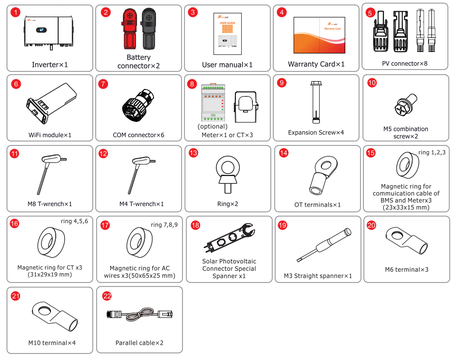
Disclaimer

- Please read the user's manual carefully before performing all operations; this installation guide does not supersede the use of the product's user's manual;
- Product information is subject to change without notice. This manual is frequently updated, please contact your salesperson for the latest version.
- After unpacking, please check the product for damages and missing parts.
- Do not open the battery to repair or disassemble. Only FelicityESS is allowed to carry out any such repairs. Only qualified personnel can install this device with battery.
- In case of fire, use only dry powder fire extinguisher. Liquid extinguishers should not be used.
- Before using the inverter, please read the instructions and warning signs of the battery and corresponding sections in the instruction manual. Improper reassembly may result in electric shock or fire.
- To reduce risk of electric shock, disconnect all wires before attempting any maintenance or cleaning. Turning off the unit will not reduce this risk.
- Never charge a frozen battery.
- Never cause AC output and DC input short circuited. Do not connect to the mains when DC input short circuits.

Installation Video

You can watch the installation video by scanning the QR code to the right

Packing List

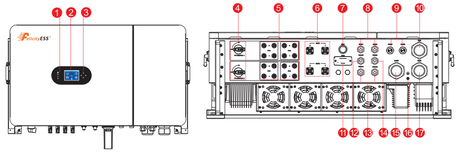


NO.	Name	Description	Quantity
1	Inverter	Inverter	1
2	Battery connector	Connection ports for batteries and inverter Bat Port	2 pair
3	User manual	User manual	1
4	Warranty Card	Warranty Card	1
5	PV connector	PV Port Connectors	8 pairs
6	WiFi module	For installing the WIFI module	1
7	COM connector	Communication Port Connector （Without short connection)	6
8	Meter+CT(Optional)	Meters and anti backflow	3
9	Expansion Screw	Used for securing the product's wall mount	4
10	M5 combination screw	Fixed wall mounts and inverter	2
11	M8 T-wrench	Used for internal connection of the wiring bin	1
12	M4 T-wrench	Used for cover disassembly or internal ground connection	1
13	Ring	Used to connect wall hooks	2
14	OT terminals	For external ground connection	1
15	Magnetic ring	For commuication cable of BMS and Meter(23x33x15 mm)	3
16	Magnetic ring	Magnetic ring for CT (31x29x19 mm)	3
17	Magnetic ring	Magnetic ring for AC wires(50x65x25 mm)	3
18	Solar Photovoltaic Connector Special Spanner	Photovoltaic connector installation Spanner	1
19	M3 Straight spanner	Used for communication cable connection	1
20	M6 terminal	The external AC cable terminal chassis ground connection	3
21	M10 terminal	Cold crimping terminal of the inverter load terminal	4
22	Parallel cable	Used for parallel wiring	2

Explanation of the Symbols

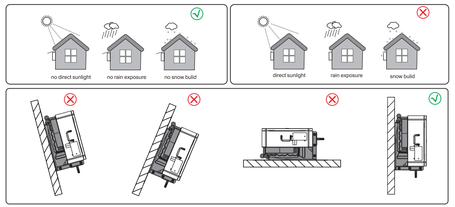
⚠	Danger: Serious physical injury or even death may occur if not follow the relative requirements	ℹ	Instruction manual: Read the instruction manual before starting installation and operation.
⚠	Warning: Physical injury or damage to the devices may occur if not follow the relative requirements		EU WEEE mark: Product should not be disposed as household waste.
⚠	Hot surface: Sides of the device may become hot. Do not touch!	NOTE	Note:The procedures taken for ensuring proper operation.
⚠	Electrostatic sensitive: Damage may occur if not follow the relative requirements	CE	CE mark: The inverter complies with the CE directive.
RoHS	Directive on the restriction of the use of certain hazardous components in electrical and electronic equipment	⏚	Earth terminal: The inverter must be reliably grounded.
⚠	Caution: Ensure that DC and AC side circuit breakers have been disconnected and wait at least 5 minutes before wiring and checking.		

Product Overview



1. Inverter Indicators
2. LCD display
3. Button
4. PV switch
5. PV input connection port
6. Battery connection port
7. EPO
8. BMS port
9. COM port
10. Generator
11. WIFI Communication port
12. RS485 port
13. PARA port
14. DRMs port
15. LOAD
16. PE
17. GRID

Installation Environment

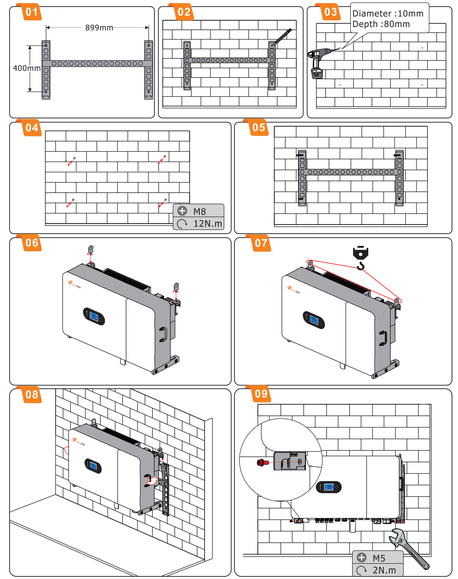


LCD Display Icons

Function Key	Icon	Description
ESC	⮌	To exit setting mode
UP	∧	To go to previous selection
DOWN	∨	To go to next selection
ENTER	↵	To confirm the selection
LED Indicator	**Icon**	**Description**
Alarm/Fault	⚠	Fault or warning
DC/AC		Inverter connection normal
GRID		Grid connection normal
BATTERY		Battery operating normal

Installation Procedure

The inverter is suitable for mounting on concrete or other non-combustible surface only.



FelicityESS™

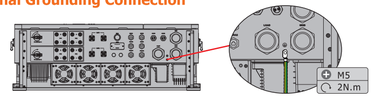
Quick Installation Guide

Hybrid inverter



358-S030006-02

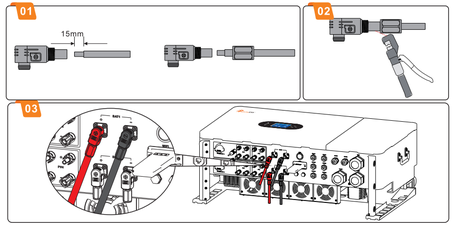
External Grounding Connection



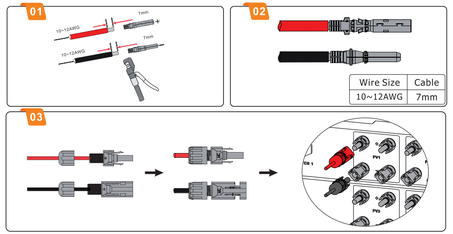
Screw locking torque 2N. m

Battery Connection

Inverter Model	Wire Size	Strip length
T-REX-50KHP3G01	4AWG	16mm



PV Connection

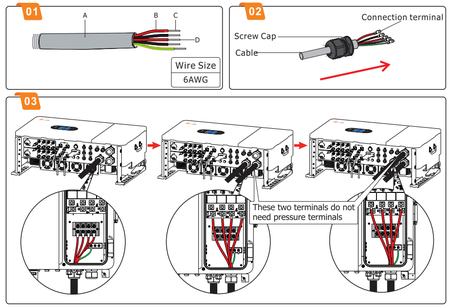


On-Grid & Back-Up Connection

•Make sure the inverter is totally isolated from any DC or AC power before connecting AC cable.

An external AC breaker is needed for on-grid connection to isolate from grid when necessary.
Recommended AC circuit breaker parameters are 72A/400V.

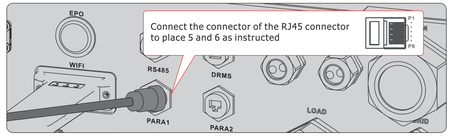
Grade	Description	Value
A	Outside diameter	30-40mm
B	Separated wire length	200-250mm
C	Conductor wire length	20-25mm
D	Conductor core section	15-20mm

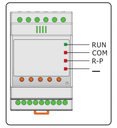


Smart Meter & CT Connection

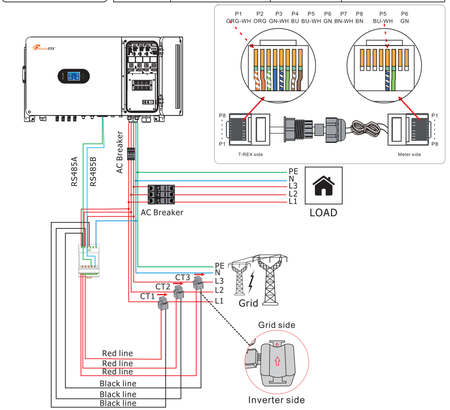


NO.	1	2	3	4	5	6	7	8
Function	CANB_L	CANB_H	PC_485_B	PC_485_A	Meter/485B	Meter/485A	Scope/485B	Scope/485A

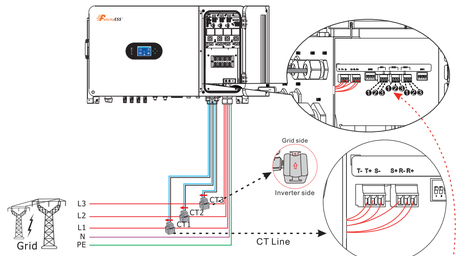




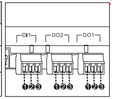
STATUS	OFF	ON	Blinking
Run (Green)	The instrument is not running	/	The instrument is running normally
Com (Red)	The instrument is not communicating	/	The instrument is incommunication status
R-P (Red)	Positive power	Negative power	/
— (Red)	/	Negative value indicator lamp	/



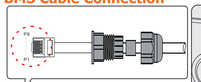
Or No Meter,Just a CT



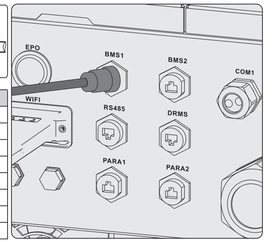
No.	Position	Function
1	DI1	Dry contact intput,reserved.
2	DO1	Dry contact output sianal for startup the diesel generator. (PIN1/2,normal close. PIN2/3,normal open)
3	DO2	Dry contact output,reserved



BMS Cable Connection



Position	Function
1	/
2	/
3	/
4	BMS/CANH
5	BMS/CANL
6	GND
7	BMS/485A
8	BMS/485B

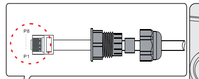


DRMS Connection

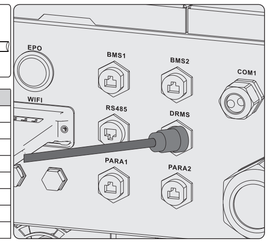
DRMS(Demand response enabling device) is used for Australia and New Zealand installation (also used as remote shutdown function in European countries), in compliance with Australia and New Zealand safety requirements(or European countries). Inverter integrates control logic and provides an interface for DRMS, The DRMS is not provided by inverter manufacturer, Detailed connection of DRMS & Remote Shutdown are shown below:

Step 1. Screw this plate off from the inverter.

Step 2. Plug out the RJ45 terminal and dismantle the resistor on it. Plug the resistor out, leave the RJ45 terminal for next step.



Position	Function
1	DRM1/5
2	DRM2/6
3	DRM3/7
4	DRM4/8
5	REF
6	COM
7	/
8	/



Installation Of Wifi Module

For detailed instructions on how to install WIFI Module, you can scan the QR code to the right to view the WiFi Module installation instructions.

WIFI Module

Download The App

Method 1: Access https://download.felicityess.com using the mobile phone browser and download the latest installation package.
Method 2: Scan the following QR code and download the latest installation package.

Fsolar APP

User Manual

User Manual in the OR code or at https://www.felicityess.com/

User Manual