



Thank you for purchasing the PR300. This manual describes the setting procedures of phase and wire system, voltage range, VT ratio, and CT ratio of the PR300. The electronic manuals are also provided on the accompanying CD in addition to this manual. Read them along with this manual. To ensure correct use, be sure to read the PR300 Power and Energy Meter User's Manual (IM 77C01E01-01E) thoroughly before beginning operation.

Printed manuals (Electronic manuals [PDF files] are also provided on the accompanying CD.)

Model PR300 Power and Energy Meter Startup Manual <Installation> : IM 77C01E01-02E

Model PR300 Power and Energy Meter Startup Manual <Initial Setup Operations>: IM 77C01E01-03E (This manual)

Electronic manuals (PDF files)

Model PR300 Power and Energy Meter User's Manual: IM 77C01E01-01E

Model PR300 Power and Energy Meter Communication Interface User's Manual: IM 77C01E01-10E

Please keep this manual for future reference.



IM 77C01E01-03E  
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## Component Names and Functions

**Demand Alarm lamp (Red)**  
Comes on if the demand value exceeds the demand alarm point at any point in time other than the demand alarm mask time.

**Pulse Output lamp (Green)**  
Comes on when the output is turned on in the pulse output mode and goes out when the output is turned off.

**Communication lamp (Green)**  
Blinks while RS-485 or Ethernet communication is in progress.

**Power lamp (Green)**  
Comes on and remains lit when the PR300 is turned on and operating normally. Blinks (4 times/second) if a communication error occurs, and continues to blink until the PR300 returns to normal.

**Phase Indication lamps (Red)**  
Come on to tell for which phase the voltage or current value is being measured.

**MAX and MIN lamps (Red)**  
Come on when the maximum or minimum measured value is displayed.

**Operation keys**  
In the measured value display mode, this key is used, for example, to switch the display pattern. Also used to set parameters on the Parameter screen.  
In the measured value display mode, this key is used, for example, to move from one digit to another in an energy reading. Also used to set parameters on the Parameter screen.  
In the measured value display mode, this key is used, for example, to show the maximum/minimum value. Also used to set parameters on the Parameter screen.

**Phase and Wire System lamps (Green)**  
The phase and wire system option set in the PR300 turns on.

**Input Range lamps (Green)**  
The voltage range option set in the PR300 and the current range (rated input) option specified at the time of ordering turn on.

**Measured Value display (Red)**  
Shows a measured value of power, energy, etc. Also shows a parameter symbol and its setpoint at the time of parameter setting.

**Unit lamps (Red)**  
Show the unit symbol of a measured value for each measurement item. These unit symbols are shown in combination depending on the type of measured value.

**DEMAND lamp (Red)**  
Comes on when the measured value of demand power or demand current is displayed. (Only supported for a PR300 with the demand measuring function.)

Use to start or stop demand measurement. The lamp (green) in the key lights in the demand measurement.

In the measured value display mode, this key is used, for example, to switch the phase of voltage/current. Also used to set parameters on the Parameter screen.

## 1. Set up the PR300 First

### NOTE

If you change the phase and wire system and the voltage range, all parameters other than those related to RS-485 and Ethernet communications are initialized (to factory-set values). Change the phase and wire system and the voltage range before setting parameters such as the VT and CT ratios.

### 1.1 Setting the Phase and Wire System

This section explains how to set the phase and wire system by taking as an example the case when a three-phase four-wire system is changed to a three-phase three-wire system.

#### Startup screen



1 Turn on the PR300.

#### Measured Value screen



The PR300 shows the station number for about 5 seconds, then the Measured Value screen \* appears.

2 Hold down **SET/ENT** for at least 3 seconds.

#### VT Ratio screen



The parameter **Vt** (VT ratio) appears.

3 Simultaneously hold down **SET/ENT**, **↓** and **SEL** for at least 3 seconds.

#### Specification Change Confirmation screen



The Specification Change Confirmation screen appears.

4 Using **↓** or **↑**, show **YES** on the lower display.

#### Specification Change Confirmation screen



5 Press **SET/ENT** once.

#### Phase and Wire System screen



The Phase and Wire System screen appears.

6 Press **SET/ENT** once.

#### Phase and Wire System Setting screen



The Phase and Wire System Setting screen appears.

7 Switch the phase and wire system using **↓** or **↑**.

#### Phase and Wire System Setting screen



8 Press **SET/ENT** twice to confirm the setpoint.

#### Phase and Wire System Setting screen



Pressing **SET/ENT** once causes all digits of the setpoint to start blinking. Pressing **SET/ENT** once again confirms the setpoint and returns to the Phase and Wire System screen.

The phase and wire system thus set is shown as the current value.

#### Phase and Wire System screen



When proceeding to set the voltage range, start from Step 6 in Section 1.2, "Setting the Voltage Range," with this screen (figure on the left) shown as is.

Current value

9 Hold down **SET/ENT** for at least 3 seconds.

#### Measured Value screen



The PR300 shows the Startup screen for about 5 seconds, then the Measured Value screen appears.

Setting completed.



### Note

- If single-phase three wire system is selected, the voltage range is fixed at 300V (between P0 and P1, P0 and P2). The voltage range cannot be selected.
- Three-phase four-wire system (2.5 element) can be used only when the voltage is in a state of equilibrium. In addition, the phase and wire system cannot be changed.

### Range of Phase and Wire System Options

Parameter Symbol Parameter Name	Setting Type	Setting Range (Details)	Initial Value (Factory-set Value)
PH-41 Phase and wire system	Selection	Model and Suffix Codes PR300-3□□□□-6□-0	Three-phase three-wire system
		Single-phase two-wire system	1P2W
		Single-phase three-wire system	1P3W
Model and Suffix Codes PR300-4□□□□-6□-0	Selection	Three-phase three-wire system	3P3W
		Single-phase two-wire system	1P2W
		Single-phase three-wire system	1P3W
		Three-phase three-wire system	3P3W
Model and Suffix Codes PR300-5□□□□-6□-0	Selection	Three-phase four-wire system	3P4W
		Three-phase four-wire system (2.5 element)	2.5E

\* The initial value of the Measured Value screen (display pattern) is Upper display: Current (phase switch indication), Middle display: Voltage (phase switch indication), and Lower display: Active power. For the display pattern setting procedures, refer to the PR300 Power and Energy Meter User's Manual (IM 77C01E01-01E) provided on the accompanying CD.

## 1.2 Setting the Voltage Range

This section explains how to set the voltage range by taking as an example the case when the voltage range is changed from 300 V to 600 V.

### Startup screen



1 Turn on the PR300.

### Measured Value screen



The PR300 shows the station number for about 5 seconds, then the Measured Value screen \* appears.

2 Hold down **SET/ENT** for at least 3 seconds.

### VT Ratio screen



The parameter **VL** (VT ratio) appears.

3 Simultaneously hold down **SET/ENT** and **SEL** for at least 3 seconds.

### Specification Change Confirmation screen



The Specification Change Confirmation screen appears.

4 Using **↓** or **↑**, show **YES** on the lower display.

### Specification Change Confirmation screen



5 Press **SET/ENT** once.

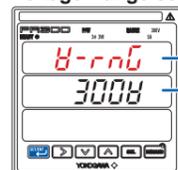
### Phase and Wire System screen



The Phase and Wire System screen appears.

6 Using **↓** or **↑**, show the Voltage Range screen.

### Voltage Range screen



The Voltage Range screen appears.

Parameter symbol for voltage range  
Current value

7 Press **SET/ENT** once.

### Voltage Range Setting screen



The Voltage Range Setting screen appears.

8 Using **↓** or **↑**, change the voltage range.  
Setpoint

### Voltage Range Setting screen



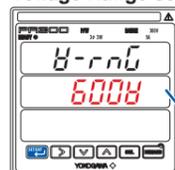
9 Press **SET/ENT** twice to confirm the setpoint.

### Voltage Range Setting screen



Pressing **SET/ENT** once causes all digits of the setpoint to start blinking. Pressing **SET/ENT** once again confirms the setpoint and returns to the Voltage Range screen.  
The voltage range thus set is shown as the current value.

### Voltage Range screen



When proceeding to set the phase and wire system, press **↓** or **↑** to show the Phase and Wire System screen, with this screen (figure on the left) shown as is. After showing the Phase and Wire System screen, start from step 6 in Section 1.1, "Setting the Phase and Wire System."  
Current value

10 Hold down **SET/ENT** for at least 3 seconds.

### Measured Value screen



The PR300 shows the Startup screen for about 5 seconds, then the Measured Value screen appears.

Setting completed.

### NOTE

- The voltage range of single-phase three-wire system is fixed at 300V (between P0 and P1, P0 and P2). The voltage range cannot be selected.
- For the voltage range of three-phase four-wire system, set the voltage between P0 and P1, P0 and P2, P0 and P3.

### Range of Voltage Range Options

Parameter Symbol Parameter Name	Setting Type	Setting Range (Details)	Initial Value (Factory-set Value)
U-rnG Voltage range	Selection	150V 150V 300V 300V 600V 600V	300V

\* The initial value of the Measured Value screen (display pattern) is Upper display: Current (phase switch indication), Middle display: Voltage (phase switch indication), and Lower display: Active power. For the display pattern setting procedures, refer to the PR300 Power and Energy Meter User's Manual (IM 77C01E01-01E) provided on the accompanying CD.

## 2. Setting the VT and CT Ratios



### NOTE

Set the VT and CT ratios so that the value of "secondary rated power × VT ratio × CT ratio" is smaller than 10 GW. If this value exceeds 10 GW, the updated VT or CT ratio will not be incorporated but revert to the current value before change.

### 2.1 Setting the VT Ratio

This section explains how to set the VT ratio by taking as an example the case when the VT ratio is changed from the initial value (1) to 4. Prior to proceeding to the following steps, ensure that the PR300 is turned on, and the Measured Value screen is displayed.

### Measured Value screen



1 Hold down **SET/ENT** for at least 3 seconds.

### VT Ratio screen



The parameter **VL** (VT ratio) appears.

2 Press **SET/ENT** once.  
Current value

### VT Ratio Setting screen



The screen changes to the one for setting the parameter **VL** and the alterable digit blinks.

3 Using **↓** or **↑**, change the setpoint.  
Setpoint

### VT Ratio Setting screen



To move to the digit to be changed, use the following keys:  
To the left  
To the right

4 Press **SET/ENT** twice to confirm the setpoint.

### VT Ratio Setting screen



Pressing **SET/ENT** once causes all digits of the setpoint to start blinking. Pressing **SET/ENT** once again confirms the setpoint and returns to the VT Ratio screen.

To re-set the parameter:  
Press any key other than **SET/ENT** while all digits of the setpoint are blinking. The PR300 returns to the initial setting screen.

### VT Ratio screen



To return to the Measured Value screen, hold down **SET/ENT**.

If you do not operate any key for more than 5 minutes on the Parameter screen, the PR300 automatically returns to the Measured Value screen.

Setting completed.

When proceeding to set the CT ratio, press **↓** once and start from step 3 in Section 2.2, "Setting the CT Ratio."

### Parameter Setting Types and Ranges

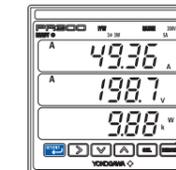
Parameter Symbol Parameter Name	Setting Type	Setting Range (Details)	Initial Value (Factory-set Value)
VL VT ratio	Integral numeric value	1 to 6000	1

## 2.2 Setting the CT Ratio

This section explains how to set the CT ratio by taking as an example the case when the CT ratio is changed from the initial value (1.00) to 10.00.

Prior to proceeding to the following steps, ensure that the PR300 is turned on, and the Measured Value screen is displayed.

### Measured Value screen



1 Hold down **SET/ENT** for at least 3 seconds.

### VT Ratio screen



The parameter **VL** (VT ratio) appears.

2 Press **↓** once.

### CT Ratio screen



The parameter **CL** (CT ratio) appears.

3 Press **SET/ENT** once.  
Current value

### CT Ratio Setting screen



The screen changes to the one for setting the parameter **CL**. The lower display shows the current value and the decimal point blinks.

To move the decimal point, use the following keys:  
To the left  
To the right

4 Press **SET/ENT** once to fix the position of the decimal point.

### CT Ratio Setting screen



The alterable digit blinks.

5 Using **↓** or **↑**, change the setpoint.

### CT Ratio Setting screen



To move to the digit to be changed, use the following keys:  
To the left  
To the right

6 Press **SET/ENT** twice to confirm the setpoint.

### CT Ratio Setting screen



Pressing **SET/ENT** once causes all digits of the setpoint to start blinking. Pressing **SET/ENT** once again confirms the setpoint and returns to the CT Ratio screen.

To re-set the parameter:  
Press any key other than **SET/ENT** while all digits of the setpoint are blinking. The PR300 returns to the initial setting screen.

### CT Ratio screen



To return to the Measured Value screen, hold down **SET/ENT**.

If you do not operate any key for more than 5 minutes on the Parameter screen, the PR300 automatically returns to the Measured Value screen.

Setting completed.

### Parameter Setting Types and Ranges

Parameter Symbol Parameter Name	Setting Type	Setting Range (Details)	Initial Value (Factory-set Value)
CL CT ratio	Floating-point numeric value	0.05 to 32000	1.00