PM-3133-RCT Quick Start

v1.4, June 2020

1. Packing List

This shipping package contains the following items

1 x PM-3133-RCT module	1 x Quick Start	Screw Driver x 1	Cable ties x 3

1.1. 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.

Technical Support

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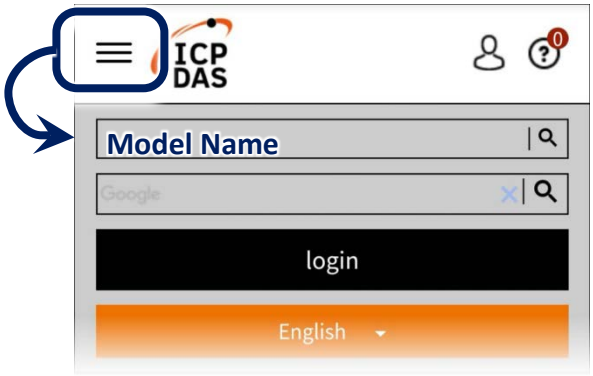
1.2 Resources

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

• For Mobile Web



• For Desktop Web

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 for PM-3133 series is DC +12V ~+48V.

2.2. Voltage Input

1. PM-3133 series: Input Voltage up to 500V.

   For any higher Input Voltage large than 500V, please add the PT (power transformer), and Change PT RATIO setup.

2. Confirm the RST (ABC) phase sequence.

2.3. Connection

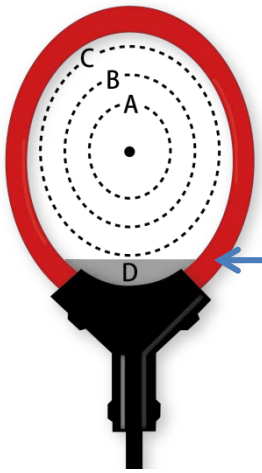
Please firstly check the current input terminal, and then in white black, white black, white black wire sequences (CT1-P1, CT1-P2, CT2-P1, CT2-P2, CT3-P1, CT3-P2). Then connect the CT's, and close the CT clip. Make sure the arrow direction sign on CT's follows current flow direction（**P1→P2**）.

2.4. Positional Accuracy

1. -500P: W Accuracy Better than 2% (PF=1; Input Current >50A; the “A” area).
   -1000P: W Accuracy Better than 2% (PF=1; Input Current >50A; the “A” area).
   -2000P: W Accuracy Better than 2% (PF=1; Input Current >50A; the “A” area).
   -4000P: W Accuracy Better than 2% (PF=1; Input Current >50A; the “A” area).

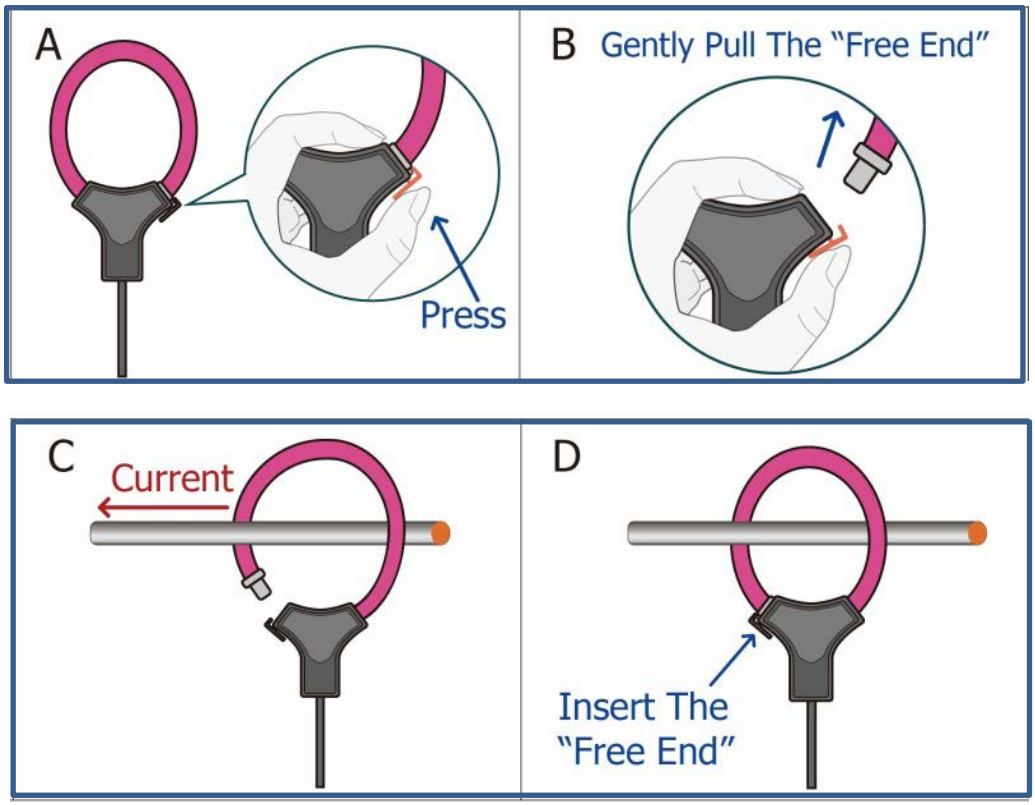
2. Due to small variations in the winding density and coil cross-sectional area the transducer output varies slightly depending on the position of the current within the coil loop.

The diagram below shows the variation of accuracy throughout the coil. The variation is greatest when the current is positioned near the junction of the connecting cable and the coil, where there is some discontinuity, and the error here can be typically 5%. Since in most applications the current is distributed throughout a significant part of the area contained by the coil loop the reading will be very close to the calibration value.

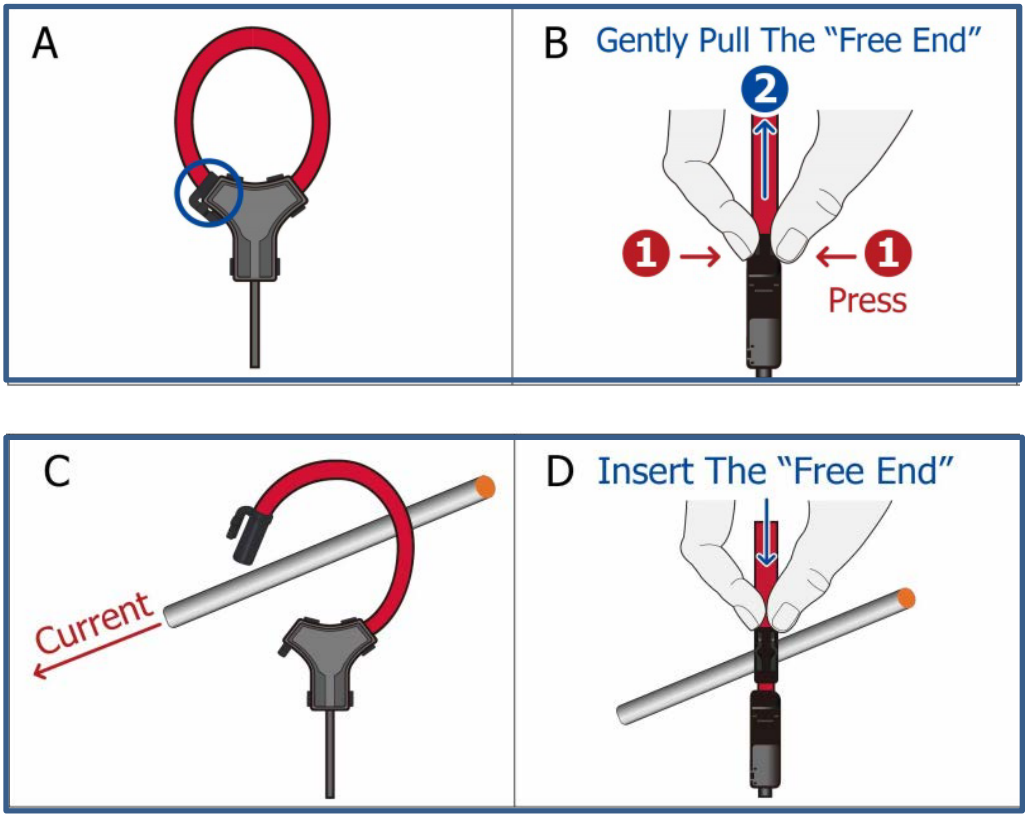


Type	A	B	C	D
Accuracy	2%	3%	5%	>5%
The current should not be positioned close to the coil-cable junction (shown by the “D” area) since the error for this region is greater.				

Type 1 CT's installation steps:

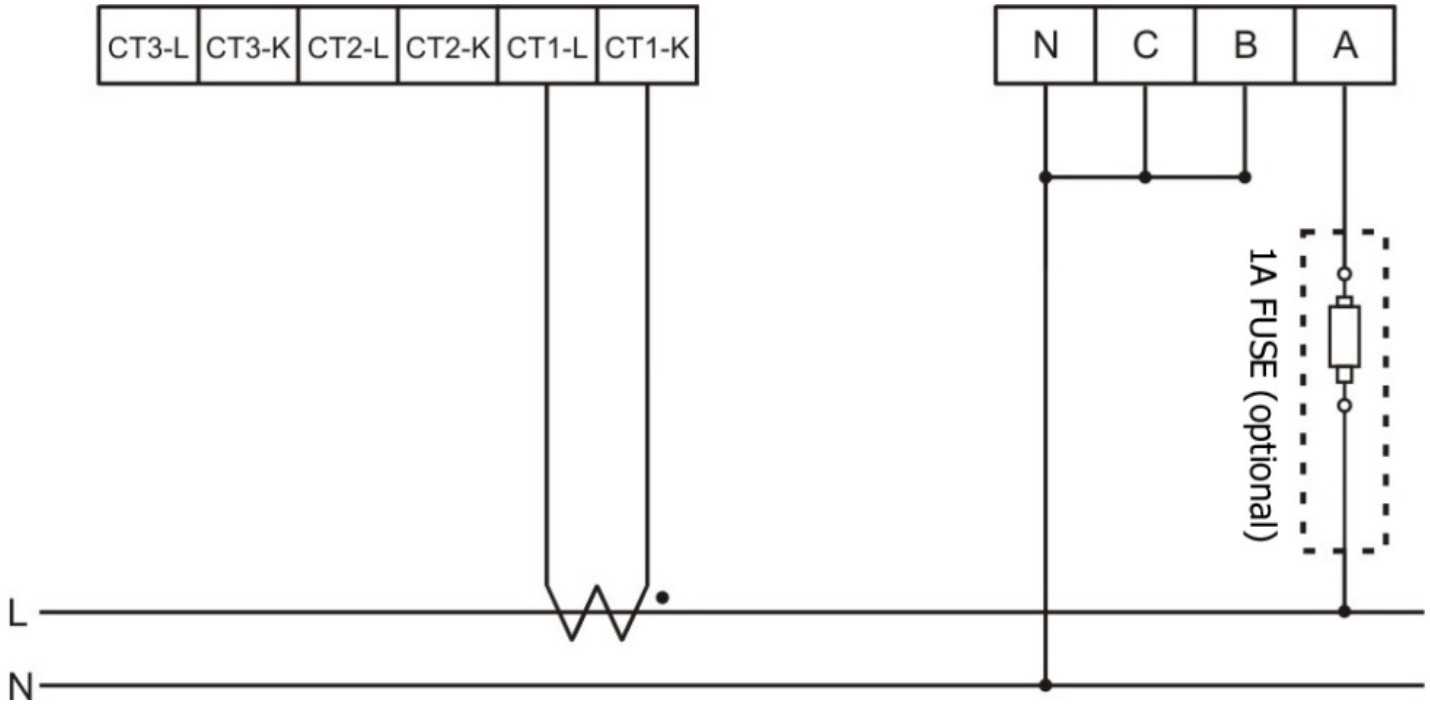


Type 2 CT's installation steps:

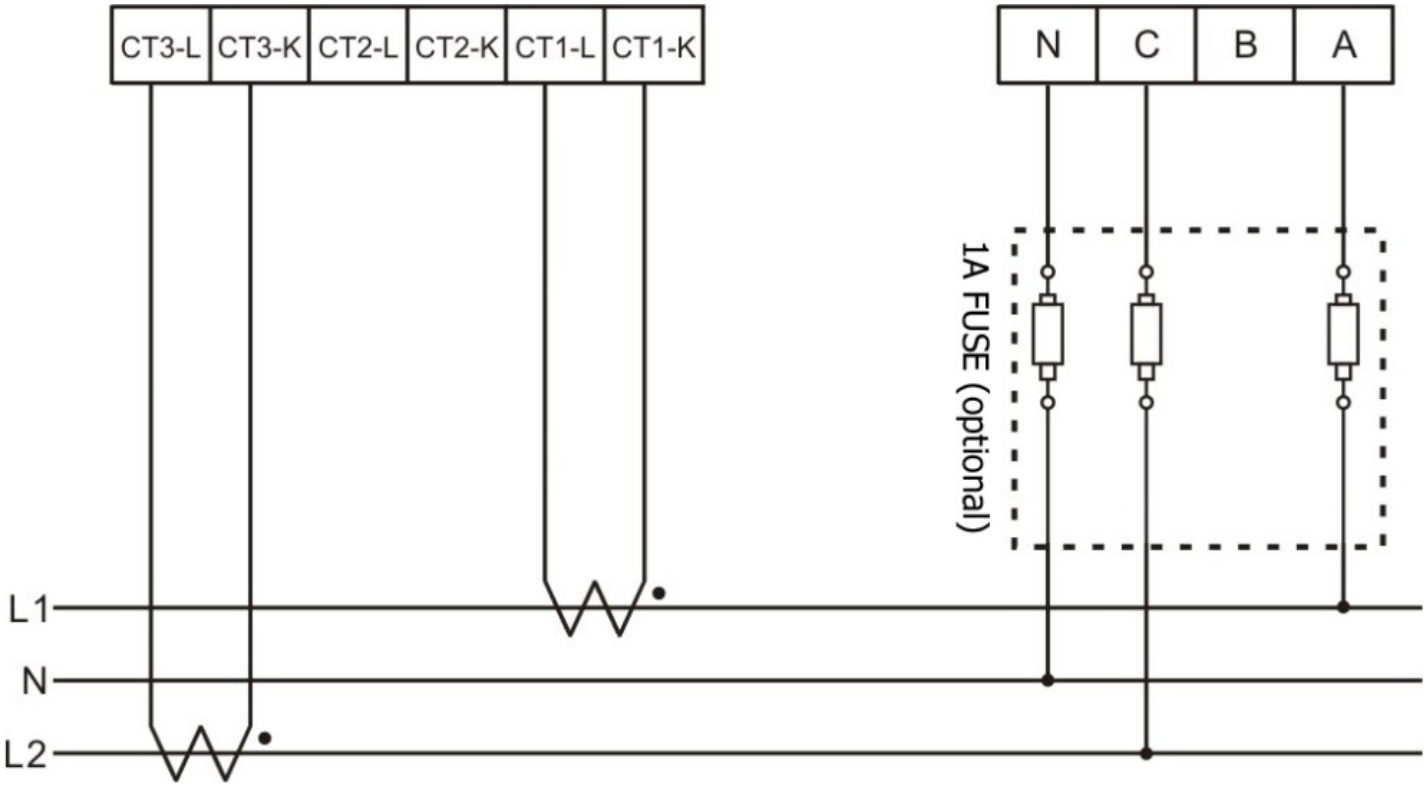


2.5. Wiring

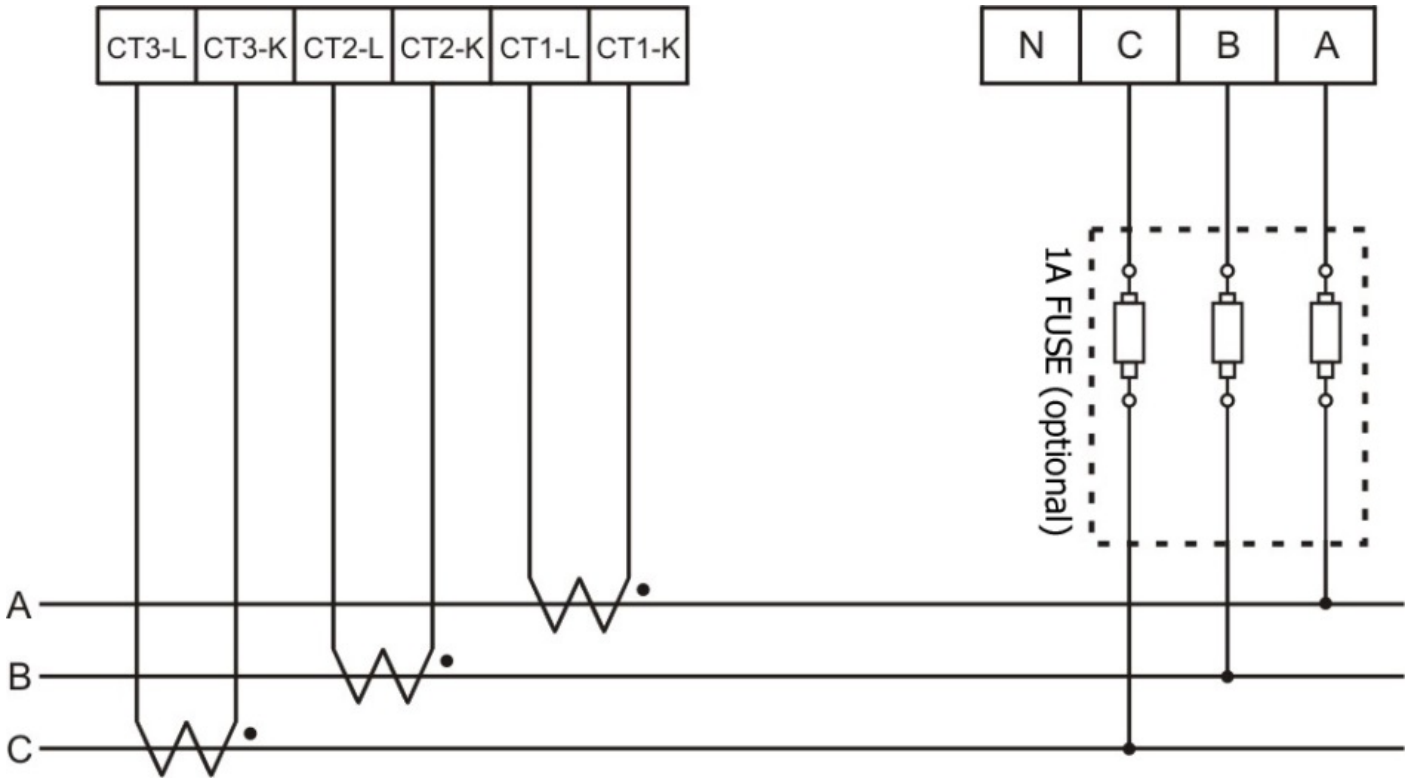
- 1P2W-1CT(PM-3133)



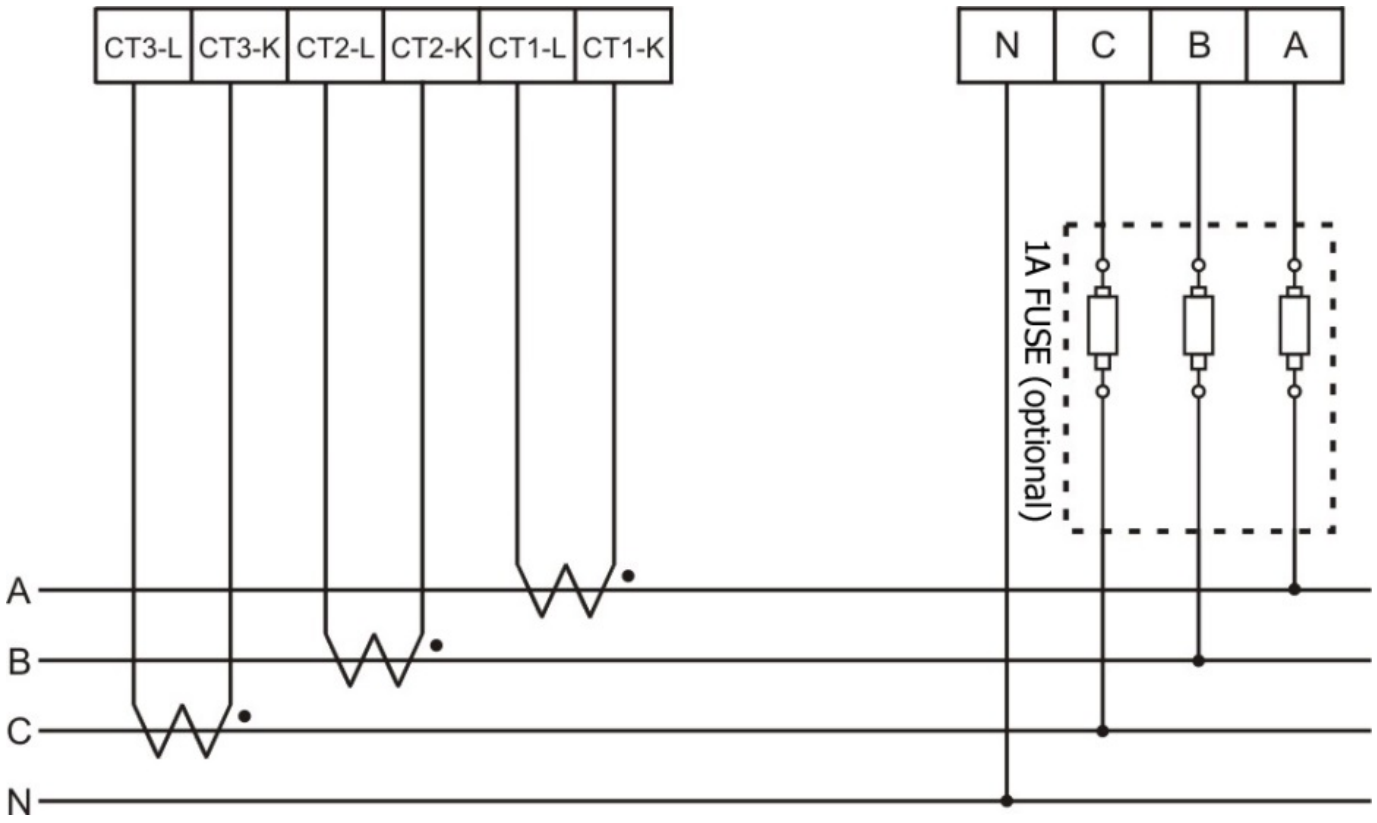
- 1P3W-2CT(PM-3133)



- 3P3W-3CT(PM-3133)

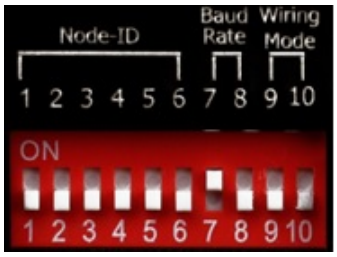


- 3P4W-3CT(PM-3133)



3. Communication

3.1. RS-485 & CAN setting



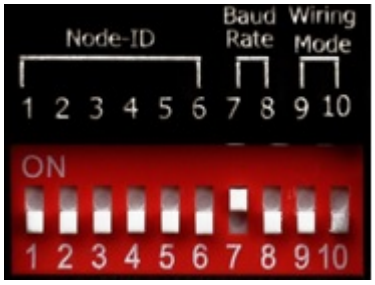
- Default setting for RS-485: **19200, n, 8, 1** ,for CAN: **125K bps**
- DIP switch (SW1-SW6) is used for Modbus address(or CANopen Node ID) setting, default is 1, i.e. all OFF
  For example: Modbus address(or CANopen Node ID) is 10，find the table of DIP switch 1-6 is **ON, OFF, OFF, ON, OFF, OFF**
- SW1－SW6 setting

  Setting Modbus-RTU address 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)**	OFF	OFF
19200 (Default)	**250k bps**	**ON**	OFF
38400 bps	**500k bps**	OFF	**ON**
115200 bps	**1M bps**	**ON**	**ON**



PM-3133：Select the different wiring mode

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

Models	PM-3133		PM-3133-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.