

# Vertiv™ CoolPhase Row and Condensing Unit Power Meter



## Quick Installation Guide

After the product arrives, you can refer to this quick installation guide for operation. For detailed description and installation diagrams, refer to Vertiv™ CoolPhase Row User Manual.

### 1. Preparation and Safety



#### WARNING

**Power Disconnection:** Before starting any work, it is imperative to turn off the power supply from the main switch to ensure safety during installation.



#### CAUTION

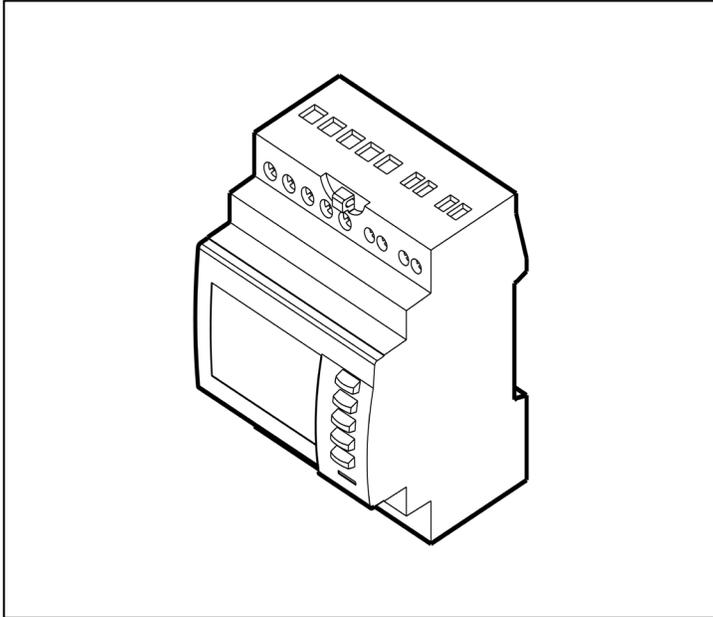
**Schematic Review:** Carefully examine the electrical schematics of the installation to identify the connection points of the CTs and the power meter feed lines. This ensures correct location and connection of components.

#### Required Tools:

- PPE defined by OSHA standards (gloves)
- Flat-head screwdriver

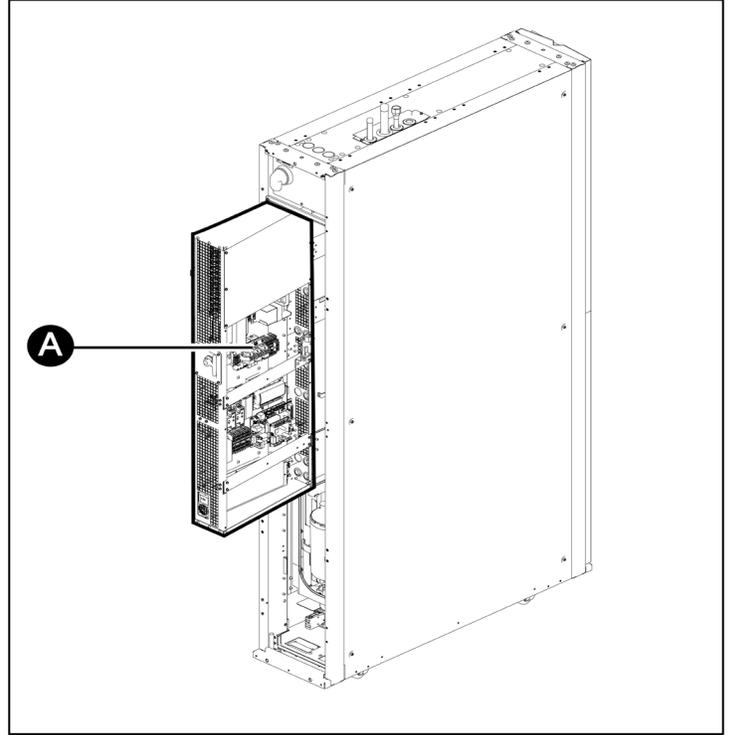
## Indoor Unit: CoolPhase Row Power Meter Installation Instructions

### 1. Main Appearance

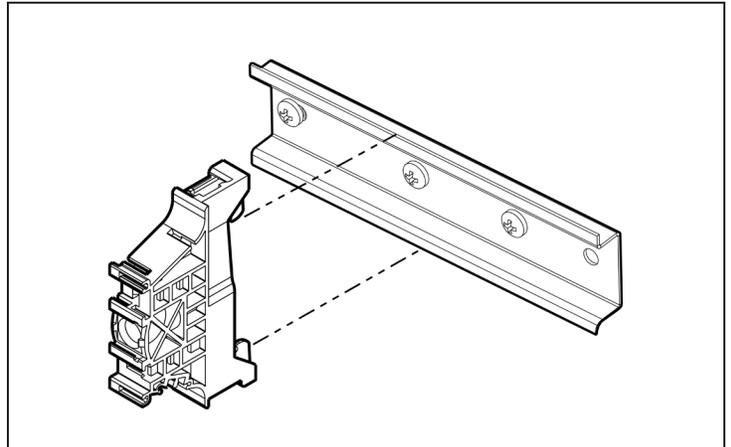


### 2. Remove a stop from the DIN rail.

**Location:** Select the designated spot in the EBOX (A), as indicated in the image below.



Remove the stop from the DIN rail in the assigned space.



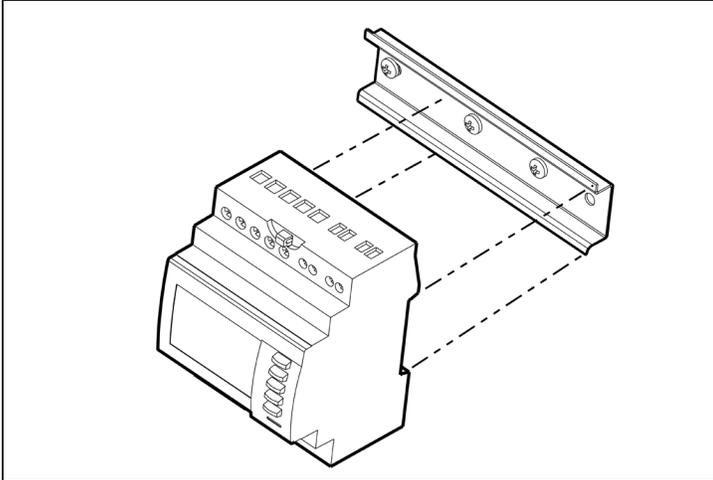
# Vertiv™ CoolPhase Row Power Meter Installation



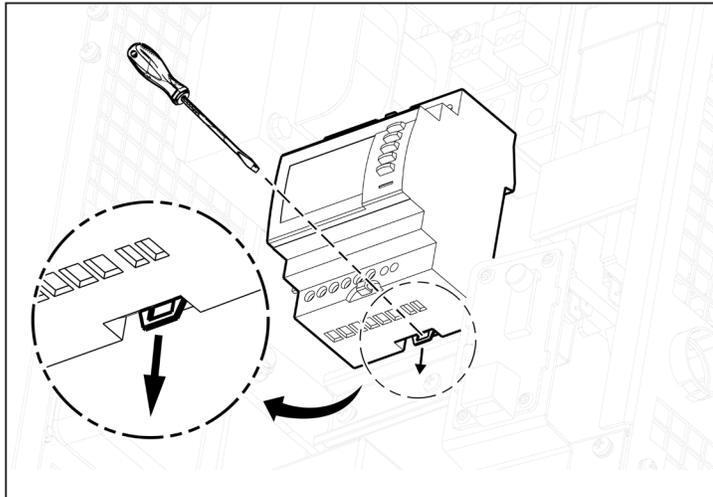
Quick Installation Guide

## 3. Power Meter Installation

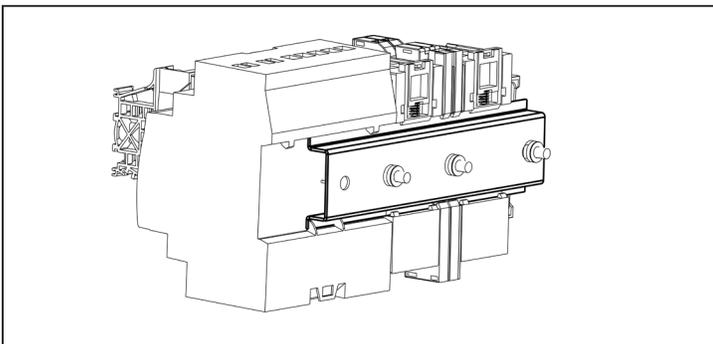
Once the stopper is removed, place the power meter on the DIN rail.



Ensuring that the manual lock at the bottom of the device is properly secured. For this, use the flat-head screwdriver to facilitate fastening to the rail.

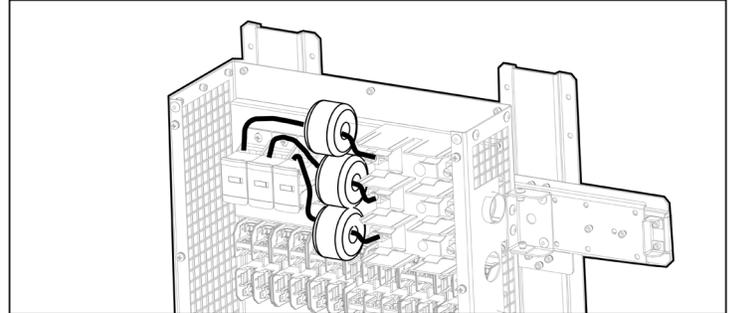


Make sure that the power meter fits correctly into the DIN rail profile as shown in the figure below.



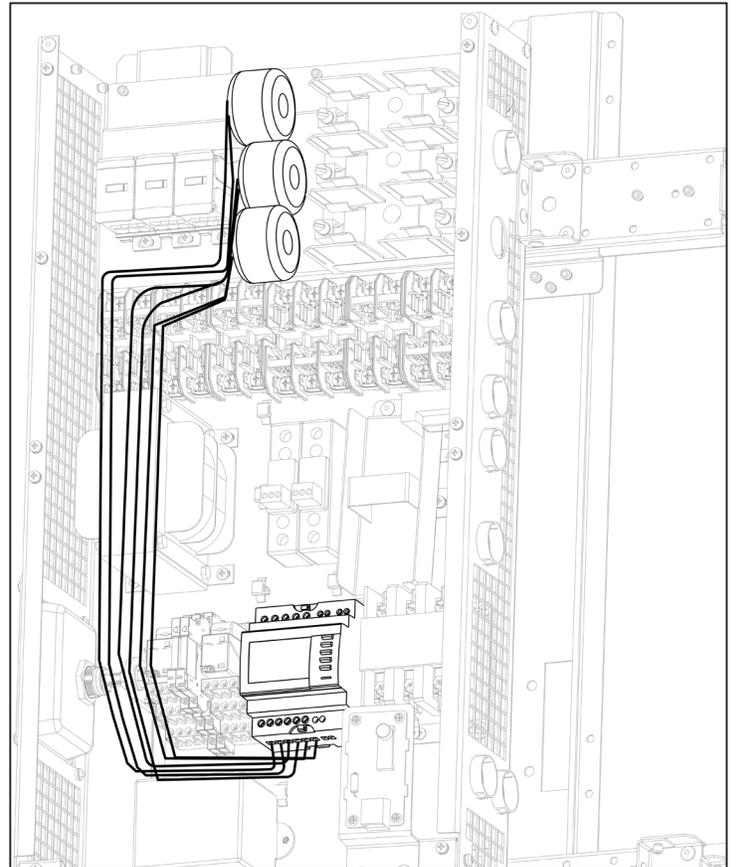
## 4. Installation of Current Transformers (CTs)

**Placement of CTs:** Install the CTs on the corresponding power lines, following the indications of the electrical schematic.



**Connection of CTs:**

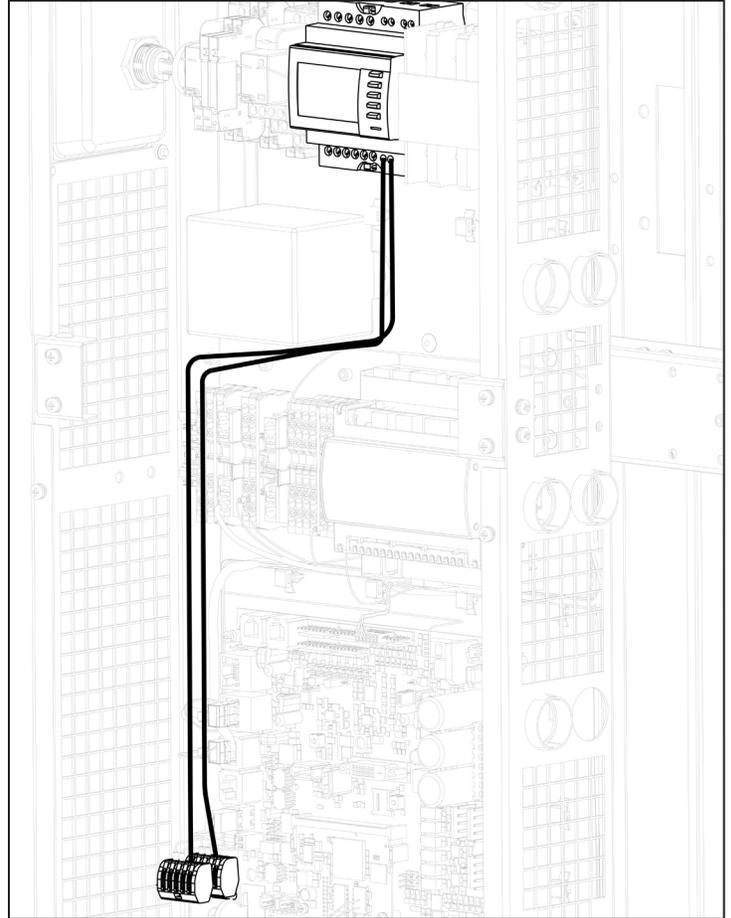
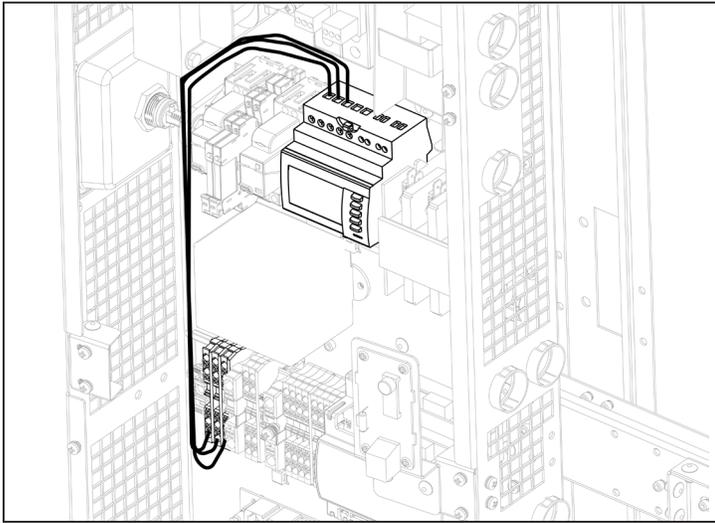
- Connect the output cables of the CTs to the designated inputs on the power meter.
- It is essential to respect the polarity and ensure firm connections to avoid erroneous readings or damage to the equipment.



## 5. Connection of Power Lines to the Meter

Once the CTs are installed, proceed to connect the power lines to the energy meter:

- **Voltage:** Connect the voltage inputs of the meter to the corresponding phases of the power line, ensuring that the connections are firm and secure. Verify against the electrical diagram.
- **Verification:** Review all connections to ensure there are no errors or loose connections that could affect the accuracy of the measurement or the safety of the system.
- Use appropriate cables ensuring they meet the specifications according to applicable standards.



## 6. Modbus Communication Connection

- **Identification of Terminals:** Locate the Modbus communication terminals on the energy meter.
- **Wiring:**
  - Use appropriate cables for RS485 communication, ensuring they comply with applicable standards.
  - Connect the cables to the corresponding terminals, following the connection diagram provided in the device manual.

Table 1. Modbus Communication Configuration

Modbus Parameters	Power Meter 1	Power Meter 2
ID	11	12
Communication Speed (Baudrate)	9600	9600
Parity	None	None
Stop Bits	2	2

## 7. Verification

- **Final Review:**
  - Ensure that all connections are firm and correctly installed.
  - Verify that there are no loose or poorly connected cables that could compromise the safety or operation of the system.
- **Power Restoration:** Once all connections and verifications are completed, restore the electrical supply from the main switch.

### NOTE:

The representations are merely illustrative, for more details please refer to the schematics in the User Manual.

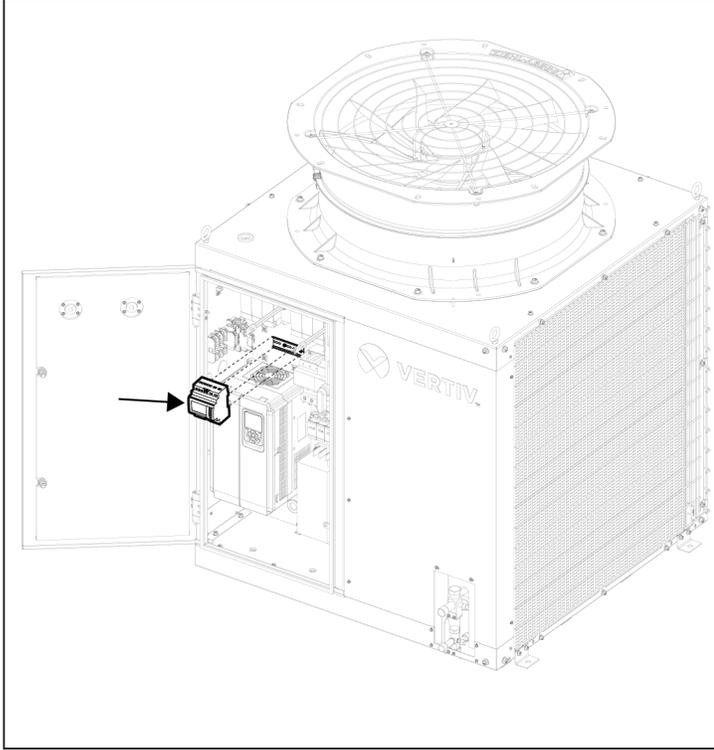
# Vertiv™ CoolPhase Condensing Unit Power Meter Installation



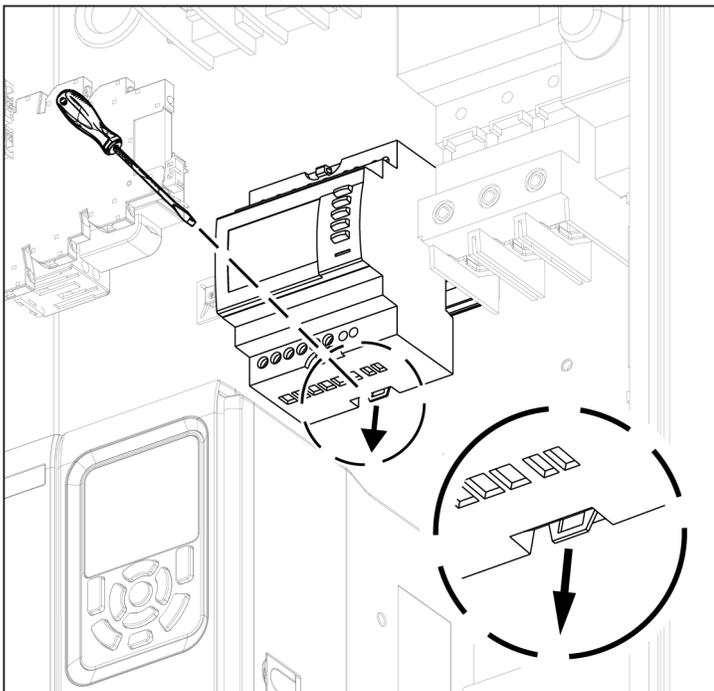
Quick Installation Guide

## 1. Location and Installation of Power Meter

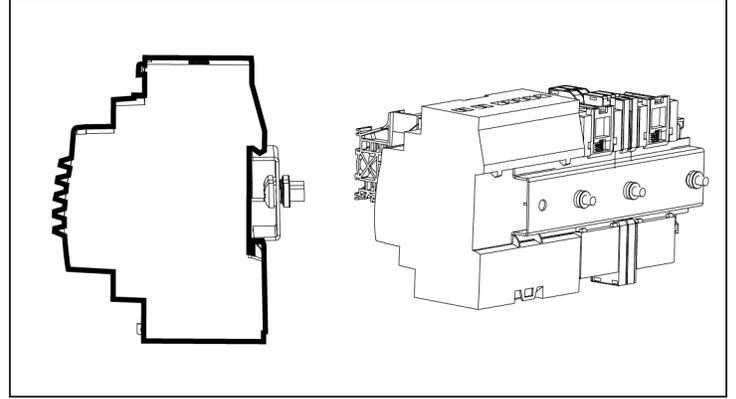
Open the electrical box to locate the empty DIN rail inside, and place the device on it.



Ensuring that the manual lock at the bottom of the device is properly secured. For this, use the flat-head screwdriver to facilitate fastening to the rail.



Make sure that the power meter fits correctly into the DIN rail profile as shown in the figure below.

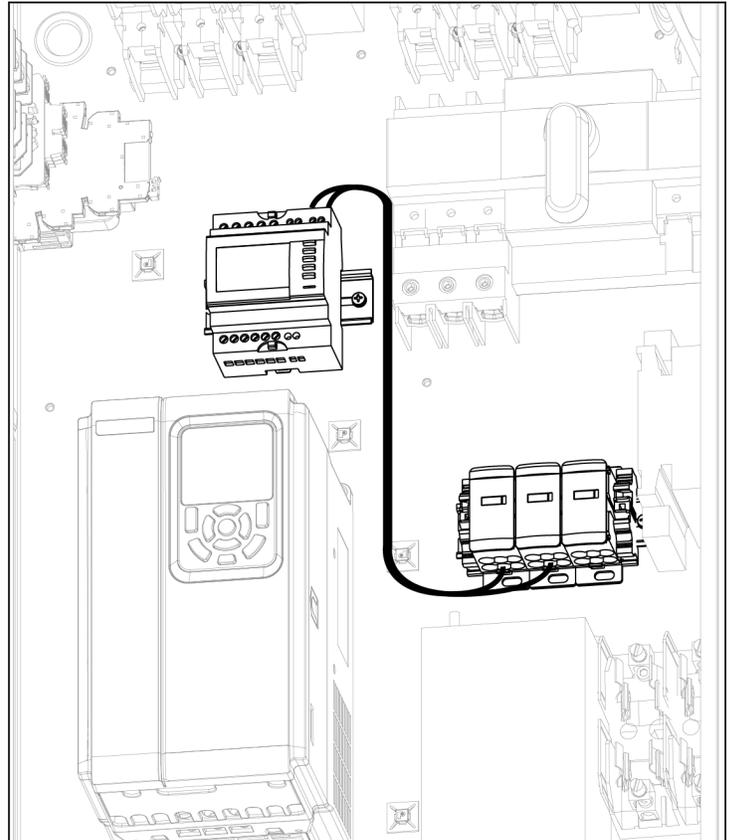


## 2. Connection of Power Lines to the Meter

Connect the power lines to the energy meter according to its corresponding model capacity.

### Power Supply connection to 260V Units

Connect the voltage inputs of the meter to their corresponding power distribution block and route the cable on the left side of it as shown. The voltage inputs must be connected to the 20 and 22 terminals of the device.



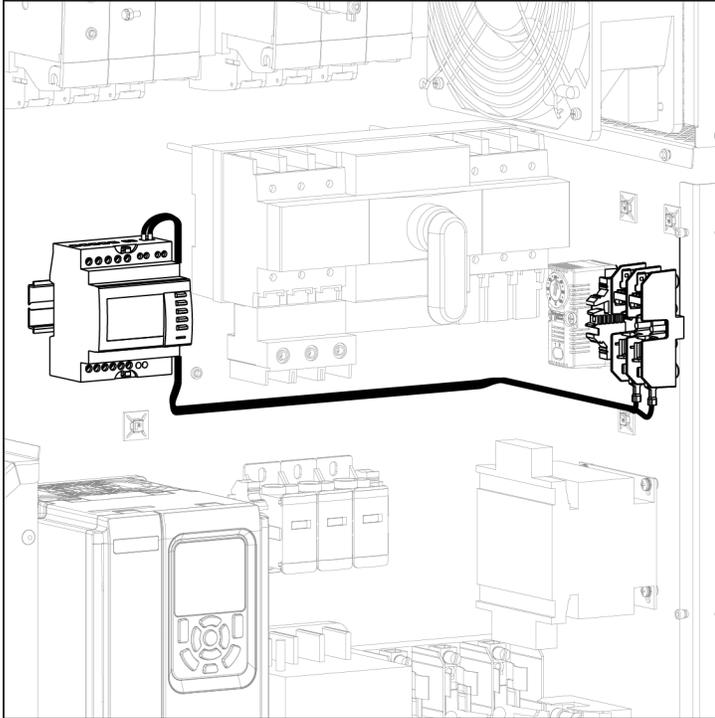
# Vertiv™ CoolPhase Condensing Unit Power Meter Installation



## Quick Installation Guide

### Power Supply connection to 460V Units

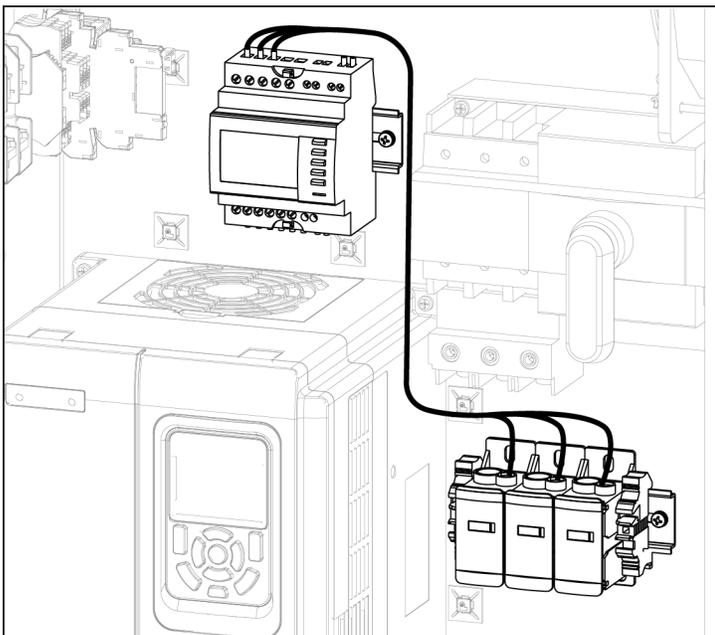
To connect the power input, it must be in a free position of the fuse block; route the cable as shown in the figure below.



### 3. Voltage readings

The following indications apply to all Condensing Unit models:

- Three cables must be connected to each power distribution block and routed to the corresponding power meter terminal.
- Neutral terminal in the Power Meter must be connected to GND terminal.

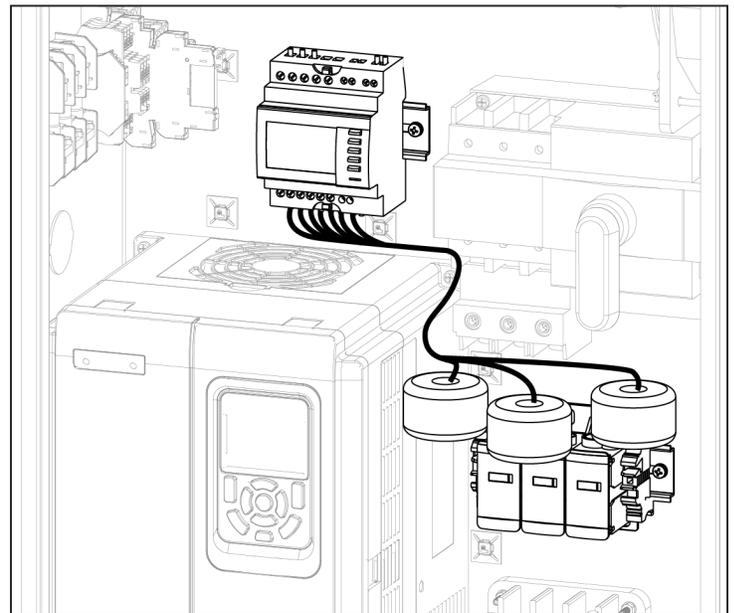


### 4. Current readings

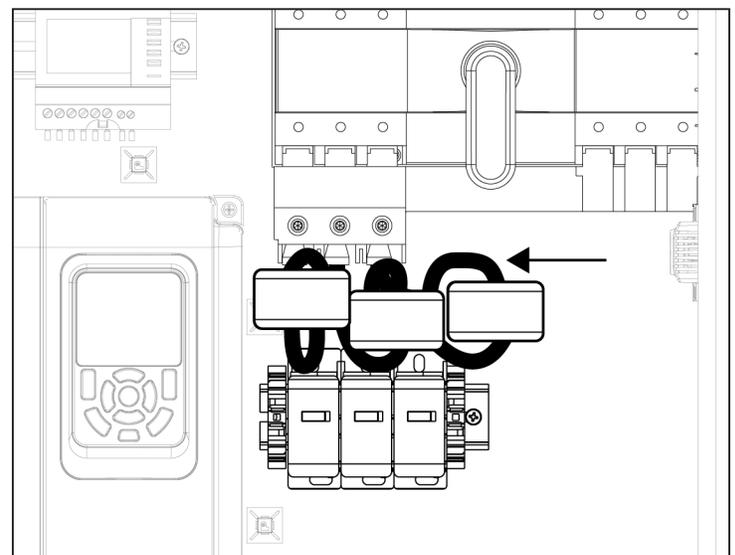
Placement of Current Transformers (CTs): Install the CTs on the corresponding power lines, following the indications of the electrical schematic.

The following indications apply to all Condensing Unit models:

- Three current transformers must be placed on each input line.
- The cables must connect to the S1, S2, and S3 power meter connections.
- It is essential to respect the polarity and ensure firm connections to avoid erroneous readings or damage to the equipment.



NOTE: For units with Dual Power Supply, it is necessary to change the cable already installed to the ATS Contactor and the power distribution block due to the limited space in the electrical box; this cable must be replaced with a longer one that can hold the CTs.



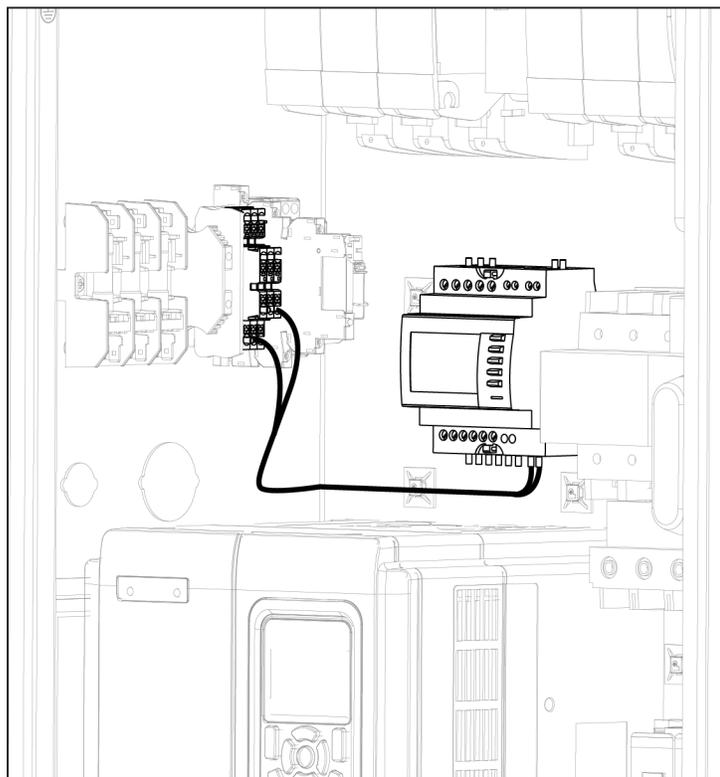
# Vertiv™ CoolPhase Condensing Unit Power Meter Installation



## Quick Installation Guide

### 6. Modbus Communication Connection

- Identification of Terminals: Locate the Modbus communication terminals on the energy meter.
- Wiring:
  - Use appropriate cables for RS485 communication, ensuring they comply with applicable standards.
  - Connect the cables to the corresponding terminals, following the connection diagram provided in the device manual. For the communication connection, the cables must route towards their corresponding terminal block, which is located on the left side of the electrical box.



### 7. Verification

- Final Review:
  - Ensure that all connections are firm and correctly installed.
  - Verify that there are no loose or poorly connected cables that could compromise the safety or operation of the system.
- Power Restoration: Once all connections and verifications are completed, restore the electrical supply from the main switch.

#### NOTE:

The representations are merely illustrative, for more details please refer to the schematics in the User Manual.

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