

TRACKSO CONNECTION MANUAL FOR SOFAR INVERTER

Brand: SOFAR

Type: Solar On Grid String Inverter

Models: SOFAR 3KTLM-G2, SOFAR 3.6KTLM-G2, SOFAR 4KTLM-G2, SOFAR 4.6KTLM-G2, SOFAR 5KTLM-G2, SOFAR 6KTLM-G2, SOFAR 10000TL, SOFAR 15000TL, SOFAR 17000TL, SOFAR 20000TL, SOFAR 25000TL, SOFAR 30000TL, SOFAR 33000TL, SOFAR 36000TL, SOFAR 40000TL, SOFAR 50000TL, SOFAR 60000TL, SOFAR 70000TL-HV, SOFAR 255 KTL

CONNECTION DIAGRAM

Locate communication terminals (RS485) as shown in the picture below. There are two connection terminals on the configuration circuit board: RS485IN and RS485OUT (used for Daisy Chain connections)



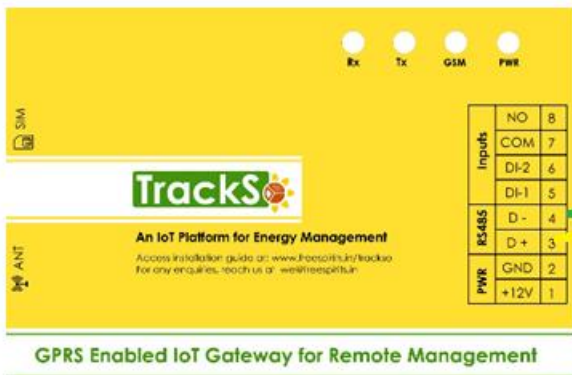
Figure S1: SOFAR String Inverter communication port & Connections

Connection steps

- Please unscrew the RS485 terminal as shown in A part of Figure S1.
- Please make the connections from the Terminal Block to TrackSo IoT Gateway as mentioned in Table – ST1.
- Provide 12V external supply to TrackSo IoT Gateway via 12V, 2A DC adaptor provided in the package

SOFAR Pin no. & Assignment			TrackSo Pin No.& Assignment	
1	485-IN	B2	4	Data-
2		A2	3	Data+
3		G		
4	485-OUT	B1	Used for Daisy Chain Connection	
5		A1		
6		G		

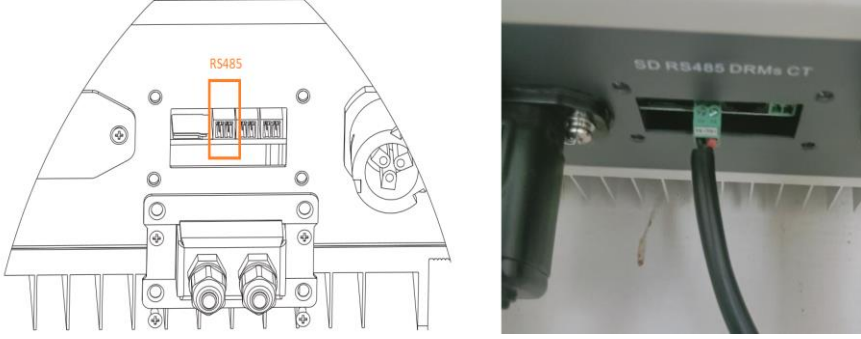

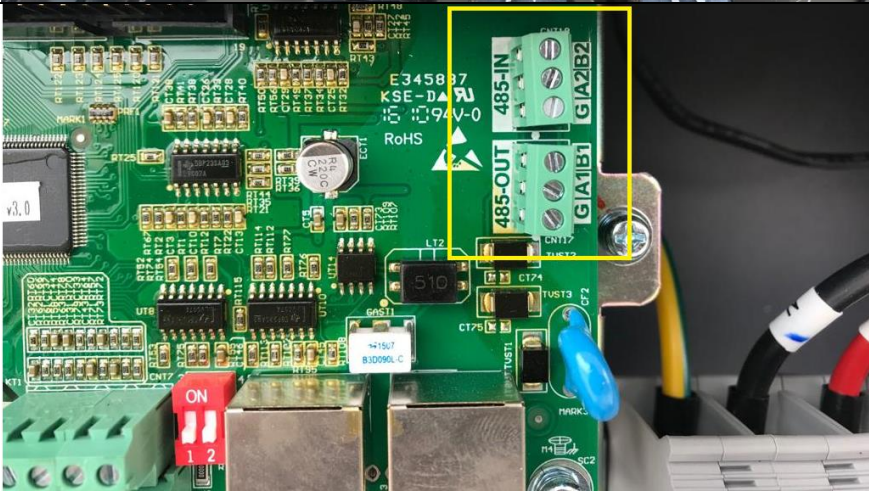
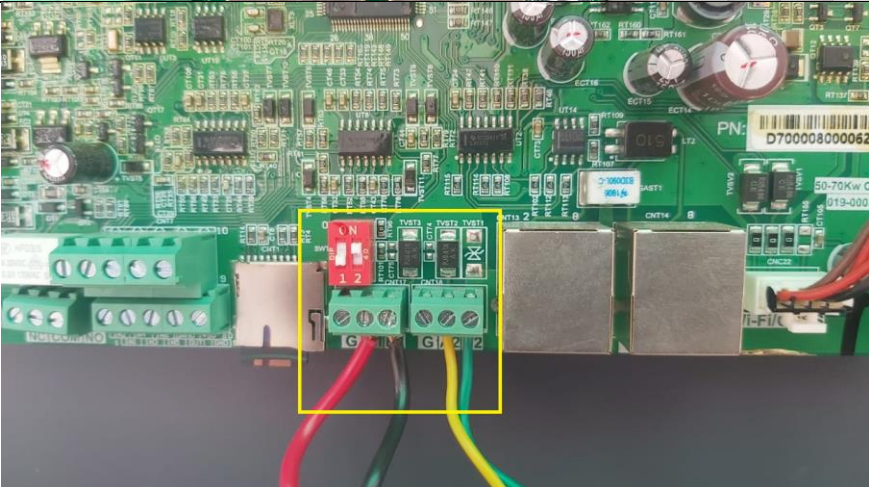
Table ST1 – SOFAR RS485 chip connections with TrackSo IoT Gateway



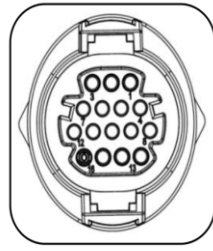
Different Connection location/connectors exist in different models of Inverter.

Please locate RS485 connector of your inverter as per its

(We have collated available the same for available model nos on next page.)

Inverter Model No.	RS485 Port Location
SOFAR 3KTLM-G2 SOFAR 3.6KTLM-G2 SOFAR 4KTLM-G2 SOFAR 4.6KTLM-G2 SOFAR 5KTLM-G2 SOFAR 6KTLM-G2	 <p>The diagram shows the top view of the inverter with an orange box highlighting the RS485 port. The photograph shows the physical port on the device, labeled 'SD RS485 DRMs CT', with a green cable plugged in.</p>
SOFAR 10000TL SOFAR 15000TL SOFAR 17000TL SOFAR 20000TL SOFAR 30000TL	 <p>The photograph shows the internal components of the inverter. A yellow box highlights the RS485 port area, which includes two RJ45 ports labeled 'RS485' and 'SD RELAY'. Below the ports are terminals labeled 'IN1 IN2 IN3 IN4 GND DRMO' and 'NC COM NO'. The background shows several '40US' fuses.</p>
SOFAR 25000TL SOFAR 33000TL SOFAR 36000TL SOFAR 40000TL	 <p>This close-up photograph shows the green PCB with the RS485 port. A yellow box highlights the '485-IN' and '485-OUT' terminals, which are connected to 'GIA1B1' and 'GIA2B2' respectively. Other components like a red 'ON' switch and various electronic components are visible.</p>
SOFAR 50000TL SOFAR 60000TL SOFAR 70000TL-HV	 <p>This close-up photograph shows the green PCB with the RS485 port. A yellow box highlights the '485-IN' and '485-OUT' terminals, which are connected to 'G1' and 'G2' respectively. A red 'ON' switch is also visible.</p>

80KTL
100KTL
110KTL
100KTL-HV
125KTL-HV
136KTL-HV
255KTL

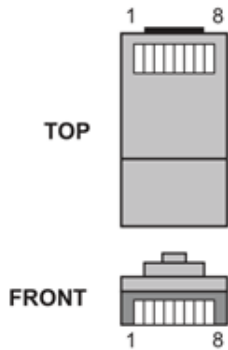


Port Description:

PIN	Define	Function	Note
1	RS485A	RS485 signal+	Wire connection monitoring or multiple inverter monitoring
2	RS485A	RS485 signal+	
3	RS485B	RS485 signal-	
4	RS485B	RS485 signal-	
5-16	Blank PIN	N/A	N/A

Note: Kindly update the Inverter to latest firmware before proceeding with communication setup for 80-255KTL Series Inverters.

In case you are using the RJ45 connector to connect with the datalogger below is the wire config



No.	Color	Function
1	White and orange	RS485 B
2	Orange	RS485 A
3	White and green	RS485 A
4	Blue	RS485 A
5	White and blue	RS485 B
6	Green	RS485 B
7	White and brown	NC
8	Brown	NC

Join the following wires from CAT6 cable to get RS485 connections

Data + (RS485 +) = 2nd + 3rd + 4th

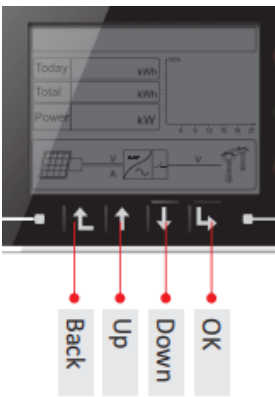
Data - (RS485 -) = 1st + 5th + 6th

DEFAULT CONFIGURATION IN TRACKSO IOT GATEWAY

Inverter ID: **1, 2, 3, 4** Continuous numbering starting with 1, (**Range:** 1 to 247)
Baud Rate: **9600 (Default) (Values:** 9600, 19200, 38400)
Data Bits: 8 ,Stop Bit: 1 ,Parity: None

CONFIGURATION AT THE INVERTER END

Inverter Screen has 4 buttons Back, Up, Down, Ok



Key-button:

- Back : to back up or enter into main interface at standard interface states
- Up : to move up or increase value
- Down : to move down or decrease value
- Enter : to confirm selection


SETTING THE INVERTER ID

The inverter ID is used to identify the inverter in a RS485 connection

← Set correct Inverter Ids

- Set a different inverter ID for each inverter in the PV plant. Otherwise, the inverter will not be identified.
- On the last inverter in the RS485 connection, switch on the RS485 termination resistor.

1.Enter Setting	
1. Set time	
2. Clear Produce	
3. Clear Events	
4. Set Country Code	
5. On-Off Control	
6. Relay Command	
7. Enable Set Country	
8. Set Total Energy	
9. Set Mod-bus Address	
10. Set Inputmode	
11. Set Language	



- Users press “Back” button to enter “1.Enter setting” interface, Press “OK” button to enter main setting interface.
- Enter “9. Set Address” by pressing “Up” button or “Down” button.
- Press “OK” button and enter setting interface “Success” or “fail” is displayed after setting.

SET DATE & TIME OF INVERTER

For a precise calculation of the statistics in the inverter itself and in a monitoring system, date and time have to be correct.

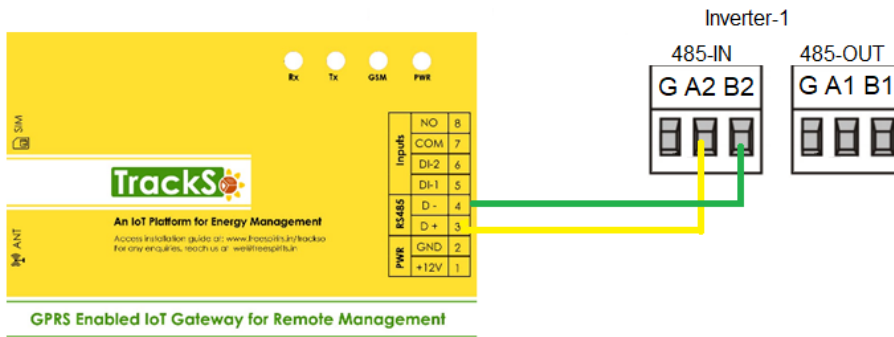
1.Enter Setting	
1. Set time	
2. Clear Produce	

← Set the Correct Date & Time

- Users press “Back” button to enter “1.Enter Setting” interface, Press “OK” button to enter main setting interface.
- Enter “1. Set Time” by pressing “Up” button or “Down” button, then press “OK” button and start to set up time.
- Time set from year, month, day, minutes, & seconds in turns, “Up” or “Down” button to choose different value to set date.
- Set each value is need to press “OK” button to confirm setting. “success” is displayed if the setting time is correct, “fail” means failure settings

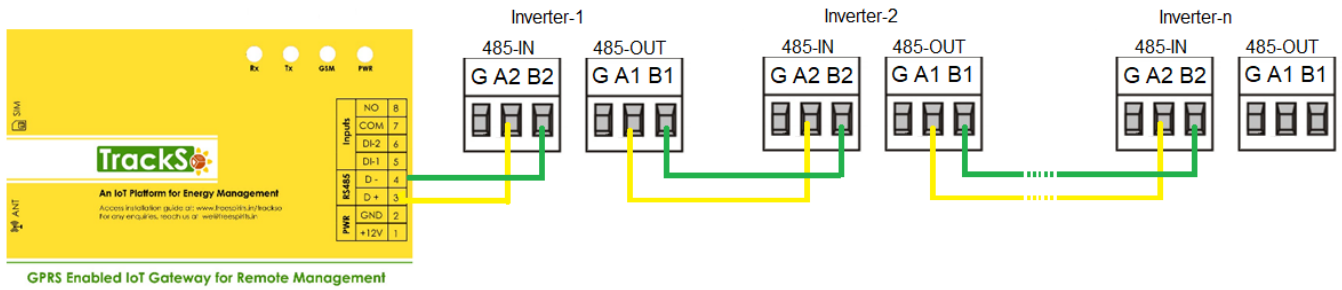
Single Inverter

Terminal Resistor-off



Multiple Inverters

If multiple SOFAR Inv are used, connect all SOFAR Inv in daisy chain mode over the RS485 communication cable. Set different Modbus address (1~31) for each inverter in LCD display and set SW2 (match resistance) at the first and last inverter



NOTE: The above details are mentioned in the [Installation & Operation Manual](#) of SOFAR Inverters