TRACKSO INSTALLATION GUIDE FOR KACO INVERTERS

Brand: KACO
Type: Solar On Grid String Inverter
Models: KACO Blueplanet Series with Modbus TCP Communication (Sunspec)

CONNECTION DIAGRAM

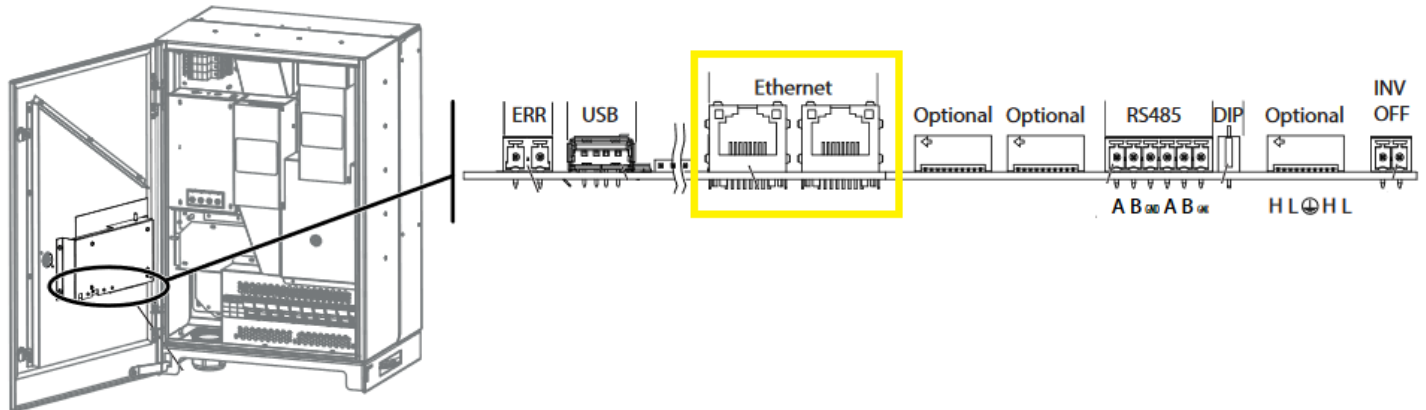Locate communication terminals (Ethernet Port) as shown in the picture below.

Figure K1: *Kaco String Inverter Communication Circuit Board*

Connection steps

- Locate the communication card as shown in Figure S1
- Guide the network cable (LAN) through the cable glands and Connect the Ethernet cable to the inverter.
- Configure the Ethernet interface in the configuration menu.
- Connect the Ethernet cable to the Data Logger
- Configure the Ethernet settings in the settings menu
- Provide 12V DC external supply to Data Logger
- Provide Internet to Data Logger

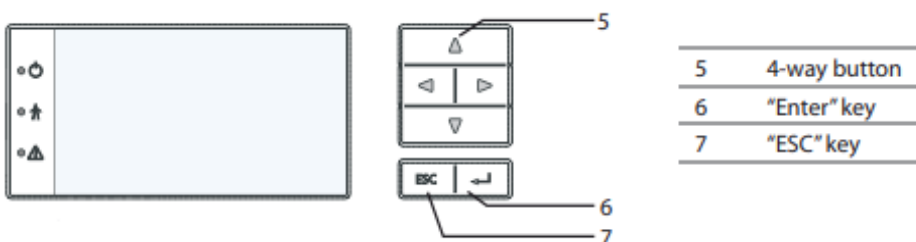## DEFAULT CONFIGURATION IN DATA LOGGER

Inv-1 -> ID-1, IP-192.168.0.10, Port-502
Inv-2 -> ID-2, IP-192.168.0.11, Port-502
Inv-3 -> ID-3, IP-192.168.0.12, Port-502
continuous to the max no. inverters allowed.

CONFIGURATION AT THE INVERTER END

5	4-way button
6	"Enter" key
7	"ESC" key

SETTING THE IP ADDRESS IN INVERTER ID

1) Go to Inverter Settings
2) Deactivate DHCP
3) Assign IP Address, Subnet Mask, Gateway and DNS Server either as mentioned on Logger or as per Site Ethernet Details.

← Set correct IP ADDRESS

[1][2][3][4] **Network**	↳	☞ Open the menu: Press the right arrow button or the Enter button.
[1][2][3][4] **DHCP**		Activate or deactivate DHCP. ☞ On: Activate DHCP. Once the DHCP server becomes available, the IP address, subnet mask, gateway and DNS server are automatically applied and the afore-mentioned menu items are hidden. ☞ Off: DHCP deactivated, make settings manually.
		NOTE: The "IP address", "Subnet masks", "Gateway" and "DNS server" menu options are only displayed with the DHCP deactivated.
[1][2][3][4] **IP address**		☞ Allocate a unique IPv4 address in the network.
[1][2][3][4] **Subnet mask**		☞ Allocate a network mask.
[1][2][3][4] **Gateway**		☞ Enter IPv4 address of gateway.
[1][2][3][4] **DNS server**		☞ Enter IPv4 address of DNS server.

SET COMMUNICATION PROTOCOL

In Network, Activate Modbus TCP and Set Port to 502 (Default) or as per site Ethernet Details

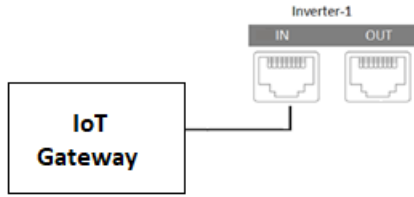|		
[1][2][3][4] **Network**	↳	☞ Open the menu: Press the right arrow button or the Enter button.
[1][2][3][4] **Modbus TCP**		☞ Activate/deactivate function. ☞ Set network port.

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.

← Set the Correct Date & Time

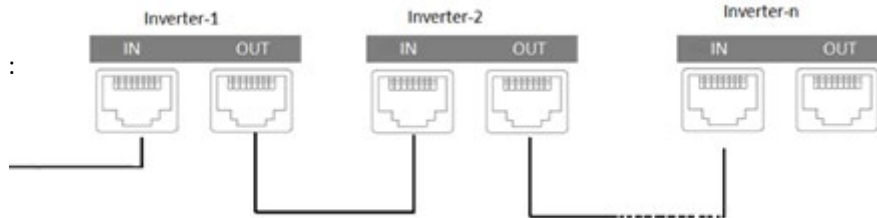|		
[0][1][2][3] **"Settings" menu**	↳	☞ Open the menu: Press the right arrow key or the OK key.
[0][1][2][3] **Date & time**		☞ Set the time and date. **NOTICE:** For self-diagnostic purposes, the inverter carries out a daily restart at midnight. To avoid having a restart occur during feed-in operation and to always obtain reliable log data, ensure that the time is correctly set.

Single Inverter

Inverter-1

IN   OUT

IoT
Gateway

**Multiple
Inverters**

If multiple inverters are used, connect all in chain as shown below. Set different ip address for each inverter.

The maximum length of a network segment is 100 m

Inverter-1   Inverter-2   Inverter-n

IN   OUT   IN   OUT   IN   OUT

:

NOTE: The above details are mentioned in the ***Installation & Operation Manual*** for KACO Blueplanet 50.0 TL3

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

Push Yellow Nob

Pull the SIM Tray

Place the SIM card In tray Inside

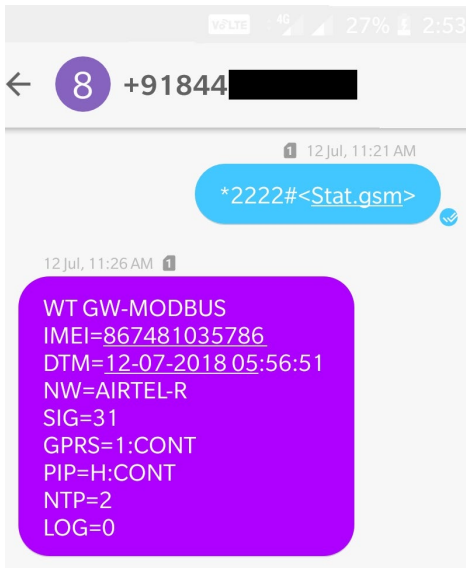

Place the SIM Tray in SLOT and Push the Tray

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	**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
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

WT GW-MODBUS
IMEI=867481035786
DTM=12-07-2018 05:56:51
NW=AIRTEL-R
SIG=31
GPRS=1:CONT
PIP=H:CONT
NTP=2
LOG=0

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

Unit Name	Site	Unit Key	Category	Data Status	Last Event Timestamp	Device Key	Device Phone	Actions		
1-Schnieder	▮	▮▮▮cc	Inverter	Receiving	2018-07-16 02:24:04	▮31034235444/1	▮9	View Data	✎	🗑
2-Schneider	▮	▮7799	Inverter	Receiving	2018-07-16 02:24:05	▮034235444/2	▮	View Data	✎	🗑
▮	▮School	▮5	Inverter	Not Receiving			▮3	View Data	✎	🗑
▮	▮chool	▮5	Inverter	Not Receiving				View Data	✎	🗑

9. If the state remains <mark>Not receiveing</mark> 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.

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