

TRACKSO INSTALLATION GUIDE FOR RISHABH INVERTER

Brand: Rishabh- Radius (Previously Gefran)
Type: Solar On Grid String Inverter
Models: APV-S-10k-AE-TL-2, APV-S-15k-AE-TL-2, APV-S-20k-AE-TL-2, APV-S-20k-AE-TL-3

CONNECTION DIAGRAM

The communication terminals (RS485) are located at the bottom of the inverter. And there are two connection terminals on the configuration circuit board: RS485 A/B terminal blocks.

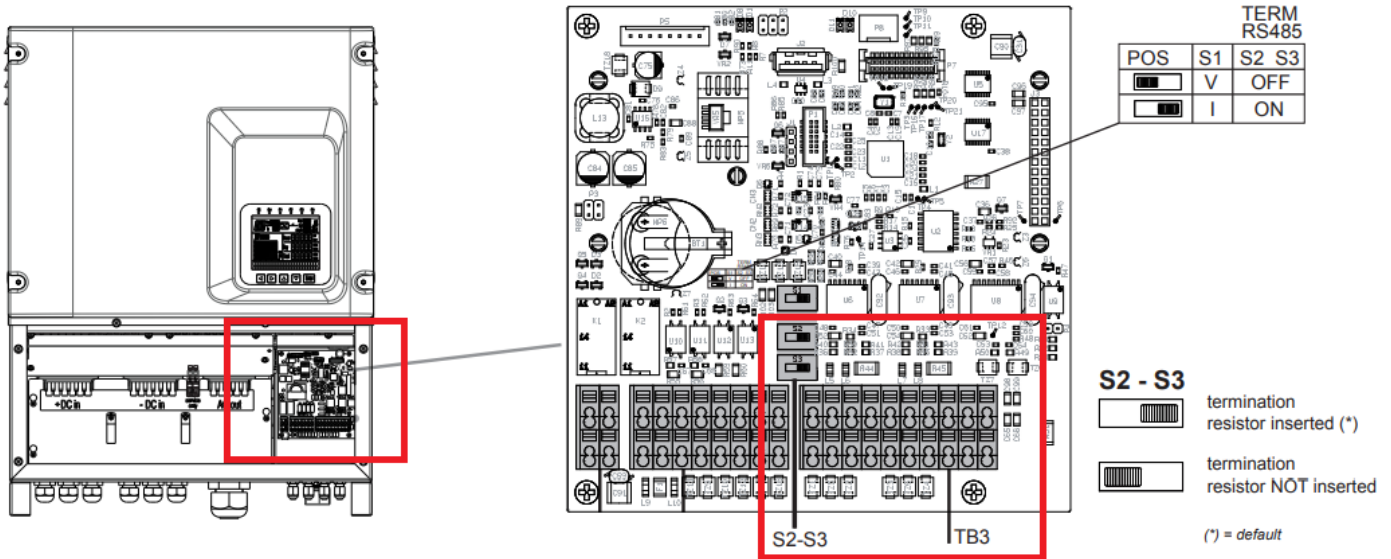


Figure G1 – Rishabh (Radius) String Inverter Connections

1. Locate the TB3 Terminal on inverter as shown in Figure G1.
2. Connectors are pressure spring type; they allow direct connection of a rigid or flexible cable with terminal(pin type), exerting cable pressure (force) on the connection terminal.
3. Connect the cables to the RS485 bus terminal blocks.
4. Please make the connections from the Terminal Block chip (A and B) to TrackSo IoT Gateway as mentioned in the Table – GT1.
5. Power TrackSo using 12V DC Adapter

Rishabh Inv Pin No. & Assignment		TrackSo Pin No. & Assignment	
1	A	3	D+
2	B	4	D-
5	A	Used for Daisy Chain Connections	
6	B		

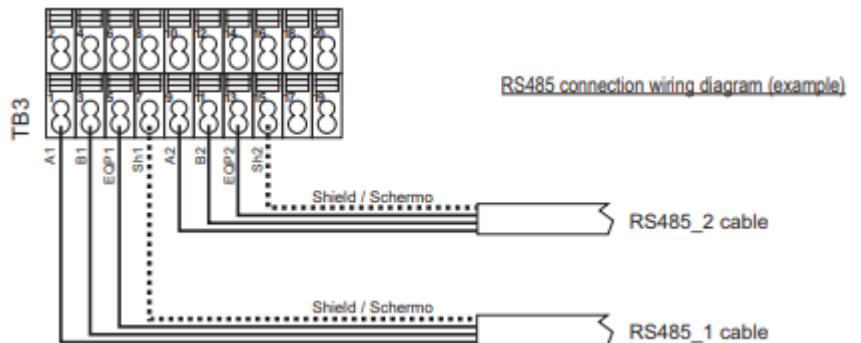


Table GT1 –Rishabh RS485 chip connections with TrackSo IoT Gateway

CONNECTING MULTIPLE INVERTERS

The first and last element of the modbus chain must have the termination resistor inserted.

See Figure 27.

The RS485 terminals are doubled to facilitate multipoint wiring.

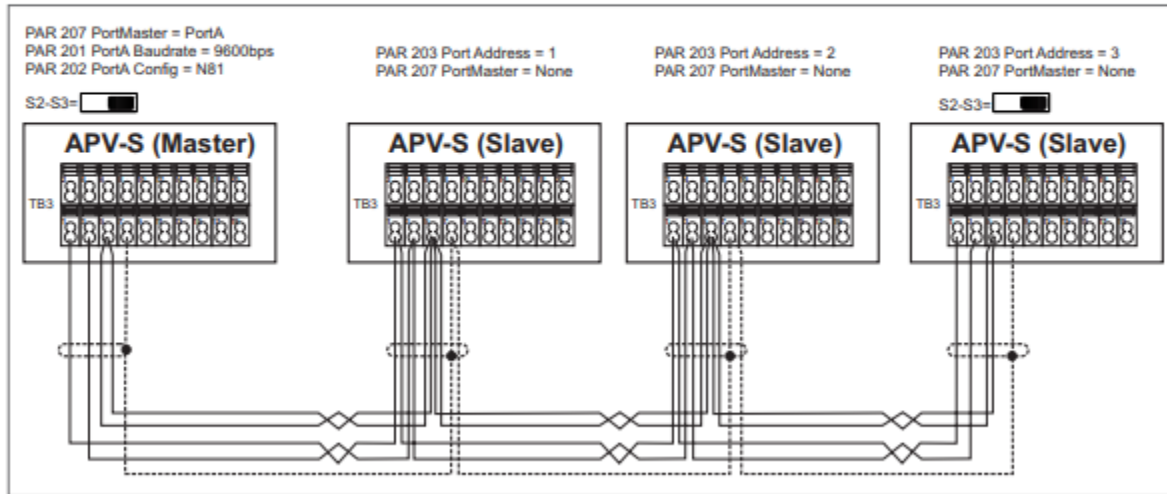


Figure 31 : Example of M/S connection

DEFAULT CONFIGURATION IN TRACKSO IOT GATEWAY

Inverter ID: **1** (Range: 1 to 247)

Baud Rate: **9600** (Default) (Values: 9600, 19200, 38400)

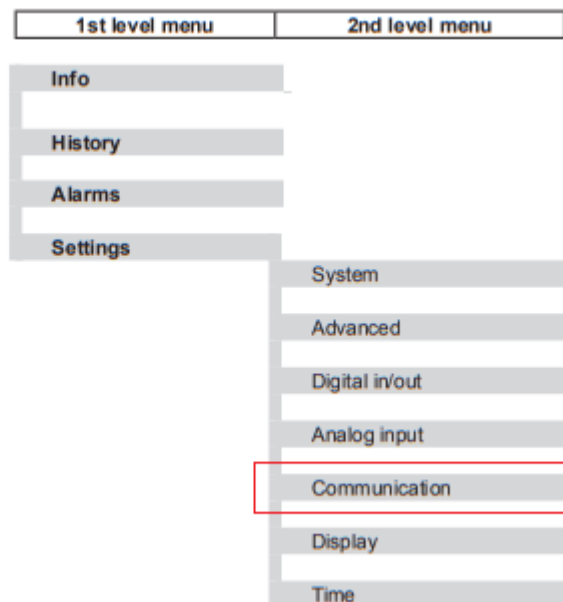
Data Bits: 8

Stop Bit: 1

Parity: N/A (None)

CONFIGURATION AT THE INVERTER END

Expert menu



Default Password-1234

TRACKSO WORKING

1. Insure correct connections as detailed in the installation guide.
2. Insert the SIM card.

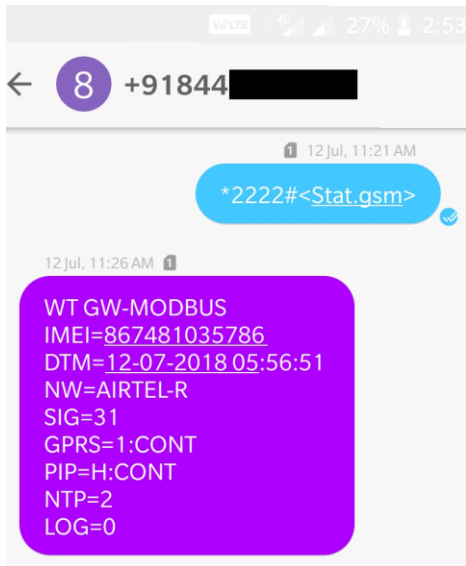


3. Switch on the power to the TrackSo device. (Minimum 12V/1A input is required)
4. Power LED (Red) of TrackSo IoT gateway glows and stays ON.

NOTE: TrackSo IoT Gateway will only be able to send data if the GPRS network is available at the installed location.


LED	NAME	DESCRIPTION														
GREEN	POWER	Light when Power on the device														
RED	GSM	<table border="1"> <thead> <tr> <th>LED Status</th> <th>Connection State</th> </tr> </thead> <tbody> <tr> <td>Flashing (ON for 100ms and OFF for 100ms)</td> <td>SIM Card not found</td> </tr> <tr> <td>Flashing (ON for 500ms and OFF for 500ms)</td> <td>Searching for GSM Network</td> </tr> <tr> <td>Flashing (ON for 0.1s and OFF for 2.9s) Once at every 3sec</td> <td>GSM Network Registered</td> </tr> <tr> <td>Flashing twice at every 3sec</td> <td>GPRS IP Connected</td> </tr> <tr> <td>Flashing 5times</td> <td>GPRS IP Sending data</td> </tr> <tr> <td>LED OFF</td> <td>GSM Fault</td> </tr> </tbody> </table>	LED Status	Connection State	Flashing (ON for 100ms and OFF for 100ms)	SIM Card not found	Flashing (ON for 500ms and OFF for 500ms)	Searching for GSM Network	Flashing (ON for 0.1s and OFF for 2.9s) Once at every 3sec	GSM Network Registered	Flashing twice at every 3sec	GPRS IP Connected	Flashing 5times	GPRS IP Sending data	LED OFF	GSM Fault
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LED OFF	GSM Fault															
GREEN	COM TX	Blink on data transmission in RS485 port														
YELLOW	COM RX	Blink on data reception in RS485 port														

5. To check the exact network status send the following message to mobile number of the device











SMS Command= *2222#<Stat.gsm>	
IMEI	IMEI No. of the data logger (Device Key)
NW	Network
SIGN	Signal Strength out of 31
GPRS	CONT- connected , NC- not connected
PIP	Connected to TrackSo Server or not CONT- connected, NC- not connected
LOG	no. of data points stored in devices incase of no internet

- If the GSM light starts flashing 5 times then Login to www.trackso.in with your Username/Password.
- Click on 'Units' from the menu bar. You will be able to view your installed unit in the table as shown below.
- Check if the **Status** becomes **Receiving** for the relevant Unit.


Mashups
Sites
Units
Rules
Notifications

Home / Units
Add Unit

Show 10 ▾
Search for...

Unit Name	Site	Unit Key	Category	Data Status	Last Event Timestamp	Device Key	Device Phone	Actions
1-Schnieder		[redacted]cc	Inverter	Receiving	2018-07-16 02:24:04	[redacted]31034235444/1	[redacted]9	View Data  
2-Schnieder		[redacted]7799	Inverter	Receiving	2018-07-16 02:24:05	[redacted]034235444/2	[redacted]9	View Data  
[redacted]	School	[redacted]5	Inverter	Not Receiving			[redacted]8	View Data  
[redacted]	chool	[redacted]5	Inverter	Not Receiving				View Data  

9. If the state remains **Not receiveing** for more than 10 minutes, click on your email ID at the top right of the screen and click on 'Event Ingestion Logs' in the dropdown.

Timestamp	Message	code
2018-07-16 02:42:16	Invalid request. Event should contain data. { "events": [{ "timestamp": 1531689133, "unit_key": "84f8b2c", "data": { } }] }	not_acceptable
2018-07-16 02:41:13	Invalid request. Event should contain data. { "events": [{ "timestamp": 1531689070, "unit_key": "84f8b2c", "data": { } }] }	not_acceptable
2018-07-16 02:40:10	Invalid request. Event should contain data. { "events": [{ "timestamp": 1531689007, "unit_key": "84f8b2c", "data": { } }] }	not_acceptable

10. Check if there is some log generated at the time of installation of the TrackSo IoT Gateway device.
- If **NO**, please restart the device and try the same flow again.
 - If **YES**, email us at we@freespirts.in to consult the same.