

# QUICK INSTALLATION MANUAL

## BACKUP BOX

### V02

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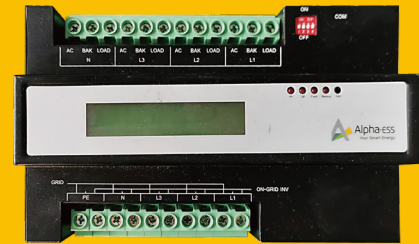
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## SUMMARY







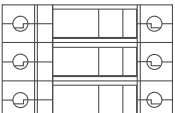
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### 01 SUMMARY

The backup box is a product of AlphaESS for switching on and off the grid.

#### 1.1. Parts List

Check the following parts list to ensure the package is complete.  
 A complete backup box system consists of:

Name	Illustration	Quantity
1 transfer 3 cable (for SMILES/SMILE-B3)		1
1 transfer 2 communication connector		2
Meter patch cable for backup box		1
Installation manual		1
Terminal		25
Cylindrical fuse		3
Fuse holder		1

**!** **Note:** 1. Meter patch cable for backup box is different from backup patch cable for backup box. Meter patch cable for backup box must be connected in the correct place as the diagram shows.  
 2. We will install the cylindrical fuse in the fuse holder before shipment. Please install the fuse part when installing the Backup Box.

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## SUMMARY

### 1.2 Terminal Diagram

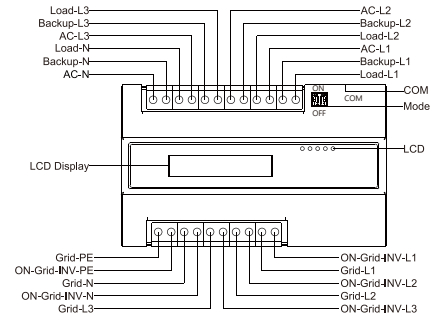


Figure 1: backup box Terminal Diagram

### 1.3 Technical Specification Datasheet:

<b>Phase</b>	Single Phase / Three Phase
<b>Display</b>	LCD
<b>Communication</b>	RS-485
<b>Operating Temperature Range</b>	-20 °C ~ 60 °C
<b>Humidity</b>	15% ~ 85%
<b>Protection Level</b>	IP20
<b>Dimension (W x D x H)</b>	208mm x 67mm x 127 mm
<b>Warranty</b>	5 Years
<b>Nominal Output Power</b>	20 kW
<b>Grid Frequency</b>	50/60 Hz
<b>Nominal Current</b>	30 A *3

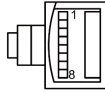
### LED Status Indication

<b>LED Display</b>	Description
<b>PF</b>	Active Power
<b>QF</b>	Reactive Power
<b>Fault</b>	Communication Lost/Relay

<b>Fault</b>	Communication Lost/Relay
<b>Backup</b>	Backup Normal
<b>Grid</b>	Grid Normal

**Communication Port RJ45**

RJ45	Backup Box COM	Inverter/EMS Meter Port
1	NC	NC
2	NC	NC
3	RS485-A (Backup for Storion-T5)	RS485-A
4	RS485-A (Meter)	—
5	RS485-B (Meter)	—
6	RS485-B (Backup for Storion-T5)	RS485-B
7	NC	NC
8	NC	NC



**Communication Cable Specification**

Meter Patch Cable for Backup Box		CAT5 Recommended as Patch Cable	
RJ45 Connector	RJ45 Connector	RJ45 Connector	RJ45 Connector
1 Or/W	Or/W	1 Or/W	Or/W
2 Or	Or	2 Or	Or
3 G/W	Bi	3 G/W	G/W
4 Bi	G/W	4 Bi	Bi
5 Bi/W	G	5 Bi/W	Bi/W
6 G	Bi/W	6 G	G
7 Br/W	Br/W	7 Br/W	Br/W
8 Br	Br	8 Br	Br

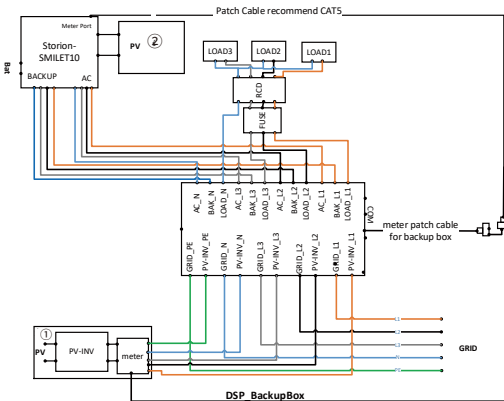
**Note:** Meter patch cable for backup box is different from backup patch cable for backup box. Meter patch cable for backup box must be connected in the right place as the diagram shows.

**Mode**

Mode	System	DIP Switch	Description
Single Phase	SMILE5/SMILE-B3	1	Turn on DIP switch 1.
Three Phase	SMILE-T10	1	Turn off DIP switch 1.
Power Resumption Latency Time 310s	SMILE5/SMILE-B3/SMILE-T10	4	Turn on DIP switch 4
Normal Power Resumption	SMILE5/SMILE-B3/SMILE-T10	4	Turn off DIP switch 4.

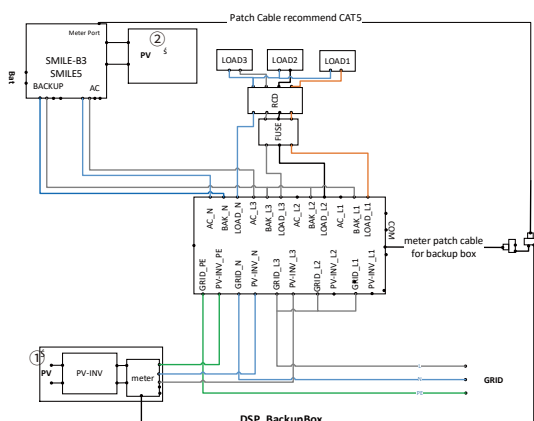
**02 INSTALLATION**

**SMILE-T10 Connection**

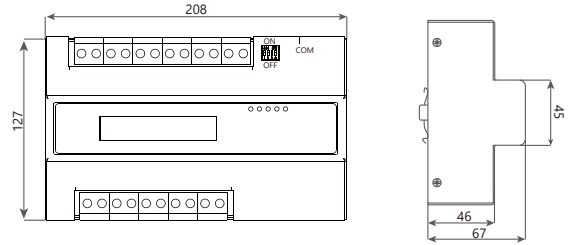


**Note:** 1. Hybrid coupled with ① and ②. DC coupled with ②. AC coupled with ①  
2. The load power of each phase must be within 5kW.

**SMILE5/SMILE-B3 Connection (single phase grid in house)**

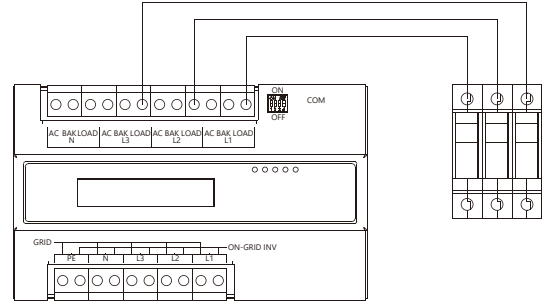


**Dimension**



**Note:** Operated by qualified electrician only.

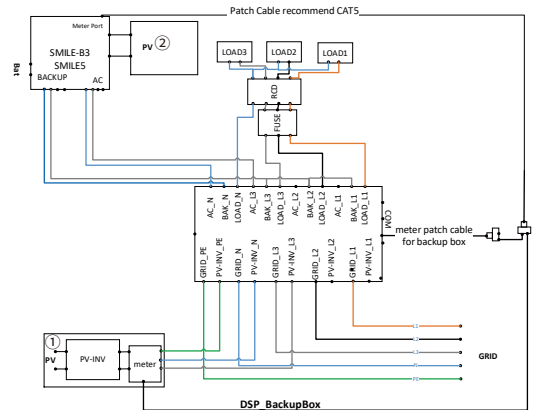
**1.4 Installation of Fuse Holder**



Connect the power cables from BackupBox Load – L1, L2, L3 to the top of the fuse holder, and then connect cables from the bottom to the load.

**Note:** The position where the fuse holder is installed in the distribution box is not specified. The installer can adjust the installation position of the fuse holder according to the actual installation scenario. The length of the related wire harness on the fuse holder can be adjusted according to the actual needs. The terminals will be in the parts list.

**SMILE5/SMILE-B3 Connection (three phase grid in house)**



**Note:** Hybrid coupled with ① and ②. DC coupled with ②. AC coupled with ①.

**It is not allowed to connect the cable as the following :**

