

Brand: HITACHI

Type: Solar On-Grid String Inverter

Models: Si 4.4K, Si 5.5K, Si 6.6K, Si 8.8K, Si 11K, Si 12K, Si 20K, Si 25K, Si 30K, Si 33K, Si 50K, Si 60K, Si 70K(HV), Si 80KTL, 100KTL, 110KTL, 100KTL-HV, 125KTL-HV, 136KTL-HV, 255KTL

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)



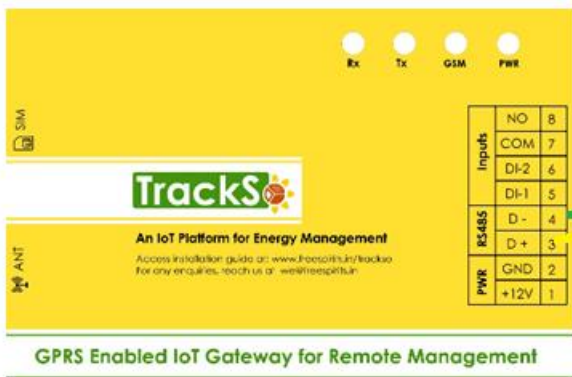
Figure S1: HITACHI String Inverter communication port & Connections

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

HITACHI 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 – HITACHI RS485 chip connections with TrackSo IoT Gateway



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

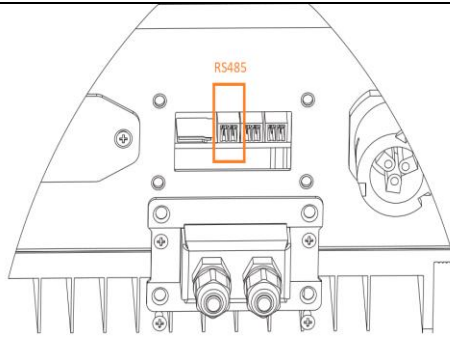
Please locate RS485 connector of your inverter as per its

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

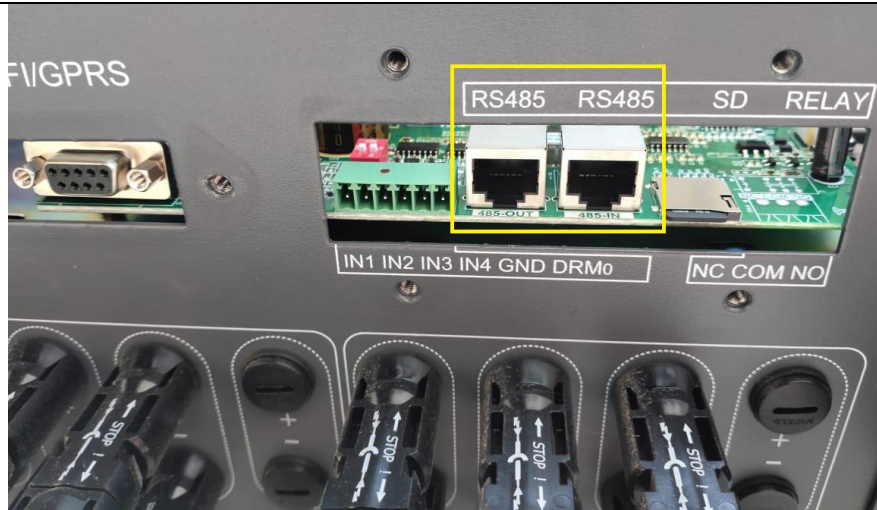
Inverter Model No.

RS485 Port Location

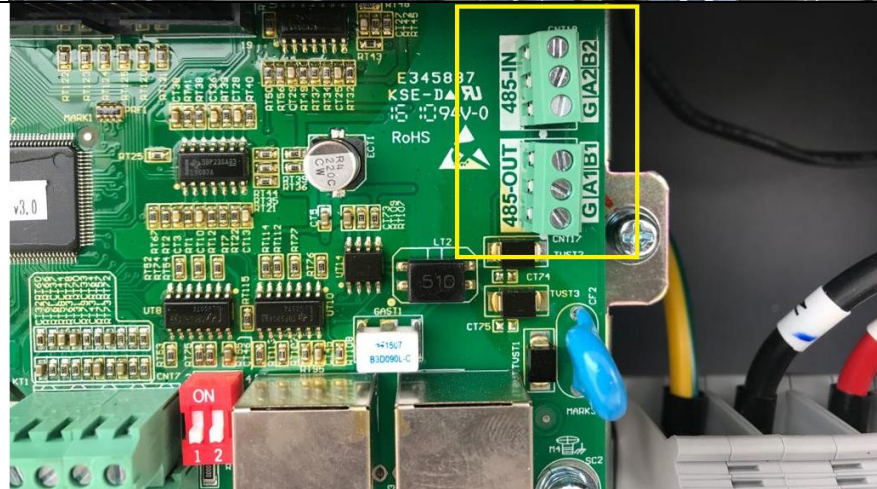
Si 4.4K
Si 5.5K
Si 6.6K
Si 8.8K



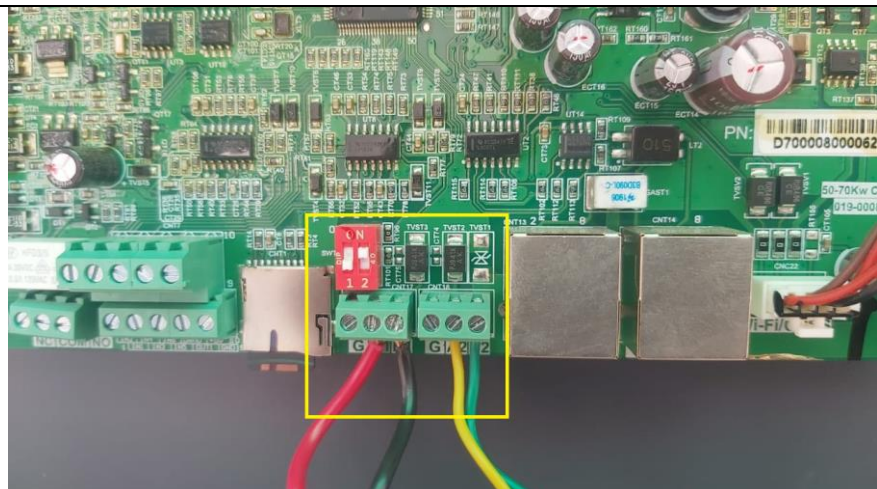
Si 11K
Si 12K
Si 20K
Si 30K




Si 25K
Si 33K



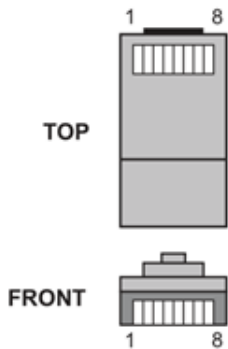
Si 50K
Si 60K
Si 70K(HV)



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

<<- ONLY VALID FOR CONNECTION TYPE: RJ45

Join the following wires from CAT6 cable to get RS485 connections

$$\text{Data + (RS485 +)} = 2^{\text{nd}} + 3^{\text{rd}} + 4^{\text{th}}$$

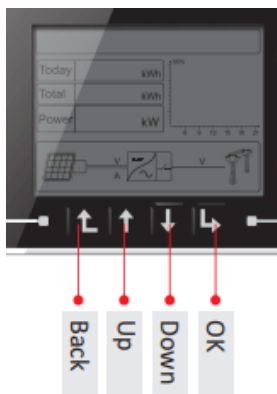
$$\text{Data - (RS485 -)} = 1^{\text{st}} + 5^{\text{th}} + 6^{\text{th}}$$

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

← Set correct Inverter Ids

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

- Set a different inverter ID for each inverter in the PV plant. Otherwise, the inverters cannot be correctly 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.

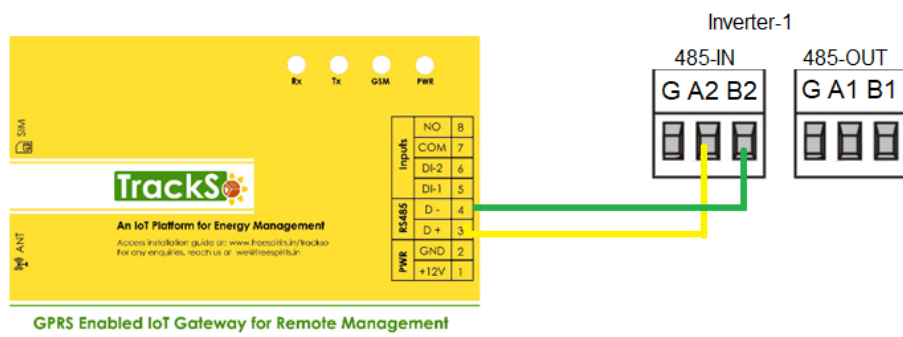
1.Enter Setting
1. Set time
2. Clear Produce

← 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

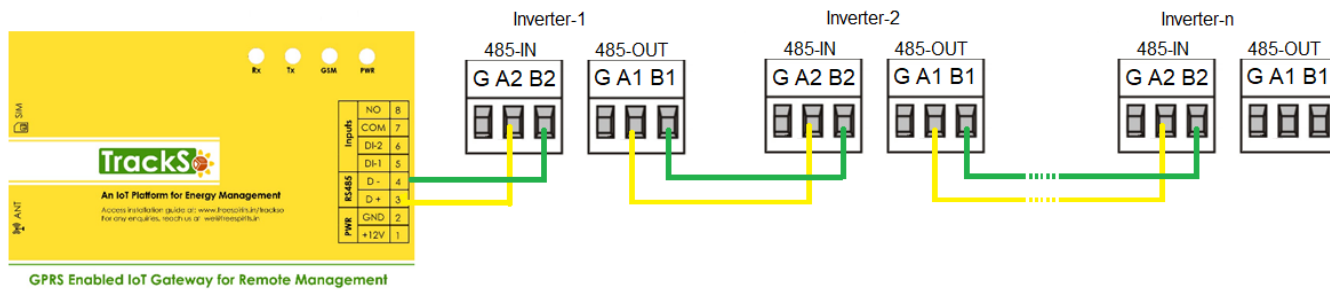
Single Inverter

Terminal Resistor-off



Multiple Inverters

If multiple HITACHI Inv are used, connect all HITACHI 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 HITACHI Inverters