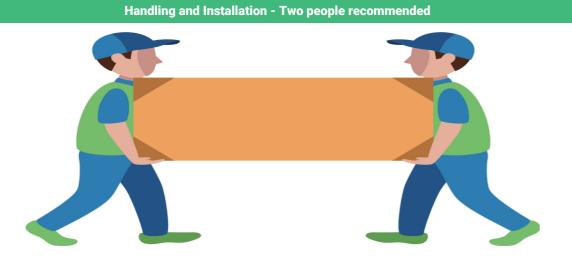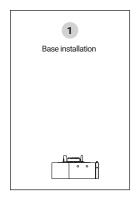# EP CUBE Quick Installation Guide V2.4 for authorized installer only!

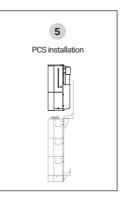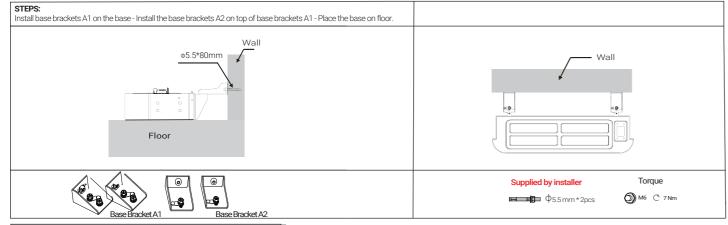## Handling and Installation - Two people recommended

Installation Steps

1	2	3	4	5
Base installation	Battery installation	Top battery installation	Wall bracket installation	PCS installation
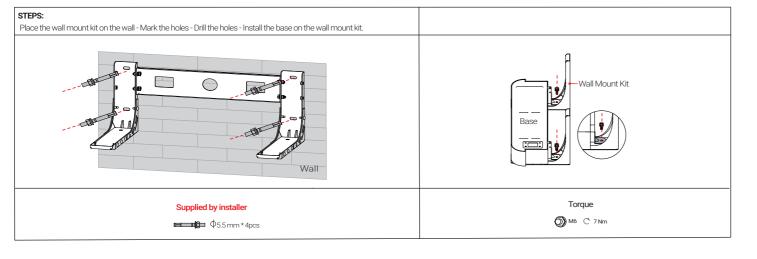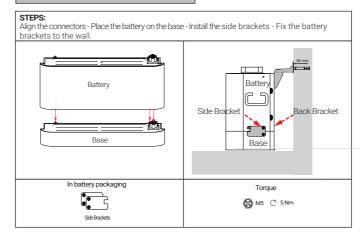
1.1 Base Installation on Wall (floor mounting)

STEPS:
Install base brackets A1 on the base - Install the base brackets A2 on top of base brackets A1 - Place the base on floor.

φ5.5*80mm
Wall
Floor
Wall

Base Bracket A1   Base Bracket A2

Supplied by installer
φ5.5 mm * 2pcs

Torque
M6   7 Nm
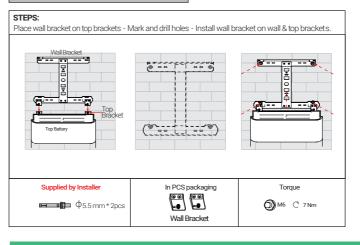
1.2 Base Installation (wall mounting - optional wall mount kit required)

STEPS:
Place the wall mount kit on the wall - Mark the holes - Drill the holes - Install the base on the wall mount kit.

Wall Mount Kit
Base
Wall

Supplied by installer
φ5.5 mm * 4pcs

Torque
M6   7 Nm
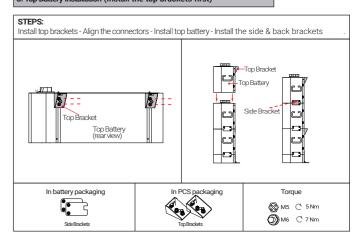
2. Battery and Base Installation

STEPS:
Align the connectors - Place the battery on the base - Install the side brackets - Fix the battery brackets to the wall.

Battery
Base
Battery
Side Bracket   Back Bracket
Base
59 mm

In battery packaging
Side Brackets

Torque
M5   5 Nm
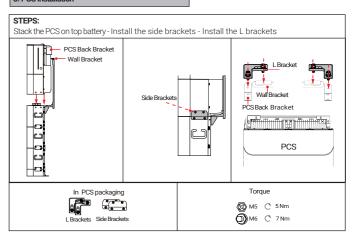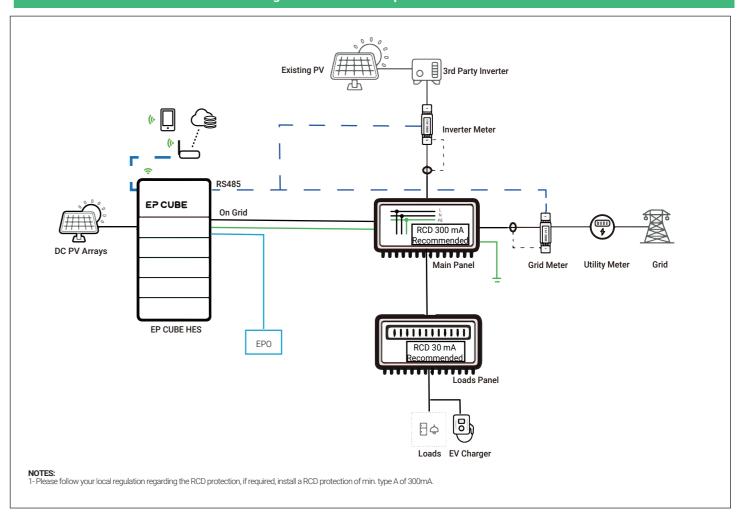
3. Top Battery Installation (Install the top brackets first)

STEPS:
Install top brackets - Align the connectors - Install top battery - Install the side & back brackets.

Top Bracket
Top Battery
(rear view)
Top Bracket
Top Battery
Side Bracket

In battery packaging
Side Brackets

In PCS packaging
Top Brackets

Torque
M5   5 Nm
M6   7 Nm

4. Wall bracket installation

STEPS:
Place wall bracket on top brackets - Mark and drill holes - Install wall bracket on wall & top brackets.

Wall Bracket
Top Bracket
Top Battery

Supplied by Installer
φ5.5 mm * 2pcs

In PCS packaging
Wall Bracket

Torque
M6   7 Nm

5. PCS installation

STEPS:
Stack the PCS on top battery - Install the side brackets - Install the L brackets.

PCS Back Bracket
Wall Bracket
Side Brackets
L Bracket
Wall Bracket
PCS Back Bracket
PCS

In PCS packaging
L Brackets   Side Brackets

Torque
M5   5 Nm
M6   7 Nm

Wiring Schematic Without Optional AC Switch Box

Existing PV — 3rd Party Inverter
Inverter Meter
RS485
DC PV Arrays
EP CUBE
On Grid
EP CUBE HES
EPO
RCD 300 mA Recommended
Main Panel
Grid Meter   Utility Meter   Grid
RCD 30 mA Recommended
Loads Panel
Loads   EV Charger

NOTES:
1- Please follow your local regulation regarding the RCD protection, if required, install a RCD protection of min. type A of 300mA.
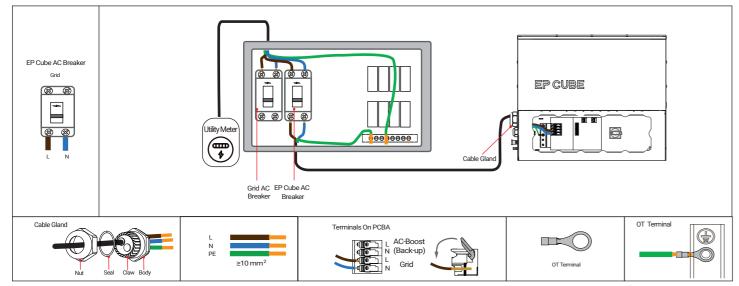
1. PV to EP Cube (It is recommended to install an external DC PV breaker between the EP Cube and the strings. Check string polarity with multimeter prior to connection).
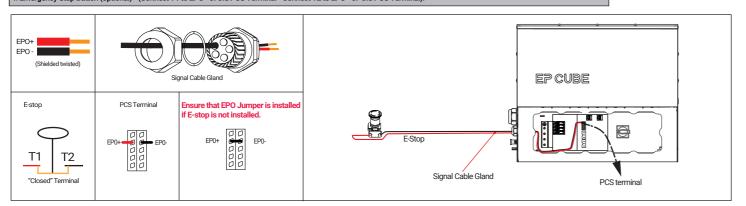
In PCS Packaging

Devalan Connector Contact Pins（Female)	2 PCS	
Devalan PV Connectors（Female)	2 PCS	
Devalan Connector Contact Pins（Male)	2 PCS	
Devalan PV Connectors（Male)	2 PCS	
Devalan PV Connector Disassembly Tool	1 PCS	

1. Crimp the male/female pins, but not the stopper.

"Stopper"

2. Assemble the connectors.

3. Plug the connectors to the PCS

4. Lock the connectors.

"Click"

EP CUBE

PV connector

2. Remove Front Panel and Dead Front Cover

STEPS:
Remove the front cover -Unfasten the screws on the dead front board.

EP CUBE

ON
OFF

M4   Torque   4-5 Nm

3. PCS On-Grid to EP Cube AC Breaker

EP Cube AC Breaker
Grid
L   N

Utility Meter

Grid AC Breaker   EP Cube AC Breaker

Cable Gland

EP CUBE

Cable Gland

Nut Seal Claw Body

L
N
PE
≥10 mm²

Terminals On PCBA

L
N
L
N

AC-Boost (Back-up)

Grid

OT Terminal
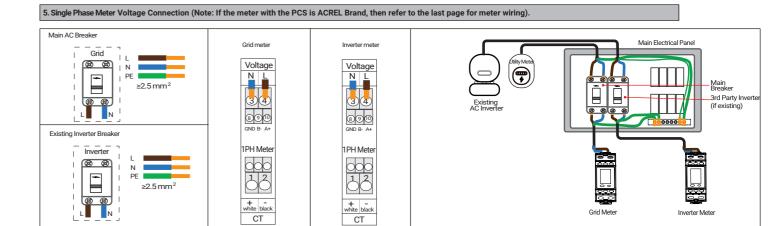
OT Terminal

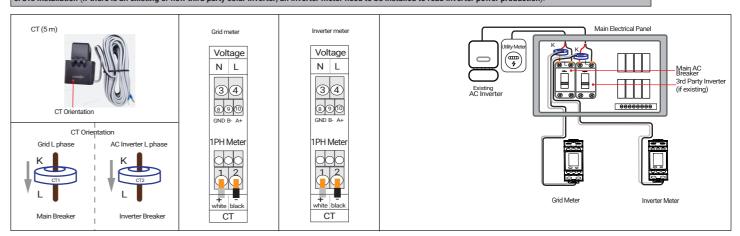## 4. Emergency Stop Button (optional) - (Connect T1 to EPO+ of the PCS Terminal - Connect T2 to EPO - of the PCS Terminal).

EPO+
EPO -
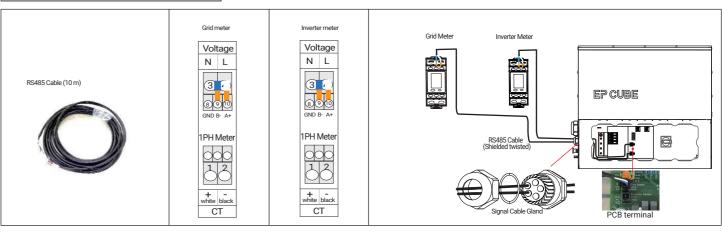(Shielded twisted)

Signal Cable Gland

E-stop

T1   T2

"Closed" Terminal

PCS Terminal

EP0+   EP0-

EP0+   EP0-

Ensure that EPO Jumper is installed if E-stop is not installed.

EP CUBE

E-Stop

Signal Cable Gland

PCS terminal

Meters Wiring (with Eastron Meter)

5. Single Phase Meter Voltage Connection (Note: If the meter with the PCS is ACREL Brand, then refer to the last page for meter wiring).

Main AC Breaker

Grid
L
N
PE
≥2.5 mm²
L   N

Existing Inverter Breaker

Inverter
L
N
PE
≥2.5 mm²
L   N

Grid meter

Voltage
N   L
3   4
8 9 10
GND B- A+

1PH Meter
1   2
+   -
white black
CT

Inverter meter

Voltage
N   L
3   4
8 9 10
GND B- A+

1PH Meter
1   2
+   -
white black
CT

Main Electrical Panel

Utility Meter

Existing AC Inverter

Main Breaker
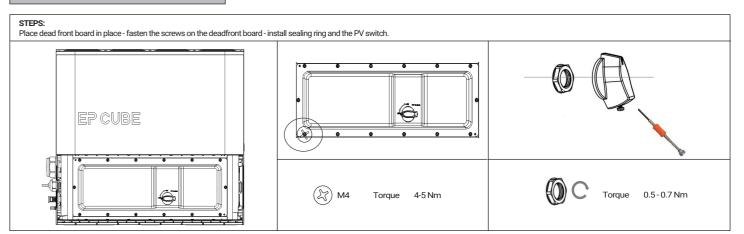3rd Party Inverter (if existing)

Grid Meter   Inverter Meter

6. CTs Installation (if there is an existing or new third party solar inverter, an inverter meter need to be installed to read inverter power production).
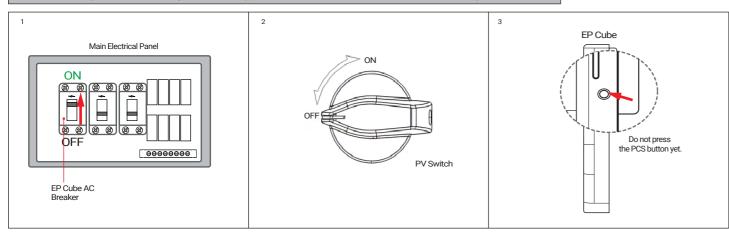
CT (5 m)

CT Orientation

CT Orientation

Grid L phase
K
L
CT1
Main Breaker

AC Inverter L phase
K
L
CT2
Inverter Breaker

Grid meter

Voltage
N   L
3   4
8 9 10
GND B- A+

1PH Meter
1   2
+   -
white black
CT

Inverter meter

Voltage
N   L
3   4
8 9 10
GND B- A+

1PH Meter
1   2
+   -
white black
CT

Main Electrical Panel

Utility Meter

Existing AC Inverter

Main AC Breaker
3rd Party Inverter (if existing)

Grid Meter   Inverter Meter

7. RS485 Signal Connection

RS485 Cable (10 m)

Grid meter

Voltage
N   L
3   4
8 9 10
GND B- A+

1PH Meter
1   2
+   -
white black
CT

Inverter meter

Voltage
N   L
3   4
8 9 10
GND B- A+

1PH Meter
1   2
+   -
white black
CT

Grid Meter   Inverter Meter

EP CUBE

RS485 Cable (Shielded twisted)

Signal Cable Gland

PCB terminal

8. Install Front Panel and Dead Front Cover

STEPS:
Place dead front board in place - fasten the screws on the deadfront board - install sealing ring and the PV switch.
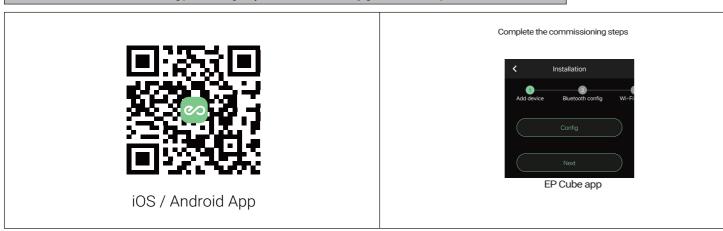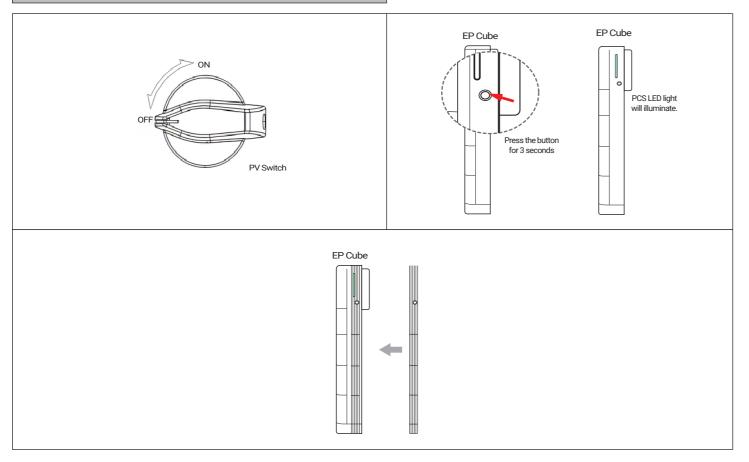
EP CUBE

M4   Torque   4-5 Nm

Torque   0.5 - 0.7 Nm

9. Power on EP CUBE, Operate EP CUBE in Standby for Commissioning (Turn on EP Cube AC Breaker - Ensure that PV Switch is off - Do not press PCS button.

1

Main Electrical Panel

ON

OFF

EP Cube AC Breaker

2

ON

OFF

PV Switch

3

EP Cube

Do not press the PCS button yet.

10. Download the EP CUBE APP for Commissioning (Download - Log in to your installer account - "More" page - "New Installation")
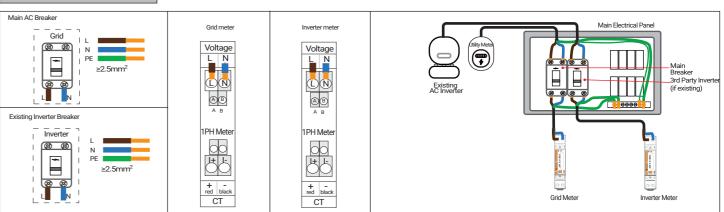
iOS / Android App

Complete the commissioning steps

Installation

Add device   Bluetooth config   Wi-Fi

Config

Next

EP Cube app

11. Activate EP CUBE (Turn on the PV switch - Press the button for 3 sec - Assemble the side covers)

ON

OFF

PV Switch

EP Cube

Press the button for 3 seconds

EP Cube

PCS LED light will illuminate.

EP Cube

5. Single Phase Meter Voltage Connection

Main AC Breaker

Grid

L
N
PE

≥2.5mm²

N

Existing Inverter Breaker

Inverter

L
N
PE

≥2.5mm²

N

Grid meter

Voltage

L   N

L   N

A   B

1PH Meter

I+   I-

+   -
red   black

CT

Inverter meter

Voltage

L   N

L   N

A   B

1PH Meter

I+   I-

+   -
red   black

CT

Main Electrical Panel

Utility Meter

Existing AC Inverter

Main Breaker

3rd Party Inverter (if existing)

Grid Meter

Inverter Meter

6. RS485 Signal Connection

RS485 Cable (10 m)

Grid meter

Voltage

L   N

A   B

1PH Meter

I+   I-

+   -
red   black

CT

Inverter meter

Voltage

L   N

A   B

1PH Meter

I+   I-

+   -
red   black

CT

Grid Meter   Inverter Meter

EP CUBE

RS485 Cable (Shielded twisted)

Signal Cable Gland

PCB terminal