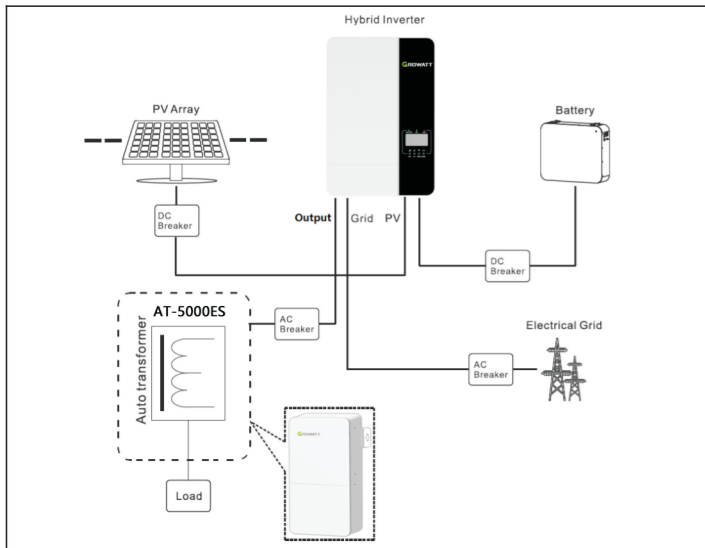


# AT-5000ES Quick Guide

## 1. Introduction

The auto-transformer(AT-5000ES) is used for backup power only, its input connects to the AC side of the inverter, for the purpose of providing the split phase power to the loads.

## 2. The AT-5000ES in the System

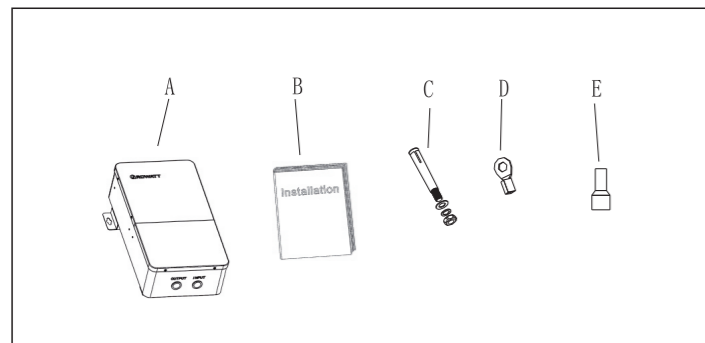


As show in the picture, the input side of AT-5000ES is connected with output of the inverter, and the output side is connected with critical load. There is a transformer in AT-5000ES, it can transform 240V to 120V/240V split phase to provide the power to load.

## 3. Configuration

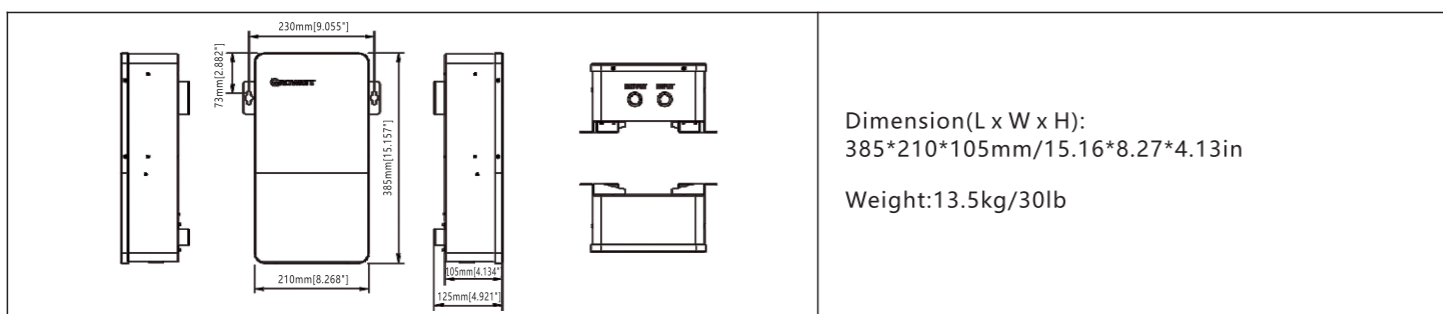
<b>Model name</b>	<b>AT-5000ES</b>
Input Rated Voltage	240/208V
Input Rated Frequency	50/60Hz
Input Rated Current	21A/24A
Load Rated Voltage	120/240V or 104/208V (split phase)
Load Max. Continued Current (L-L)	21A/24A
Load Max. Continued Current (L-N)	(21A/24A)*2
Load Rated Power (L-L)	5000VA
Load Rated Balanced Power (L-N)	2500VA*2
Load Max. Unbalanced Power (L-N)	2500W
Cooling Concept	Natural
Ingress Protection	IP 20
Installation	Wall Mountable
Operation Ambient Temperature	-25°C~+50°C(-13 to+122°F)
Weight	13.5kg/30lb
Size	385*210*105mm/ 15.16*8.27*4.13in

## 4. General Information - Parts List

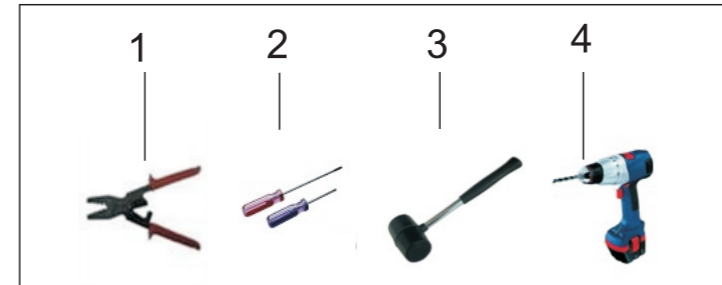


Part List					
Item	Item Name	Qty	Item	Item Name	Qty
A	AT-5000ES (Auto-transformer)	1	D	O-type terminal	2
B	User Manual	1	E	Cold pressed	6
C	Anchor Bolt	2			

## 5. Dimension & Weight

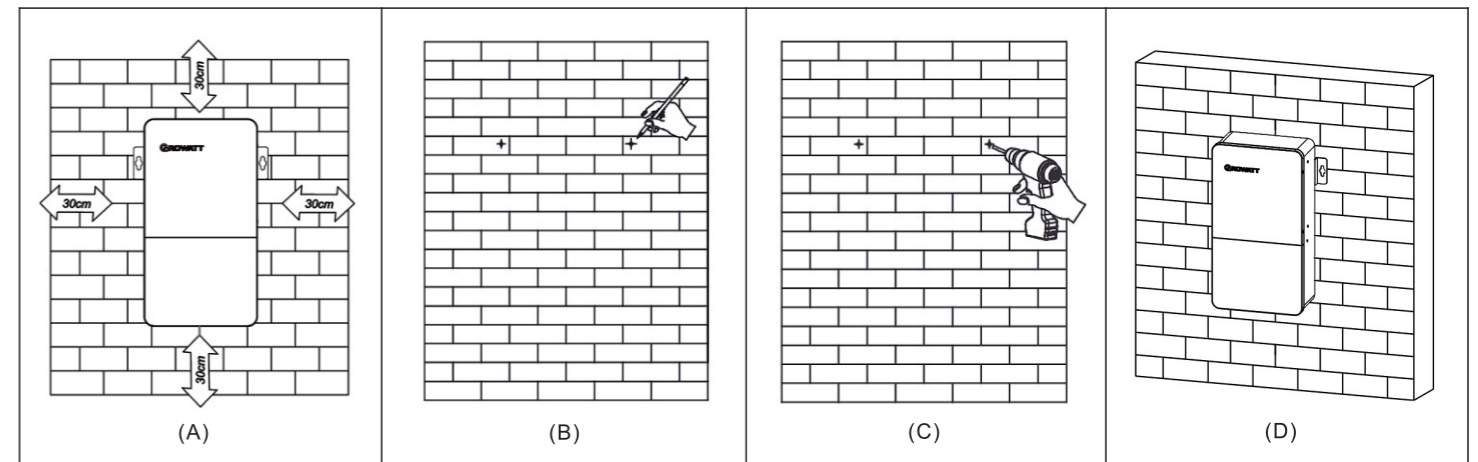


## 6. Tools



NO.	Description
1	Press terminal connector
2	Screw driver
3	Knock explosion bolt
4	Drill holes on the wall

## 7. Wall Mount Installation



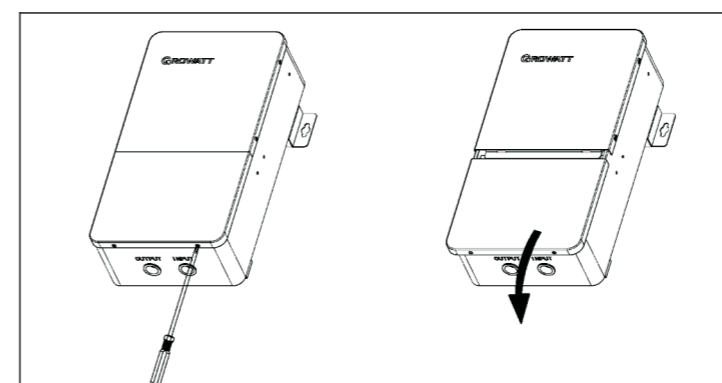
A) Please reserve the space of 300mm (11.8in) from AT-5000ES.

B) Place the ruler horizontally on the wall and mark the position of 2 holes for screws.

C) Remove the ruler and drill 2 holes were marked, Drill holes with φ10 drill Depth: at least 40mm (1.575in).

D) First knock expansion pipe into the hole with Rubber hammer and then place the AT-5000ES align with the marked position on the wall. Last, screw the self-tapping screwing into the expansion pipe.

## 8. Open the AT-5000ES






As shown in the picture, please use the screw driver to get out the 2 screws at the bottom of the AT-5000ES, then pull backward to take out the bottom cover.

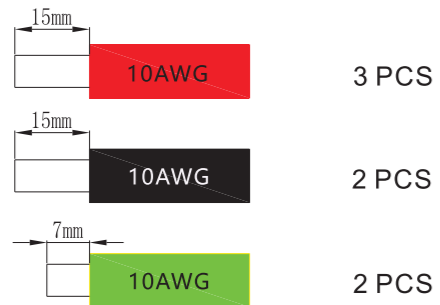
## 9. Wiring Connection

### 9.1 Wires Making

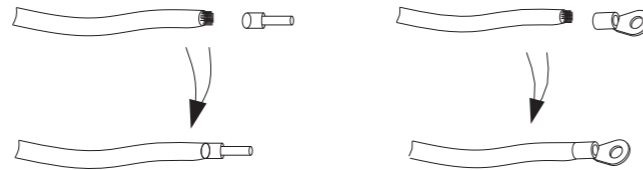
1. Wires below are needed before installation.

Cable description				
Cable	Type	Conductor Cross-sectional Area Range	Source	
 10AWG wires*3pcs	Input power cable	1. Use cables that can withstand 90°C (194°F) or 105°C (221°F). 2. Three single-core outdoor copper cables (L, N, PE)	L, N: 10-6 AWG PE: 10-6AWG	Purchased by customer
 10AWG wires*2pcs   GND wires*2pcs	Output power cable	1. Use cables that can withstand 90°C (194°F) or 105°C (221°F). 2. Use four single-core outdoor copper cables (L1, N, L2, PE).	L, N, L2: 10-6 AWG PE: 10-6AWG	Purchased by customer

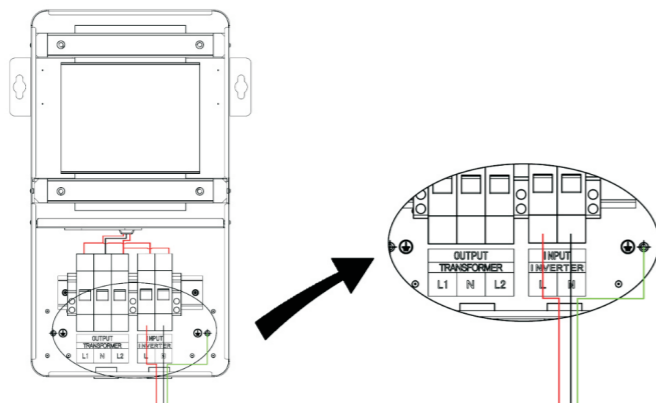
2. Use the diagonal plier to strip 15mm of insulation from one side of the 10AWG wires.  
Use the diagonal plier to strip one side of GND wire about 7mm.



3. There are two types wire need to be machining, please check ref to 9.1 wired diagram. The follow two type wires are show as below (type1 is used to power line connection, type2 is used to ground connection):

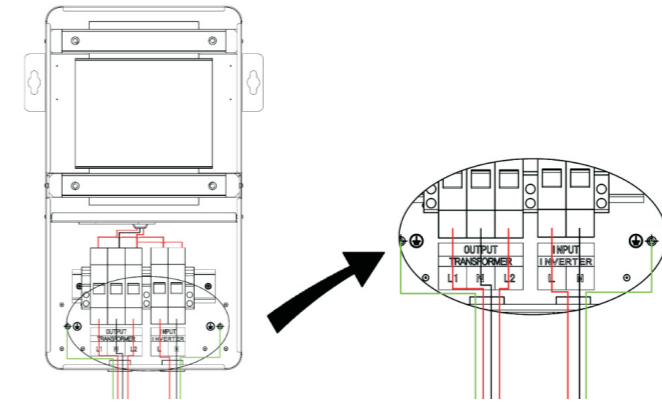


### 9.2 Input Wires Connection



Use the screwdriver to remove the nut on the input terminal strip, and the red 10AWG short wire ends were inserted into the input port L, the black 10AWG short wire ends were inserted into the input port N. Use a screwdriver to lock the ground wire on the earth bus bar.

### 9.3 Output Wires Connection



Use the screwdriver to remove the nut on the output terminal strip, and the red 10AWG short wire ends were inserted into the output port L1 and L2, The Black 10AWG short wire ends were inserted into the output port N. Use a screwdriver to lock the ground wire on the earth bus bar.

### 9.4 Checking

Please make sure that all wiring in the AT-5000ES is tightened.

## 10. AT-5000ES usage methods

After connecting the AT-5000ES internal wire, close the cover and the input end of the AT-5000ES are connected with the output of the inverter, the output end of the AT-5000ES access load. Run the system, loaded into normal operation.

## 11. Trouble shooting

Please turn off the inverter and open the AT-5000ES cover, check the input wiring and the output wiring properly.

## 12. Caution

1. Please use the equipment within the scope of specification. Excessive current or voltage may cause device damage.
2. To avoid personal injury due to energy hazard, remove wristwatches and jewelry when repairing. Use tools with insulated handles.
3. The rated power of secondary side L1-N and L2-N could up to 5KVA respectively, and power difference between the tow split phases can not exceed 2.5KW.
4. Don't connect N of AT-5000ES output together with N of input.
5. Don't connect N of AT-5000ES to PE of AT-5000ES or PE of grid.
6. Repair is to be performed only by qualified technical personal authorized by manufacturer.
7. The rated balanced power(L-N) means the Load of L1-N and L2-N is equal.
8. The rated unbalanced power(L-N) means the load of L1-N and L2-N is different.