Instructions for combining

AC•THOR / AC•THOR 9s / AC ELWA 2

with

Fox ESS H3, H3 Pro or H3 Smart via Modbus RTU

Note!

- If the RS485 communication connection on the inverter is still being used by other devices, communication with my-PV is not reliably possible!
- A connection with the AC ELWA-E is not possible as it does not have Modbus RTU (RS485) communication!

1 Default settings on the my-PV device

Before commissioning, read the assembly instructions delivered with the device and the operating instructions available online.
The AC•THOR operating instructions can be found **here.**
The AC ELWA 2 operating instructions can be found **here.**

2 Connection to the my-PV device (Modbus RTU)

The my-PV device is connected directly to the Fox ESS inverter via shielded twisted-pair cable (for example CAT-Cable).

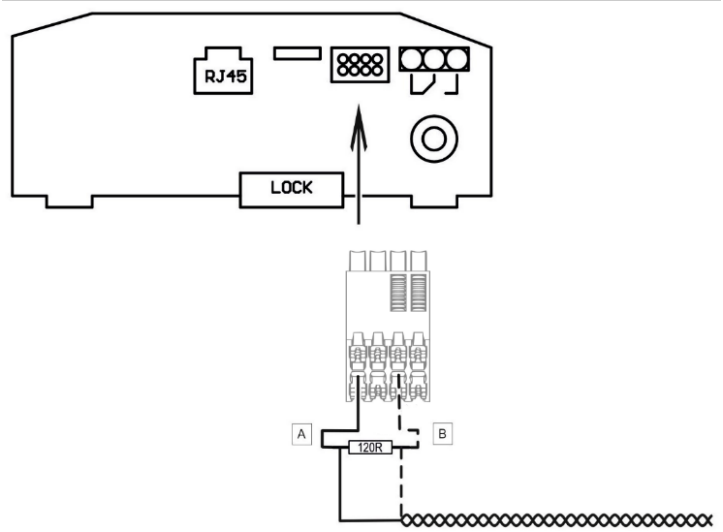
Note!

- Use a shielded cable with twisted wires (e.g. CAT cable)
- Fit the RTU-BUS with a 120 Ohm terminating resistor!
- When controlled via Modbus RTU, the M7 operating mode cannot be used with the AC•THOR!

- A meter must be connected to the inverter in order to query it. Otherwise, querying the inverter will not return any data.

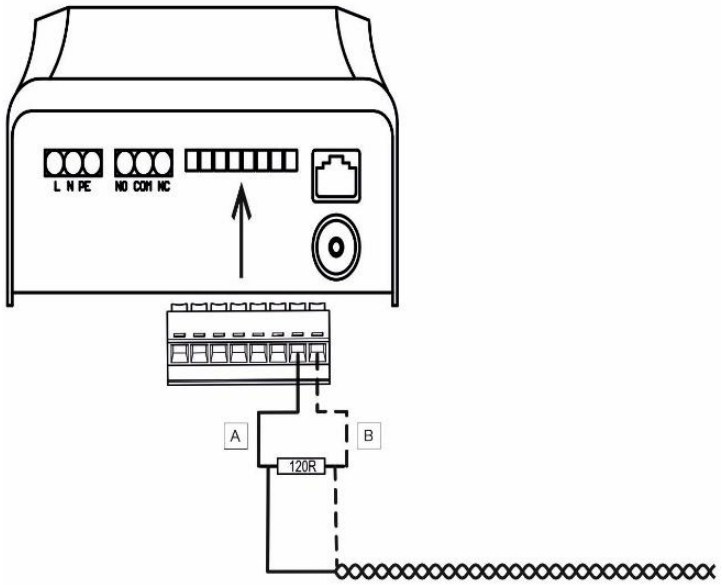
2.1 AC•THOR / AC•THOR 9s

Three pins on the 8-pin connector of the AC-THOR are the Modbus RTU communication connection. The 120-ohm terminating resistor is not included in the scope of delivery and must be purchased separately.



2.2 AC ELWA 2

On the AC ELWA 2, the connection is labelled RS485, A, B, GND.
The 120 Ohm terminating resistor is included in the scope of delivery of the AC ELWA 2

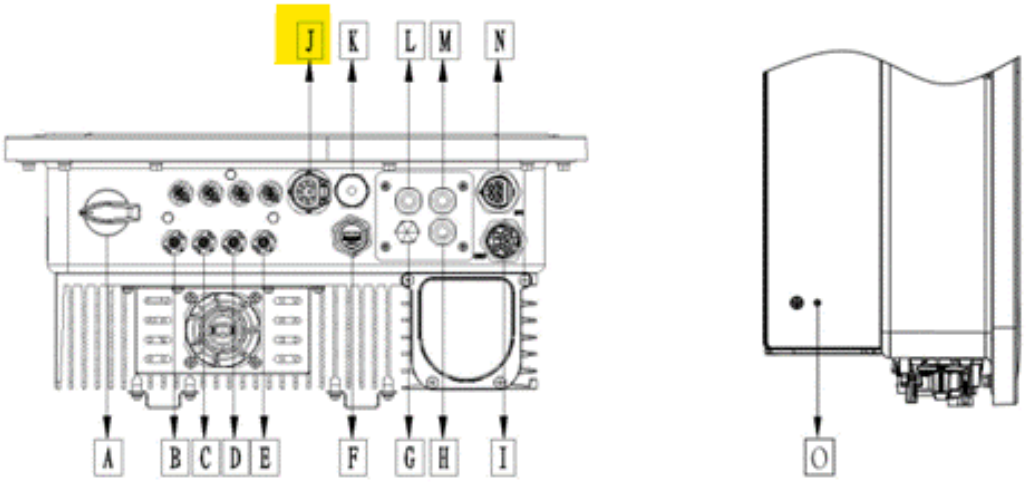


3 Connection to the Fox ESS inverter

Note!

The following information and illustrations have been taken from the Fox ESS inverter user manual. my-PV cannot guarantee the accuracy of the information or that the views are up to date.

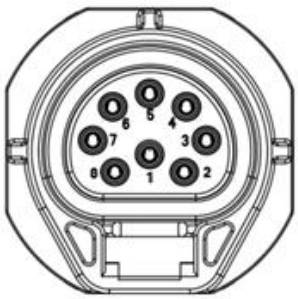
3.1 Connection to the Fox ESS H3



Item	Description	Item	Description
A	DC Switch	I	GRID
B	PV1	J	Meter / RS485
C	PV2	K	BMS
D	PV3	L	DRM
E	Battery Connector	M	PARALLEL2
F	USB / WiFi / GPRS / LAN	N	EPS
G	Waterproof Lock Valve	O	Grounding Screw
H	PARALLEL 1		

- **Meter/RS485**

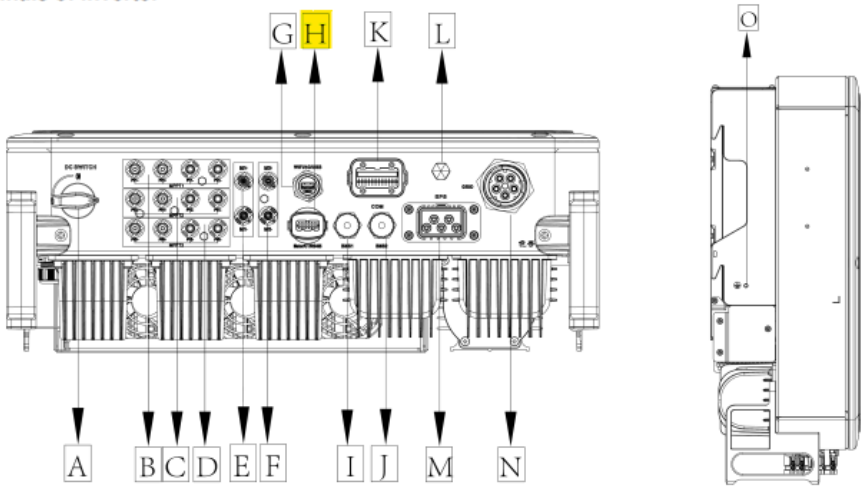
The PIN definitions of Meter/485 interface are as below.



PIN	1	2	3	4	5	6	7	8
Definition	Logger 485A	Logger 485B	Meter 485B	Meter 485A	GND	GND	RY_ CON	+12V

3.2 Connection to the H3 Pro

3.3 Terminals of inverter

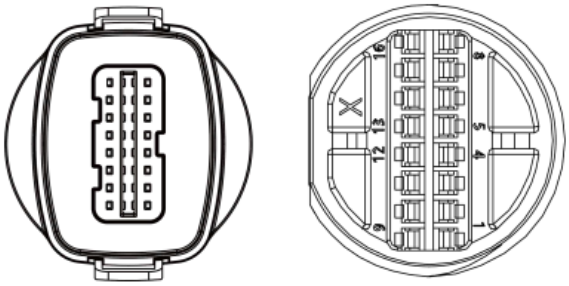


Item	Description	Item	Description
A	DC Switch	I	BMS1
B	MPPT1	J	BMS2
C	MPPT2	K	COM
D	MPPT3	L	Waterproof Lock Valve
E	BAT1	M	EPS
F	BAT2	N	GRID
G	USB/WIFI/PRS/LAN	O	Grounding Screw
H	METER/CT/RS485		

Note: Only authorized personnel are permitted to set the connection.

- **Meter/RS485**

The PIN definitions of Meter/485 interface are as below.

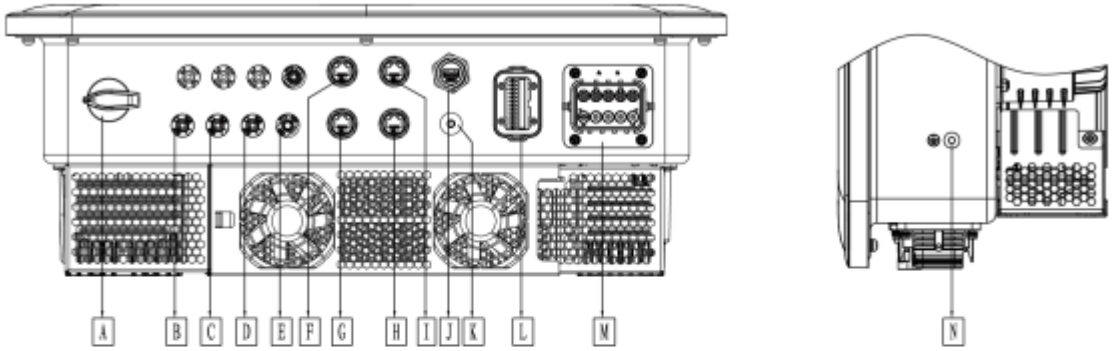


METER/CT/RS485 interface (20pin terminals)

1	2	3	4	5	6	7	8
DRY RLY2-	DRY RLY2+	DRY RLY1-	DRY RLY1+	/	/	Meter 485A	Meter 485B
9	10	11	12	13	14	15	16
GND TVS	GND COM	+12V SELV	RY Ctrl	/	/	/	/
17	18	19	20				
EMS 485A	EMS 485B	/	/				

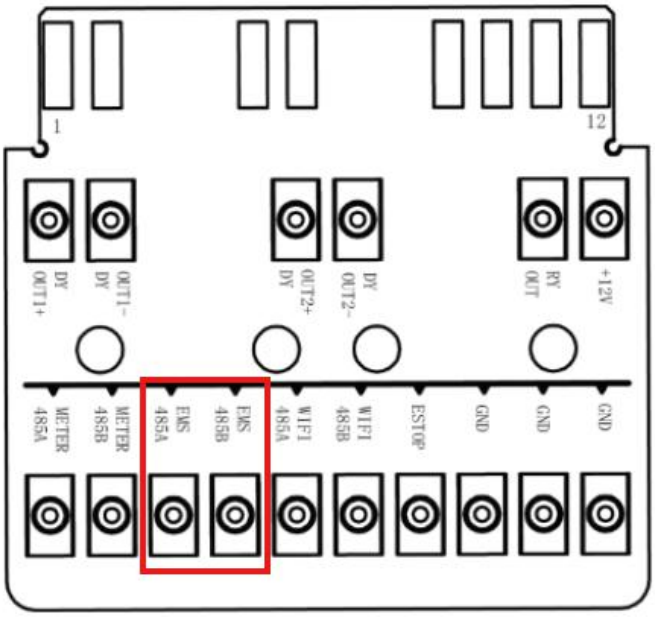
3.3 Connection to the H3 Smart

3.3 Terminals of inverter



Item	Description	Item	Description
A	DC Switch	H	DRM
B	PV1	I	Meter
C	PV2	J	COMM/DONGLE
D	PV3 (For H3-Smart Only)	K	Antenna
E	BAT	L	COM
F	BMS	M	EPS/GRID
G	LAN	N	Grounding Screw

Note: Only authorized personnel are permitted to set the connection.



4 Settings on the Fox ESS inverter

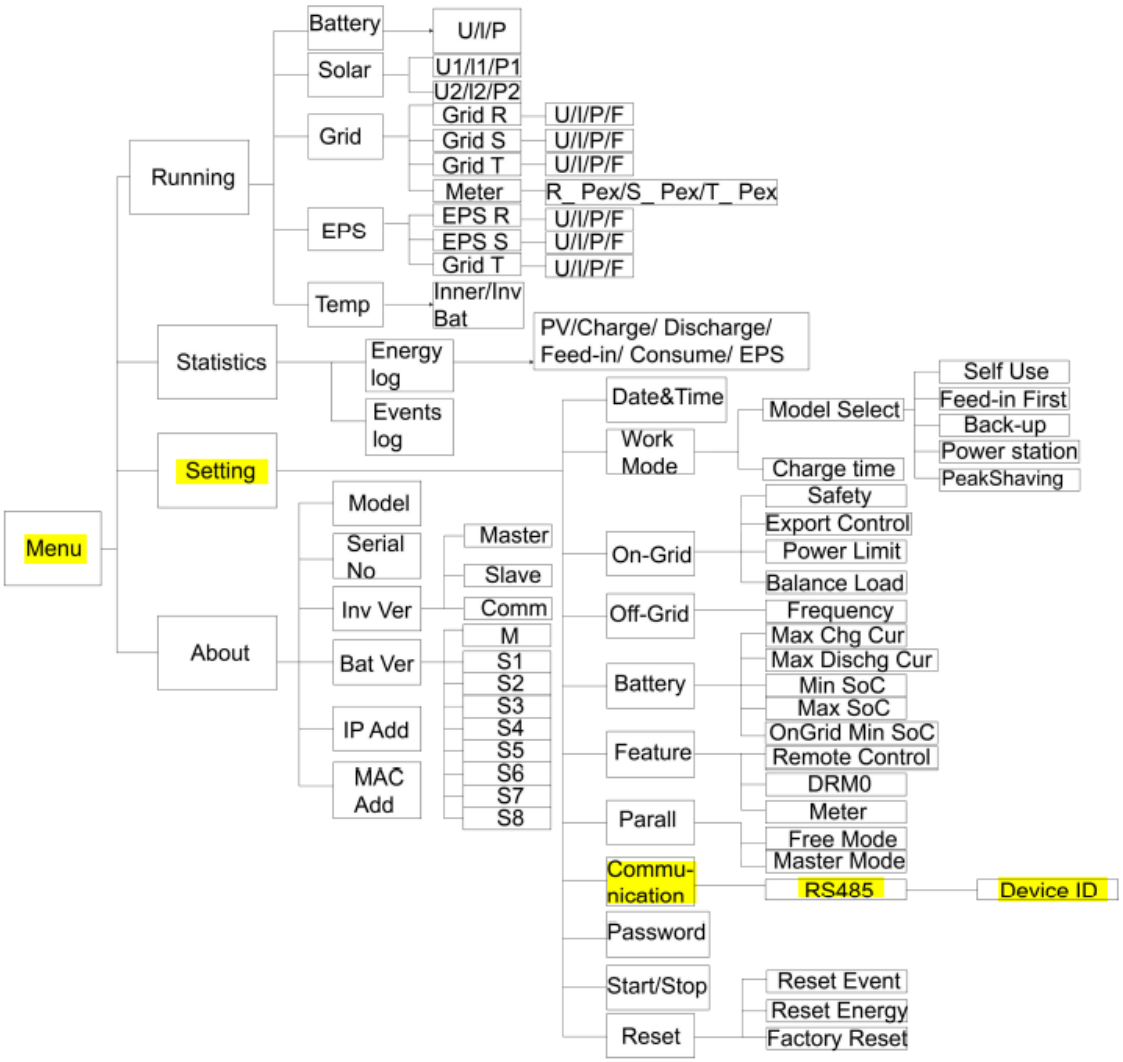
Note!

The following information and illustrations have been taken from the Fox ESS inverter user manual. my-PV cannot guarantee the accuracy of the information or that the views are up to date.

The combination with Fox ESS was tested with type H3.
For this type, the communication parameters are preset from AC•THOR firmware a0021000,
for the AC ELWA 2 from firmware e0000200.
For type H3 Pro, the communication parameters are from AC•THOR firmware a0021700,
for the AC ELWA 2 from firmware e0001100.
The device ID must be 247 and adjusted if necessary. This can be checked on the FOX ESS H3 as follows (according to the FOX ESS, the factory default password for accessing the settings is “0000”):

8.2 Function Tree

- Single machine operation mode



5 Settings on the my-PV device

The communication parameters for the H3 are preset from AC•THOR firmware a0021002 onwards, and for the AC ELWA 2 from firmware e0000202 onwards.
For the H3 Pro, the parameters are preset from AC•THOR firmware a0021702 onwards, and for the AC ELWA 2 from firmware e0001301 onwards.
On the display, select "**Fox ESS H3 (Modbus RTU)**" for the FOX ESS H3 inverter under Control. For the FOX ESS H3 Pro and H3 Smart, select "**Fox ESS H3 Pro (Modbus RTU)**".

Alternatively, the settings can also be configured via the web interface. This requires additional integration of the my-PV device into the local network.
If the system has a battery storage unit and you want to prioritize charging the battery storage unit, we recommend leaving the Control target at -150 W the. Otherwise, we recommend setting it to -50 W.

Subject to changes and printing errors.

MYPV
Empowering the Solar Future

my-PV GmbH
Betriebsstraße 12
4523 Neuzeug
www.my-pv.com