

TRACKSO INSTALLATION GUIDE FOR DELTA VFD

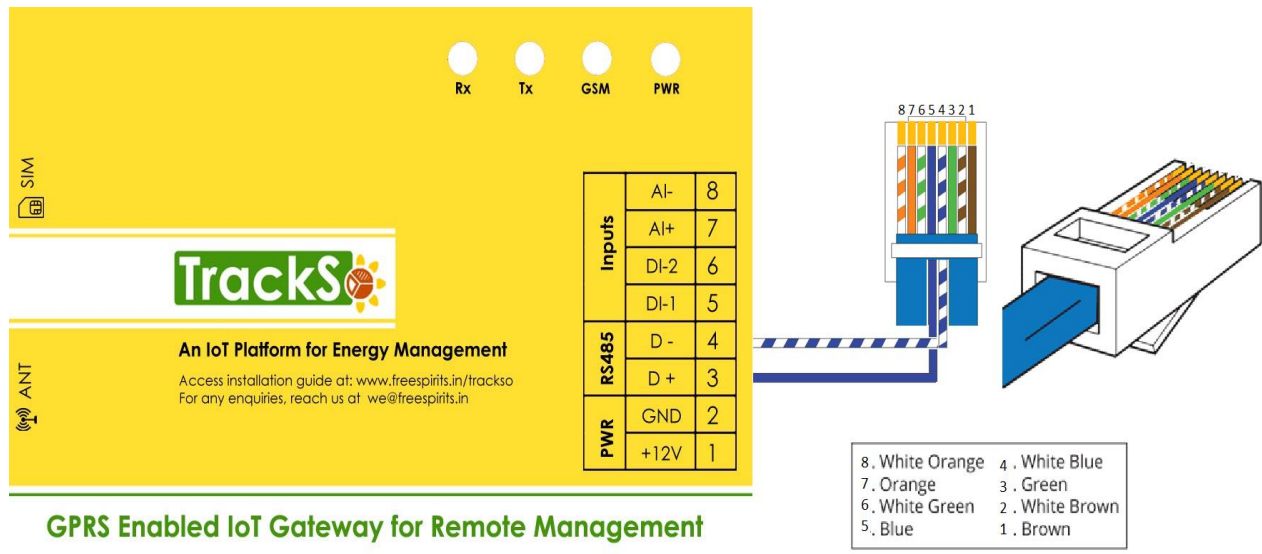
Brand: Delta
Type: VFD
Models: VFD-E Series

CONNECTION DIAGRAM



Figure D1 – Communication Port of Delta VFD E Series

1. Press and hold in the tabs on each side of the cover. Pull the cover up to release keypad.
2. Locate the RS485 terminal (communication port 1) as shown in Figure D1.
3. Please make the connections from the Terminal Block of Delta RS485 chipset to TrackSo IoT Gateway as mentioned in the Table – DT1
4. Provide 12-24V DC Supply to TrackSo at Pin no. 1 & 2.



Delta RS485 Communication Card pin no. & Assignment		TrackSo Pin No. & Assignment	
5	SG+	3	DATA+
4	SG-	4	DATA-

8<-1
RS-485 (NOT for VFD*E*C models)
 Serial interface
 1: Reserved 2: EV 3: GND
 4: SG- 5: SG+ 6: Reserved
 7: Reserved 8: Reserved

Table DT1 – Delta RS485 chip connections with TrackSo IoT Gateway

DEFAULT CONFIGURATION IN TRACKSO IOT GATEWAY

Inverter ID: **1, 2, 3, 4** Continuous numbering starting with 1, (**Range:** 1 to 247)

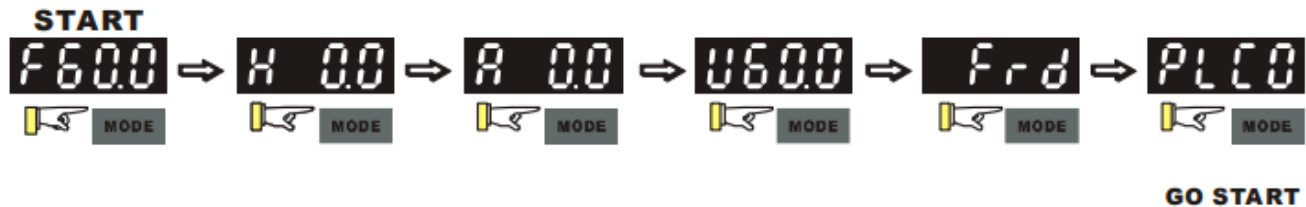
Baud Rate: **9600 (Default) (Values:** 9600, 19200, 38400)

Data Bits: 8 , Stop Bit: 1 , Parity: None

CONFIGURATION AT THE AC DRIVE END

How to operate Digital Keyboard

Setting Mode



NOTE: In the selection mode, press **ENTER** to set the parameters.

Setting parameters



NOTE :In the parameter setting mode, you can press **ENTER** to return the selecting mode.

SETTING THE BAUD RATE

This parameter is used to set the transmission speed between the RS485 master (PLC, PC, etc.) and AC motor drive.

Parameter	Explanation	Settings	Factory Setting	Setting for TrackSo
09.01	Transmission Speed	0: Baud rate 4800bps 1: Baud rate 9600bps 2: Baud rate 19200bps 3: Baud rate 38400bps	1	1

← Set the baud rate to 9600

SETTING THE VFD ID

The communication address for each AC motor drive must be different and unique. Otherwise, the drive cannot be correctly identified.

Each VFD-E AC motor drive has a pre-assigned communication address specified by Pr.09.00. The RS485 master then controls each AC motor drive according to its communication address.

← Set correct Ids

Parameter	Explanation	Settings	Factory Setting
09.00	Communication Address	1 to 254	1

SET COMMUNICATION PROTOCOL

A VFD-E can be set up to communicate in Modbus networks using one of the following modes: ASCII (American Standard Code for Information Interchange) or RTU (Remote Terminal Unit). Users can select the desired mode along with the serial port communication protocol in Pr.09.04.

Parameter	Explanation	Settings	Factory Setting	Setting for TrackSo
09.04	Communication Protocol	0: 7,N,2 (Modbus, ASCII) 1: 7,E,1 (Modbus, ASCII) 2: 7,O,1 (Modbus, ASCII) 3: 8,N,2 (Modbus, RTU) 4: 8,E,1 (Modbus, RTU) 5: 8,O,1 (Modbus, RTU) 6: 8,N,1 (Modbus, RTU) 7: 8,E,2 (Modbus, RTU) 8: 8,O,2 (Modbus, RTU) 9: 7,N,1 (Modbus, ASCII) 10: 7,E,2 (Modbus, ASCII) 11: 7,O,2 (Modbus, ASCII)	0	6

The above details are mentioned in the [Installation & Operation Manual](#) for Delta VFD-E series.

TRACKSO WORKING

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

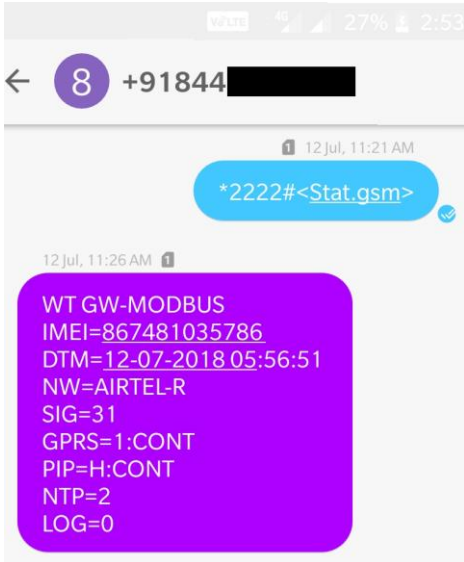


3. Switch on the power to the TrackSo device. (Minimum 12V/1A input is required)
4. Power LED (Red) of TrackSo IoT gateway glows and stays ON.

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

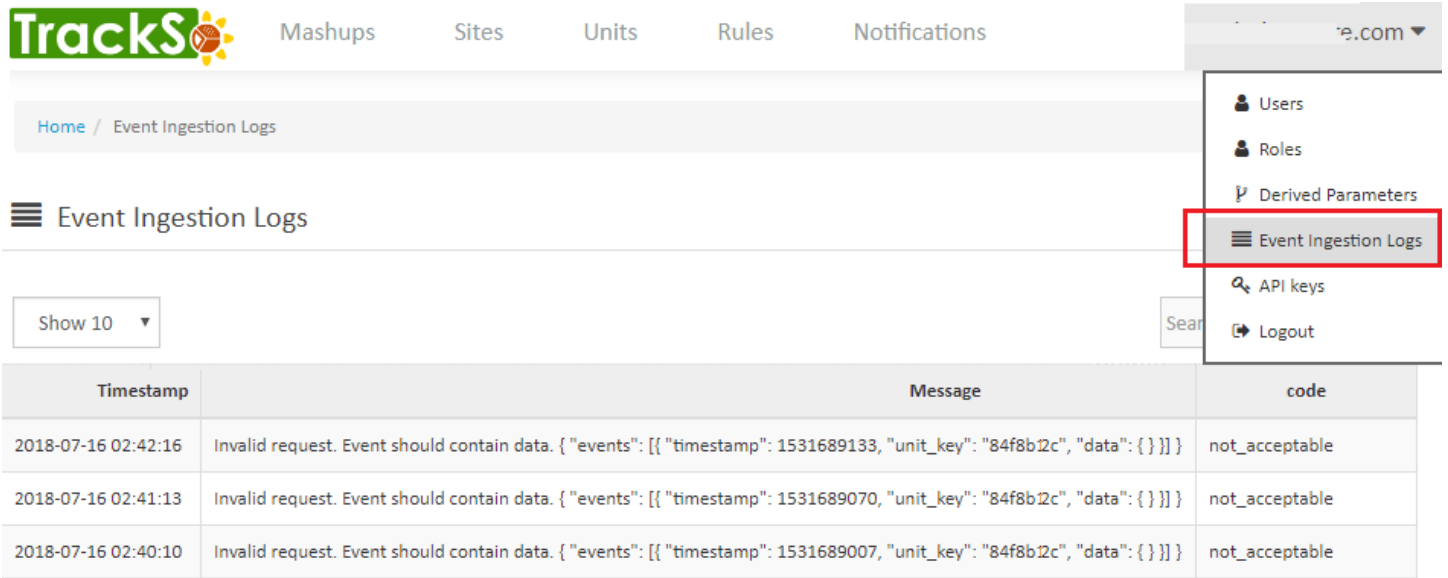


SMS Command= *2222#<Stat.gsm>	
IMEI	IMEI No. of the data logger (Device Key)
NW	Network
SIGN	Signal Strength out of 31
GPRS	CONT- connected , NC- not connected
PIP	Connected to TrackSo Server or not CONT- connected, NC- not connected
LOG	no. of data points stored in devices incase of no interet

- 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.

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 [edit] [delete]
2-Schneider		[redacted]7799	Inverter	Receiving	2018-07-16 02:24:05	[redacted]034235444/2	[redacted]9	View Data [edit] [delete]
[redacted]	School	[redacted]5	Inverter	Not Receiving			[redacted]8	View Data [edit] [delete]
[redacted]	chool	[redacted]5	Inverter	Not Receiving				View Data [edit] [delete]

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.



The screenshot shows the TrackSo web application interface. At the top, there is a navigation bar with the TrackSo logo and menu items: Mashups, Sites, Units, Rules, and Notifications. A user profile dropdown menu is open on the right, showing options: Users, Roles, Derived Parameters, **Event Ingestion Logs** (highlighted with a red box), API keys, and Logout. Below the navigation bar, the breadcrumb path is 'Home / Event Ingestion Logs'. The main heading is 'Event Ingestion Logs'. There is a 'Show 10' dropdown and a search box. Below these is a table with three columns: Timestamp, Message, and code. The table contains three rows of log entries, all with the message 'Invalid request. Event should contain data. { "events": [{ "timestamp": ..., "unit_key": "84f8b2c", "data": { } }] }' and the code 'not_acceptable'.

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@freespirits.in to consult the same.