

Pakistan Oxygen Limited

Telemetry Deployment SOPs

Step #1:

Connect and check all the electrical connections of the telemetry unit.

SOLAR PANEL / SUPPLY:

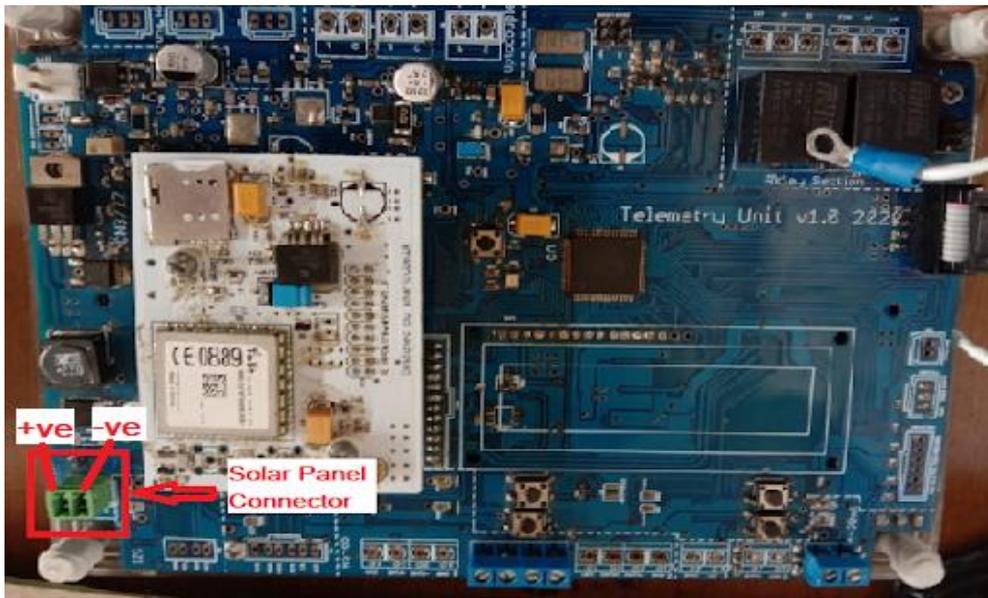


Fig 1: Solar panel/Supply Connector

BATTERY CONNECTIONS:

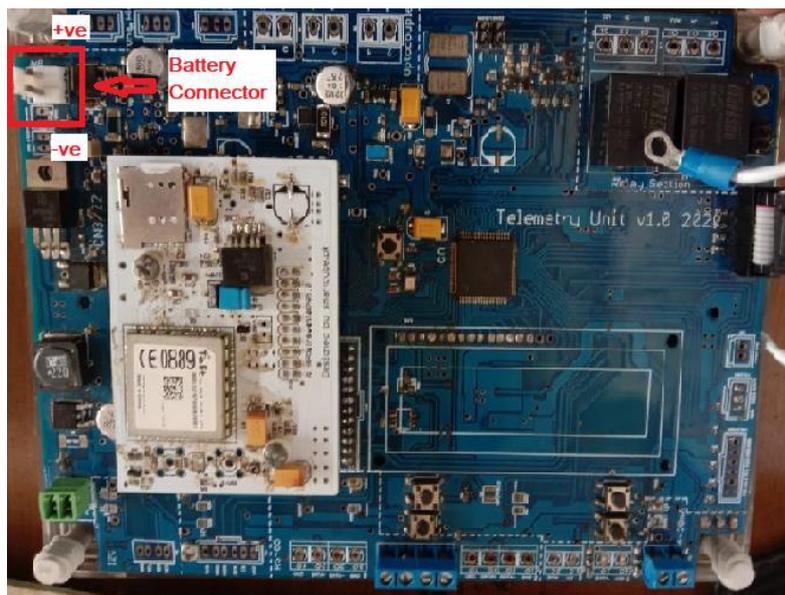


Fig 2: Battery Connector

Sensor Connections:

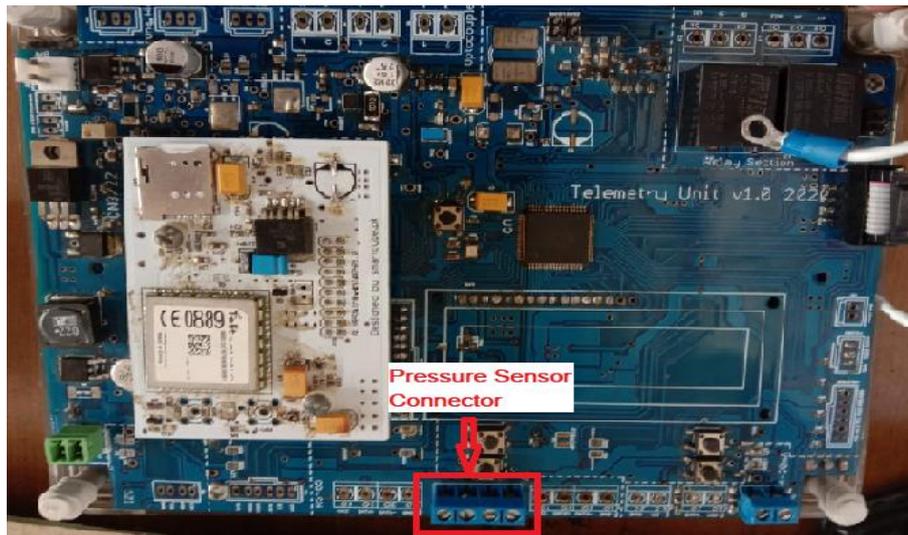


Fig 3: Pressure Sensor Connector

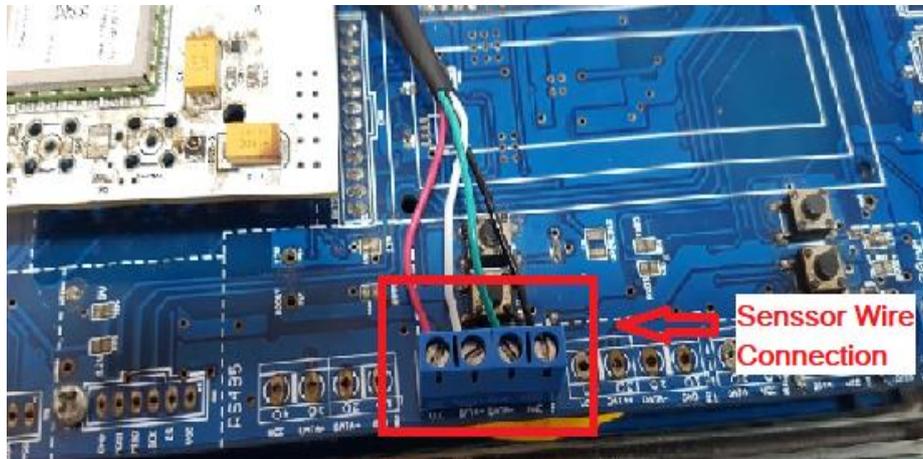


Fig 4: China Star PT502 Sensor Wire Connection

SOLAR PANEL CONNECTIONS:

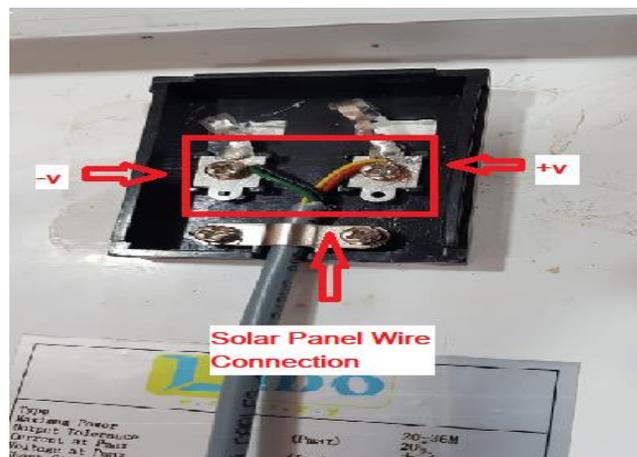


Fig 5: Solar Panel Wire Connection

Step #2:

Insert the sim in the telemetry unit in the sim socket.

SIM INSERTION:

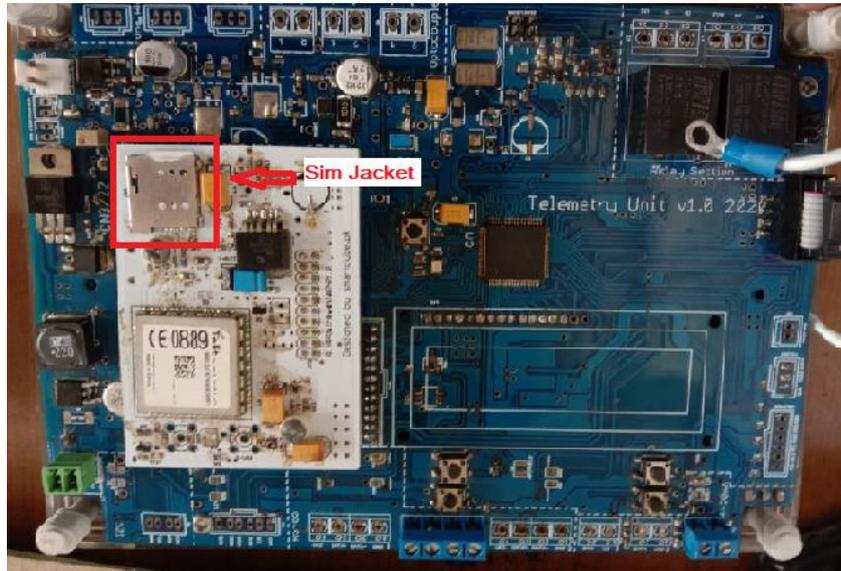


Fig 6: Sim Insertion

Step #3:

Take pictures of the device barcode and IMEI of the GSM.



Fig 1: Device ID number



Fig 2: IMEI Number

Step #2:

If the site RTU is available on the portal change the Device ID number on the portal. If not available add the new RTU, SITE, Tank, Event Setting (refer to the portal manual)

Edit RTU

Description*

Kharadar General Hospital (TB21-021503)

Site*

Kharadar General Hospital

Select Pool Schedule*

After every 1 Hour

Select Product*

Liquid Oxygen

Fig 3: RTU Details

Step #3:

Change the IMEI number and RTU number to the portal.

For S-Cube Devices Testing Email and SMS Config

Select Carrier*

Jazz Data Sim(Weekly Package)

RTU phone no*

03011105290

IMEI no*

357976067365510

IP Address*

Fig 4: RTU Number and IMEI

Step #4:

Device calibration using internal LCD.



Fig 5: Internal LCD with Buttons

Please refer to the attached link of the internal LCD calibration guide.

Link:

https://drive.google.com/file/d/1zDfu2LtLDPuzFLa8REolr0qxa5Xo2uv_/view?usp=sharing

Step #5:

Check data transmission and signal strength with antenna (should be above 15).

RTU	Item	Reading Value	Event	Importance	Reading Date & Time
<input type="text" value="Kharadar"/>	<input type="text" value="🔍"/>				
Kharadar General Hospital (TB21-021503)	Level	74.2%	Normal	Normal	3/24/2021 4:09:08 PM
Kharadar General Hospital (TB21-021503)	Pressure	9.6 Bar	Normal	Normal	3/24/2021 4:09:08 PM
Kharadar General Hospital (TB21-021503)	Temperature	32.33°C	Normal	Normal	3/24/2021 4:09:08 PM
Kharadar General Hospital (TB21-021503)	Battery Voltage	12 Volt	Normal	Normal	3/24/2021 4:09:08 PM
Kharadar General Hospital (TB21-021503)	Signal Quality	31	Normal	Normal	3/24/2021 4:09:08 PM
Kharadar General Hospital (TB21-021503)	Alarm	OFF	Normal	Normal	3/24/2021 4:09:08 PM

Fig 6: Signal Quality

Step #6:

Store zero in High and Low Line Pressure status in the event settings **if the line pressure sensor is not used**. By default, these statuses are set to On.

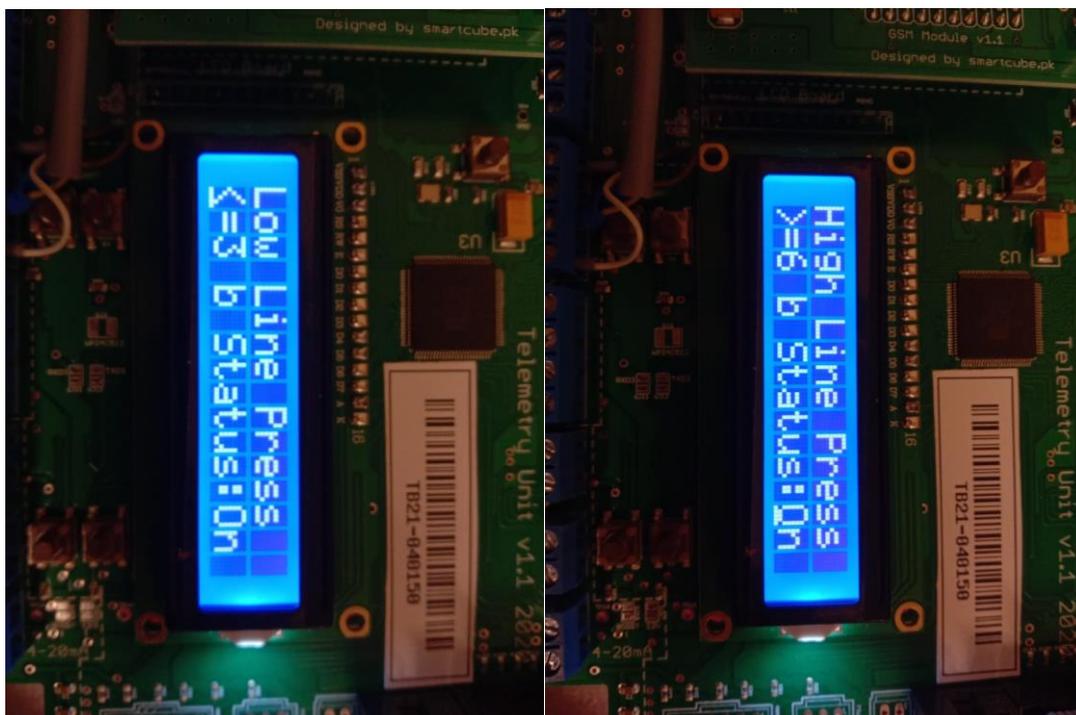


Fig 7: Line Pressure Status On

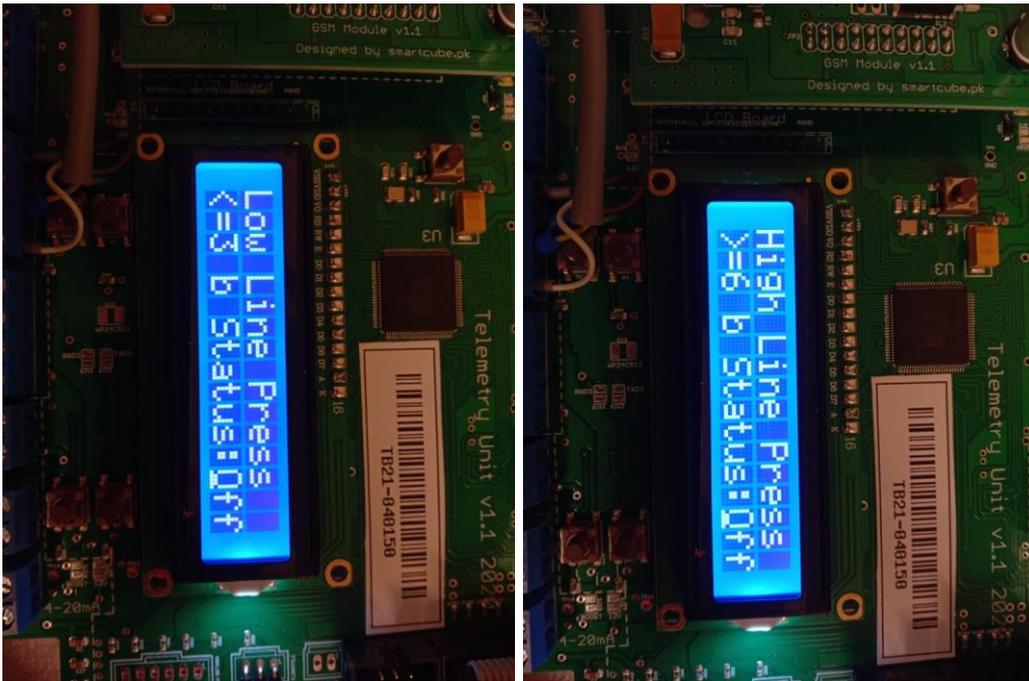


Fig 8: Line Pressure Status Off

Step #7:

Make sure that the event settings on the device have the following values:

	LEVEL	CONDITION	STATUS
Full	99	4 (>=)	1
Reorder	70	5 (<=)	1
Critical	50	5 (<=)	1
Empty	30	5 (<=)	1

	PRESSURE	CONDITION	STATUS
High Tank Pressure	16	4 (>=)	1
Low Tank Pressure	5	5 (<=)	1
High Line Pressure	6	4 (>=)	1
Low Line Pressure	3	5 (<=)	1

Note: We will store off in high and low line pressure status if the line pressure sensor is not used.

Step #8:

Make sure that the device and portal settings (both event and remote) are same. This is done by entering the internal LCD menu, as it will automatically upload the settings to the portal.

Step #9:

Take screenshots of the updated remote and event settings from the portal

Remote Setting

Show: 10 entries

Search: |

Description	Density	Maximum Pressure	Minimum Pressure	IP Address	Server Port	Server No	Pool Schedule	Updated By	Acknowledgement	Date & Time	Action
Patel Hospital (KT09-75084)	1141	237	0	13.76.167.100	80	923070415311	30	Patel Hospital	Message Received	2/23/2021 11:24:01 AM	 

Fig 9: Remote Setting Acknowledgement

Event Configuration

Show: 10 entries

Search: patel

[View Configuration](#)

Description	Full	Empty	Critical	Reorder	High Pressue	Low Pressue	High Line Pressure	Low Line Pressure	Alarm	Updated By	Acknowledgement	Date & Time	Action
Patel Hospital (KT09-75084)	Level=99	Level<=30	Level=50	Level=70	Pressure=>16	Pressure<=6	Disabled	Disabled	ON	Patel Hospital	Message Received	1/16/2020 2:31:25 PM	 

Fig 10: Event Setting Acknowledgement