

PEL-3000



Assembly Guide

REVISION A NOV 2018

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ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

INTRODUCTION

Description PEL-3000 Parallel to 9KW contains the parts below
(i.e., PEL-3955 with outline Rack)

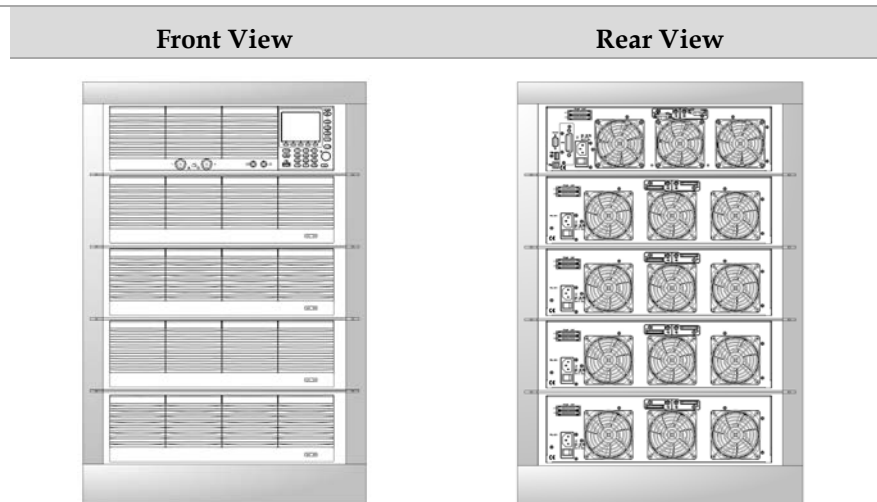
| Contents | Model Name | Part Number | Quantity | Description |
|----------|------------|--------------|----------|------------------|
| | PEL-3111 | 01EL311100GT | 1 | 1KW LOAD Master |
| | PEL-3211 | 01EL321100GT | 4 | 2KW LOAD Booster |

Description Connection & Structure Accessory

| Contents | Model Name | Part Number | Quantity | Description |
|----------|------------|---------------|----------|---|
| | PEL-005 | 11EL-00500101 | 1 | Bus Bar Connector |
| | PEL-006 | 11EL-00600101 | 1 | Bus Bar Connector (Included PEL-005) |
| | PEL-007 | 11EL-00700101 | 1 | Bus Bar Connector (Included PEL-005) |
| | PEL-008 | 11EL-00800101 | 1 | Bus Bar Connector (Included PEL-005) |
| | PEL-009 | 11EL-00900101 | 1 | Bus Bar Connector (Included PEL-005) |
| | GRA-413-E | 01RA413E000T | 4 | PEL-3111 3U Frame (Optional) |
| | GRA-414-E | 01RA414E000T | 1 | PEL-3111 3U Frame (Optional) |

 **Note** Refer to the PEL-3000 Series Rack Parts details_EN.doc for the other models.

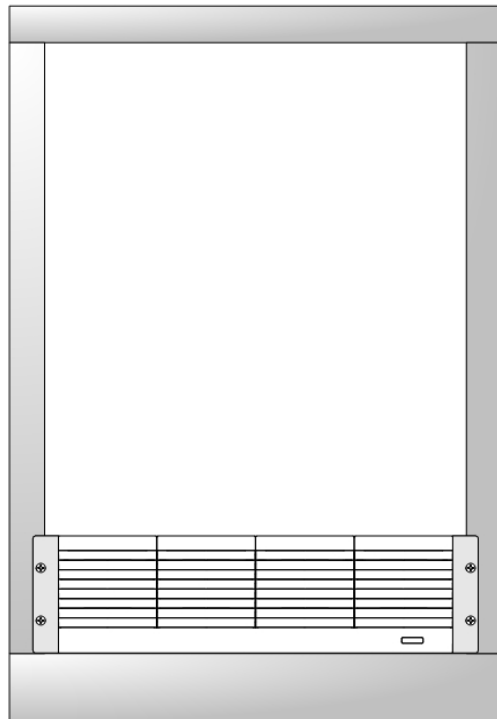
Final Assemble Result



ASSEMBLE PROCEDURE

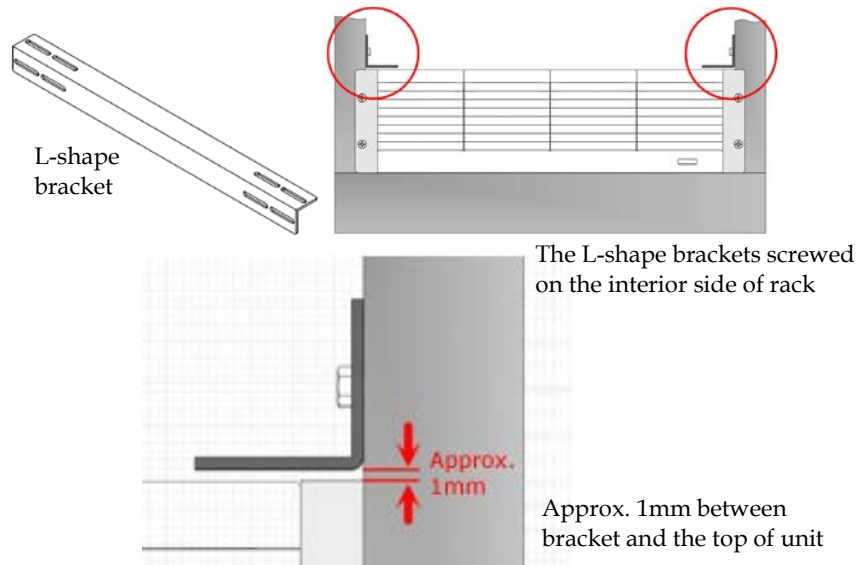
Step 1

Put the 1st PEL-3211 on the bottom of the rack followed by fastening the 4 screws for side bracket in the front but not tightening them completely.

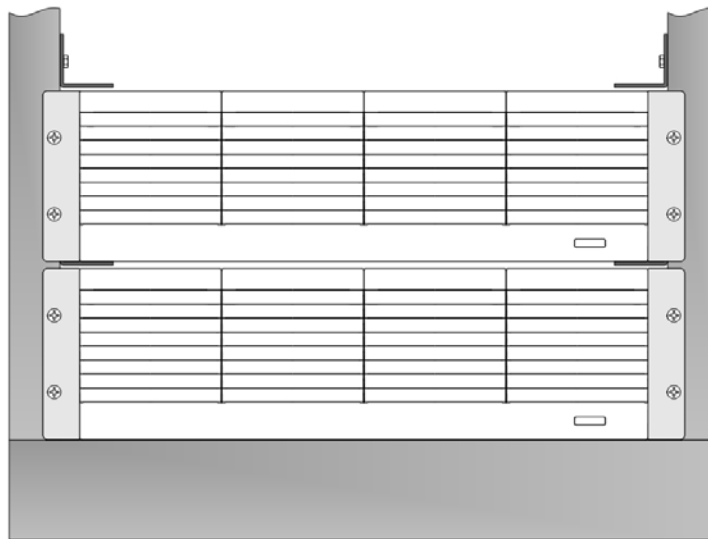


Step 2

Screw the L-shape brackets in the interior side of rack. An approx. 1mm distance between the bottom of brackets and the top of PEL-3211 is required.

**Step 3**

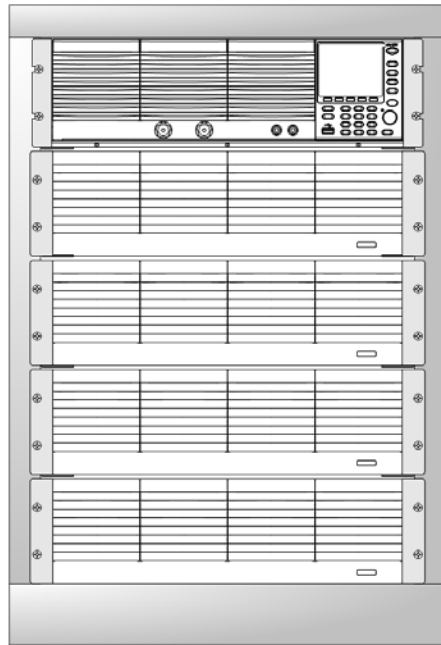
Put the 2nd PEL-3211 onto the L-shape brackets within the rack and, again, fasten the 4 screws for side bracket in the front but not tighten them fully followed by screwing another group of L-shape brackets within the interior of rack.



2nd unit installation completion

Step 4

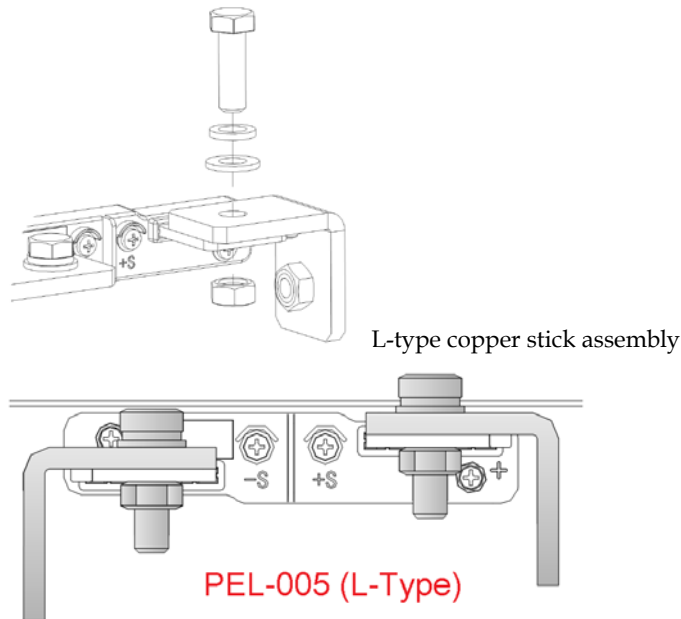
Repeat the previous steps in order to install the rest of PEL-3211s and further install the bracket (GRA-414-3) of PEL-3111 on the upper side followed by installing the PEL-3111 onto the top of the bracket.



Assembly completion for 5 units

COPPER STICK ASSEMBLY

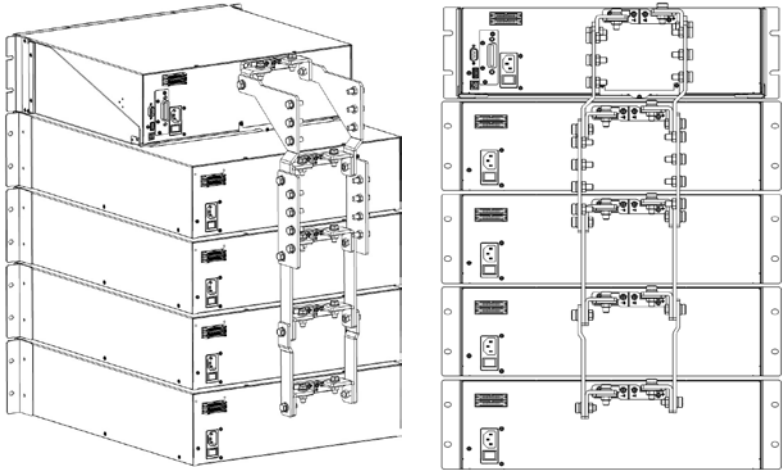
Step 1 Assemble the L-type copper stick (PEL-005) onto the output terminal in the rear side of each unit as the figure below shown.



L-type copper sticks assembly completion

Step 2 In accordance with the figure below, assemble the copper sticks for unit conjunction followed by fastening the screws in the front of rack tightly.

| | |
|--------------------------------|---|
| Copper sticks assembly diagram | Diagram of rear side for copper sticks assembly |
|--------------------------------|---|

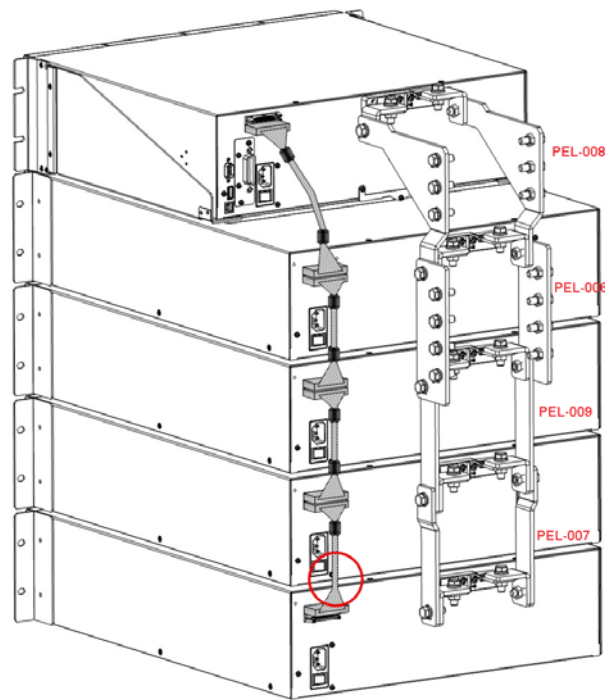


P ARALLEL CABLES

INSTALLATION

Step 1

Install the parallel cables in accord with the following figure.



 Note

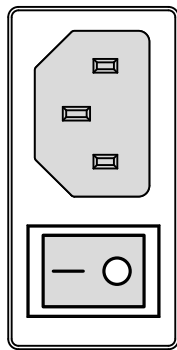
The last cable connecting to the last unit cannot be clipped with core. When only one PEL-3111 connects to a PEL-3211 (Booster) in parallel, the cable in the Booster end cannot be clipped with core.

C ONNECT TO AC

POWER CORD

Step 1

Refer to the figure below; connect the AC power cords for all units to the power sockets in the rear side individually followed by powering on the power switch that is underneath the power socket (– indicates power ON).



Step 2

Attentively check if the indicator in the front panel of all units lights up with red color:

- I. Master indicator lights up as the figure below:



- II. Booster indicator lights up as the figure below (STBY indicator lights up):



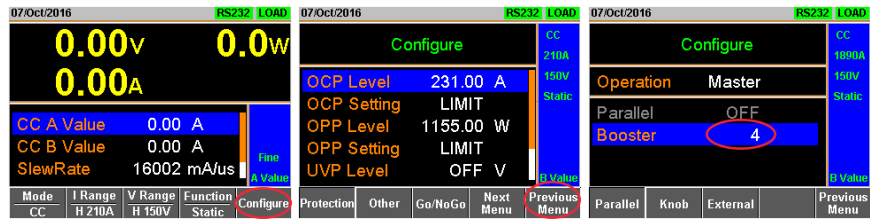
S SYSTEM IN SERIAL

SETTING

Step 1 Power on the power switch in the Master front panel and the indicator lights up in green as figure below shown:



Step 2 Press **Main** > **Configure**[F5] > **Next Manu**[F4] in the front panel followed by selecting “4” for Booster number within Configure page, which indicates 4 Booster units in parallel. See the steps figures below:



Note Select Booster number corresponding to the actual Booster number in parallel.

Step 3

Properly confirm if the indicator in the front panel of all PEL-3211 (Booster) lights up with LINK in green, which means the software setting connects to Booster appropriately. Refer to the figure below.

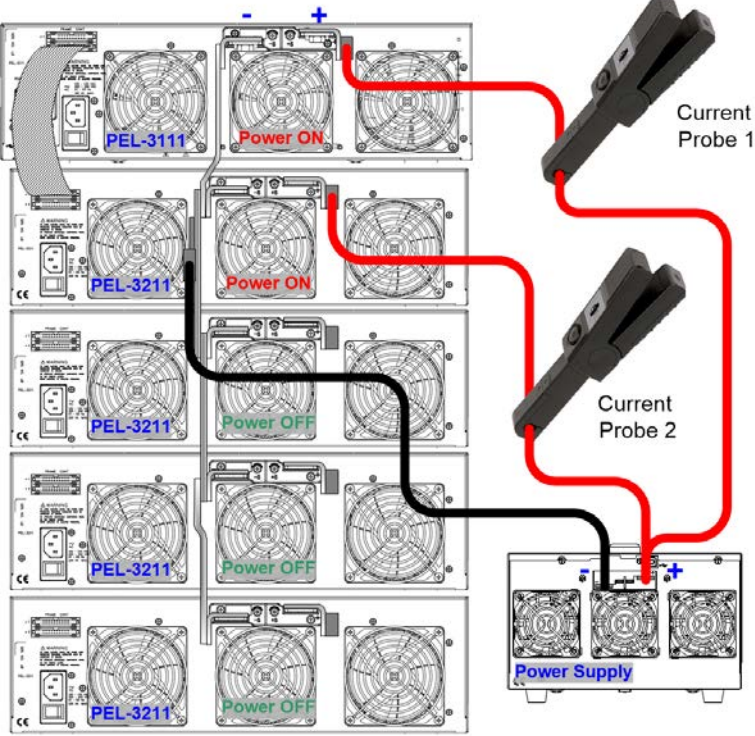


CURRENT SINK

CURRENT DIVISION CHECKUP

| | |
|-------------|--|
| Description | <p>The current sink power of PEL-3111 and PEL-3211 is 1KW:2KW; therefore, the ratio of current sink will always be the exactly 1:2.</p> <p>E.g., PEL-3332 (3KW); when current sink is set 30A, Master (PEL-3111) will sink current by 10A, whilst Booster (PEL-3211) will sink current by 20A.</p> <p>E.g., PEL-3955 (9KW); when current sink is set 90A, Master (PEL-3111) will sink current by 10A, whilst the rest of the 4 Booster (PEL-3211) will sink current by 20A individually.</p> |
| Step 1 | <p>First dismantle all of the positive parallel copper sticks and parallel cables in the rear output terminal of unit.</p> |
| Step 2 | <p>Check the 1st Booster current:</p> <ol style="list-style-type: none"> I. Connect the parallel cable to the J2 connector in the rear of PEL-3111 in one end and the J1 connector in the rear of PEL-3211 in the other end. II. Power on both PEL-3111 and the 1st PEL-3211, while keep the rest units power-off. Set the unit PEL-3111 as the parallel mode via the following procedure: III. Select from the main interface <ol style="list-style-type: none"> a. Configure > Next Menu > Parallel > Operation; select: Master b. Configure > Next Menu > Parallel > Parallel; select: OFF c. Configure > Next Menu > Parallel > Booster; select: 1 |

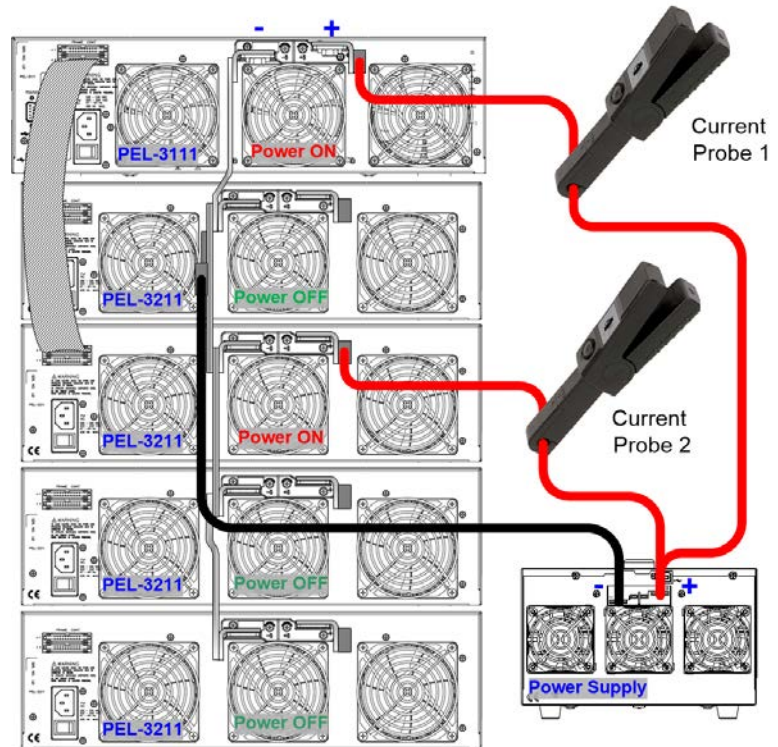
IV. Based on the connection method in the figure below, connect current sink cable to the unit followed by setting current sink value for unit. Measure the currents from both the current sink cable of Master positive pole and the current sink cable of Booster positive pole, via current probe, to validate the accuracy of currents. The measured current value of Master is supposed to be 1/3 of the set value, whereas the measured current value of Booster should be 2/3 of the set value.



Step 3

The 2nd Booster current checkup:

- I. Connect the parallel cable to the J2 connector in the rear of PEL-3111 in one end and the J1 connector in the rear of PEL-3211 in the other end.
- II. Power on both PEL-3111 and the 2nd PEL-3211, while keep the rest units power-off. Set the unit PEL-3111 as the parallel mode. The setting procedure is identical to the setting of the 1st PEL-3211 validation.
- III. Based on the connection method in the figure below, connect current sink cable to the unit followed by setting current sink value for unit. Measure the currents from both the current sink cable of Master positive pole and the current sink cable of Booster positive pole, via current probe, to validate the accuracy of currents. The measured current value of Master is supposed to be $1/3$ of the set value, whereas the measured current value of Booster should be $2/3$ of the set value.



Step 4

Follow the previous steps to validate the 3rd and the 4th Booster respectively.

Step 5

The assembly procedure and system setting are completely finished. Press **Main** to return back to the main screen and the current sink test is properly ready to initiate.