provide the bias.

## 4.2. What problem is while the measured readings of the power consumption（kw）is negative?

(1)First check the current input end – line terminal, （check the connection should be **CT1-K, CT1-L, CT2-K, CT2-L, CT3-K, CT3-L**）· base on white black, white black, white black follow the sequence order

(2)Check the field current direction( K→L )is same as the inner arrow direction of the split type clip-on CT.

(3)Incorrect voltage or current wiring sequence may lead to phase angle calculation errors, causing the power meter to misinterpret the direction of power flow. This may also result in an abnormally low Power Factor (PF) reading.

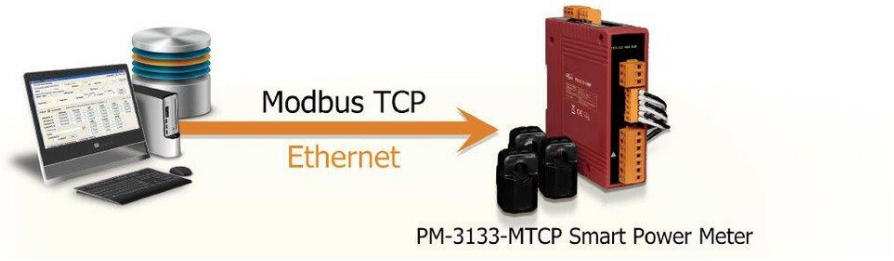


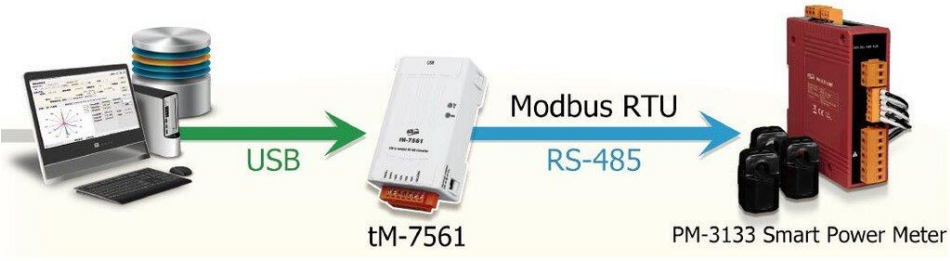
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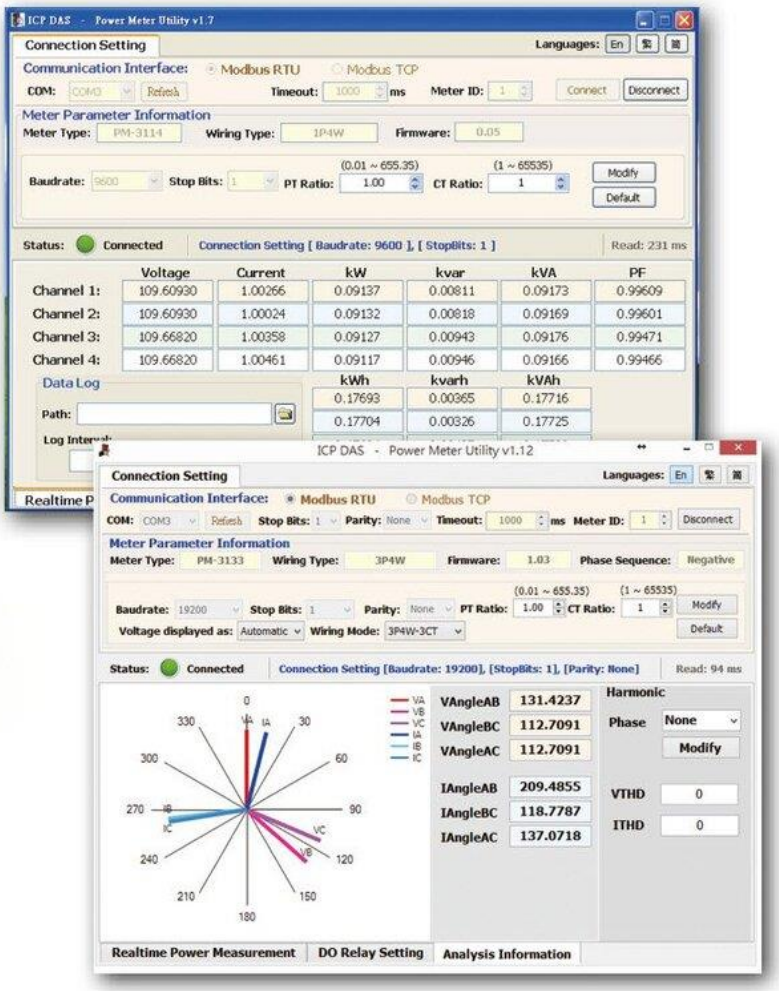
# 5. Power Meter Utility

Power Meter Utility has to be installed on PC and it enables to retrieve and display the power measurement values that measured by power meter via COM Port or Ethernet. The users will be able to read the power measurement values and to perform parameter settings of the meter.

Visit www.icpdas.com/, search [Power Meter Utility], and download the tool.



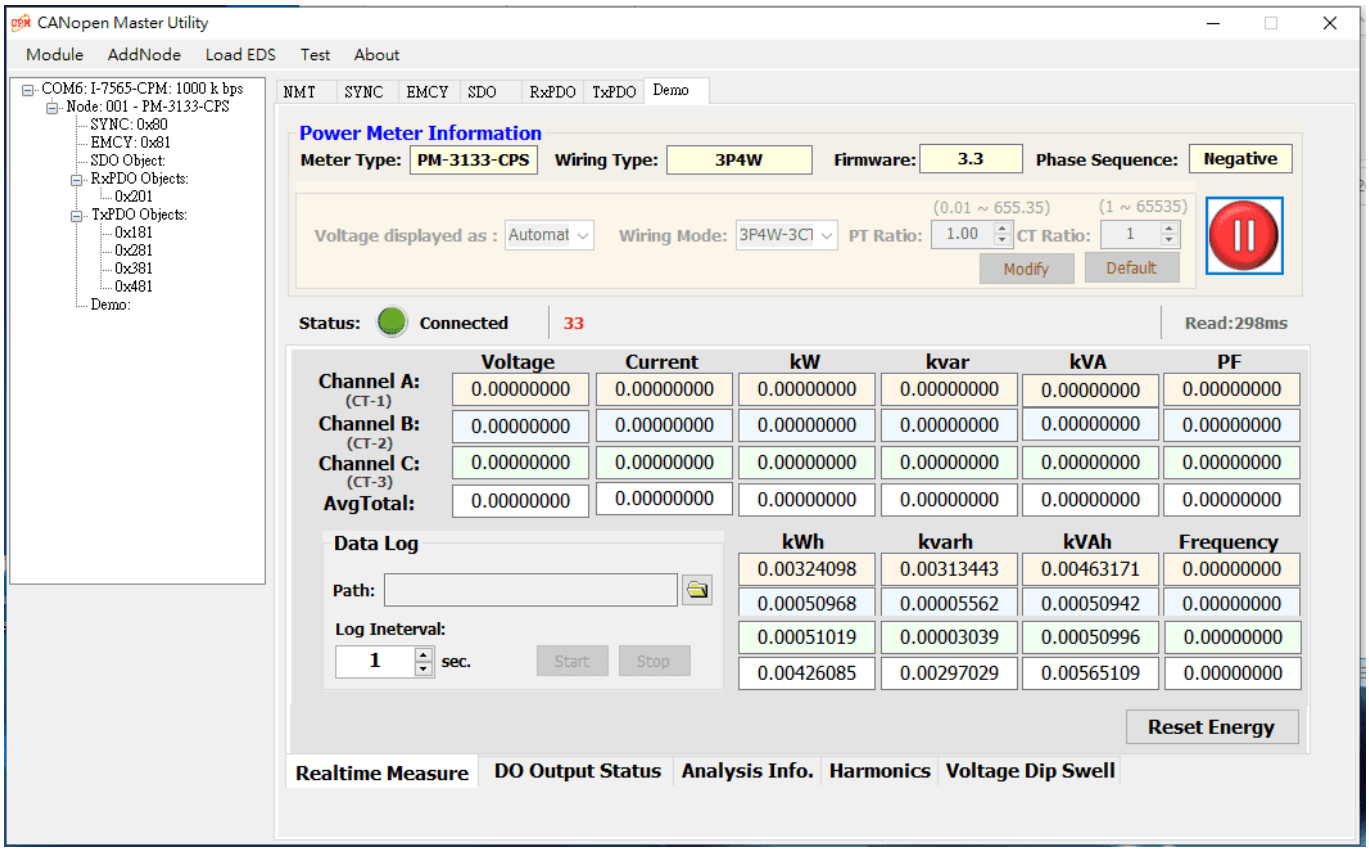



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# 6. CANopen Master Utility

Visit www.icpdas.com/, search [CANopen Master Utility], and download the tool.






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