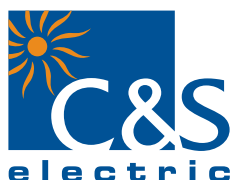
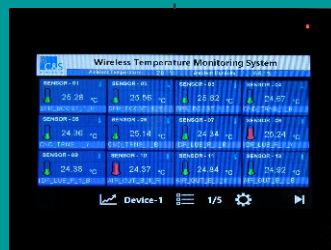
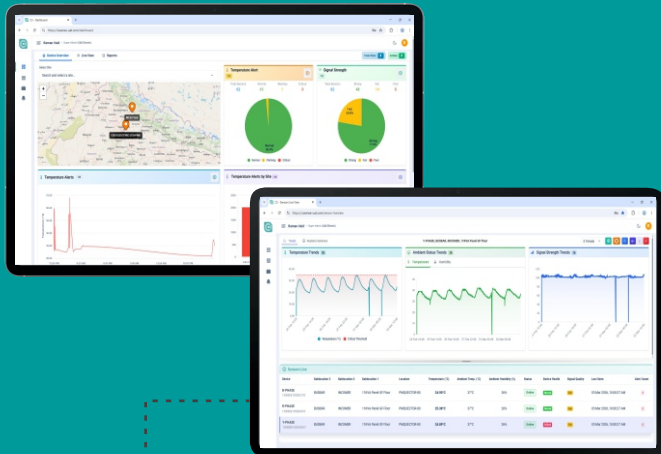


We touch your **electricity** everyday!

Wireless Self Powered Busbar Temperature Monitoring System Solution



PMD Division

C&S Wireless Self Powered Busbar Temperature Monitoring System

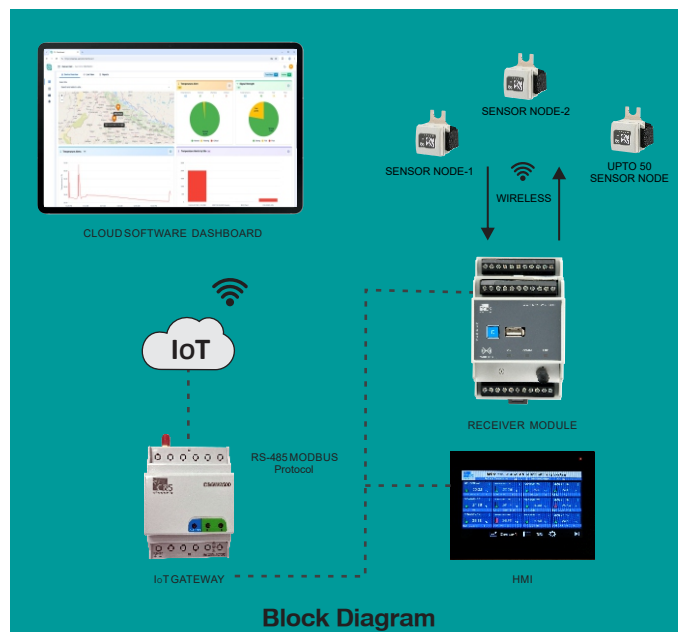
Introduction

Wireless Self powered Busbar temperature monitoring system offers a comprehensive thermal management solution by seamlessly integrating four essential components into a single, unified platform.

- 1) **Sensor Node *** : Self powered Temperature sensor for Busbar Temperature monitoring.
- 2) **Receiver Module** : Receiver with RS-485 MODBUS-RTU & Alarm O/p.
- 3) **HMI** : 7" HMI with resistive touch for Local display.
- 4) **Gateway** : Industrial IoT gateway to monitor Sensor data over IoT through Cloud Software.

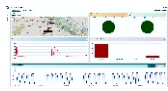
KEY FEATURES

- Self powered Energy efficient
- Predictive maintenance
- Advance Analytics through Graphs & Trends
- Excel & PDF Report features
- Prevent Overheating & Failures with E-mail & SMS alerts *
- Remote Monitoring through Cloud software



SENSOR NODE, CSTSM-WL, CLOUD SOFTWARE

Solution : Temperature Monitoring System

Sensor Node		Self powered temperature node starting measurement at 20A (Pickup ≥20A)
Ferromagnetic Strip		Ferromagnetic Strip for Energy harvesting
Velcro Strap		To cover the Ferromagnetic Strip
Strip Lock		To lock the Ferromagnetic Strip
HMI		7" HMI for local display
IOT Gateway		Industrial IOT gateway to share data over cloud (Cloud Software)
Cloud Software		CS-Sense Cloud Software for Remote monitoring & Alerts.
Receiver Module		To receive the data from Sensor Node (up to 50 nos / receiver)

TERMINAL NUMBER	DESCRIPTION
8 - 9	DO 1
10-11	DO 2
23 - 24	RS-485 (B) - RS-485 (A)
42 - 44	Power Supply (-) - Power Supply (+)

TECHNICAL DATA

PARAMETERS

SENSOR NODE: *	
Temperature Monitoring Range	-20 to +145 °C
Temperature Accuracy	± 3.0 °C Max.
Transmission Period	60s
Temperature Resolution	0.1 °C
Communication Protocol	LoRa
Wireless Frequency Range	865 to 867 MHZ
Max. distance between Sensor & Receiver	200 Meter (in free field un-obstructed)
Rated Supply	Starting current : For Energy Harvesting 20Amp
Current limit of the Live & Measured part	5000A without exceeding the temperature rise limits
Voltage limit of the Live & Measured part	up to 12kV
Power Consumption in Transmission mode	200mA max.
Power consumption in Sleeping mode	2µA max.
Boot-up Time	<8 min
Back-up Time	≤15 min
Ambient Air Temperature for operation	-25 to +80 °C (Any live and measured parts shall be lower than IEC limits)
Relative Humidity	10 to 95%
Sensor Node mounting	By Velcro-Metal Strip
Dimension (W x H x D) (mm)	52 x 42 x 31.1
RECEIVER MODULE :	
Power Supply	24 to 60V DC
Input Channels	up to 50 Sensor Nodes
Wireless Frequency Range	865 to 867 MHz
rH Measurement (Ambient)	10 to 95% (± 2% Accuracy)
Temp. Measurement (Ambient)	-20 to +80°C (± 0.2°C Accuracy)
Communication Port	RS-485, MODBUS-RTU
Dimension (W x H x D) (mm)	67.5 x 128 x 78
Mounting Type	35 mm Din-rail / Panel mount
HMI MODULE :	
Size	7 Inch WVGA Color TFT
Resolution	800 x 480 pixels
Touch Screen	Analog Resistive
Dimension (W x H x D) (mm)	120 x 89 x 31.5
Mounting	Panel mounting (Flush Type)
IP Degree of Protection	Front Panel : IP-66 ; Rear Panel : IP-20
IOT GATEWAY :	
Connection Type	4G / 5G Cellular / Wi-Fi / LAN
Mounting	35 mm DIN Rail
IP Degree of Protection	IP-20

