



Shift from *Monitoring*

...To Management

Leader in Controlling & Management of Renewables



SuryaLog[®]

Centralize & Single Platform to Digitize & Optimize Renewables



About SuryaLogix



SuryaLogix is a product and technology development company in the field of renewables. We support and resolve client's pain points of remote monitoring, smart/hybrid controlling, asset management, SCADA in order to increase the ROI

Technologies & Benefits



Analytics & IoT



Deemed & Curtailment



SCADA



Modular GPRS 4G / LTE



Wireless



Sensor In-House Mfg



Mobile App



Multiple & Reliable Storage



Artificial Intelligence



Sensor In-house Calibration



Remote Management



Sensor In-house Repairing





**Compatible
With Multiple
Makes**

**75%+
Market
Share**

**Priority
Wise
Controlling**

**Executed
Complex
Projects**

PV-DG Controller

- Protects DG from excess solar power & maintains spinning reserve of DG
- To optimize Solar generation while running with DG

Zero Export Controller

- To avoid back feeding into grid
- Beneficial when the load is less during break time or holidays in without net metering scenario

Data Logger

- Remote & Local Monitoring system with real time alerts through mail & messages
- Wireless data transmission possible for multiple building

Irradiation Sensor



- Irradiance: 0 to 1600W/m²
- Supply Voltage: 10 to 28Vdc (0.5 to 1 W)
- Output: 4-20mA/ 0 -10VDC/ RS-485

Module + Ambient



- Sensor Accuracy : Up to $\pm 0.1^\circ\text{C}$
- Measuring Temperature Range -40 to 120
- Analog and Digital Output
- Shield based arrangement Ambient

Surge Protection Device (SPD)



- Data Line & Power line surge protection
- To protect the device from over voltage or switching transients

Li-ion UPS



- ± 12 VDC, 2A output with 3-4 hours backup for SuryaLog device
- Light weight & small size

Slave



- Wired-LAN-Same Intranet
- Wireless-Slave- RF Based
- Master Slave Configuration
- Failsafe Condition available

Wireless Transceiver



- Range up to 1.2kms with obstacles 2 km LoS
- Comes with point-to-point technology
- On board proprietary



Remote Management

Third Party Portal Compatible

Customizable Screens & Alerts

Easy to Install & Operate

SCADA : New & Retrofit

- Monitoring & Controlling - Local and Remote SCADA
- Grid, Substations and Transformer level monitoring
- Real time monitoring & Alerts through e-mails and messages
- Third party portal compatibility
- Central monitoring & Asset management features
- Analysis & loss calculations

SMB : New & Retrofit

BEFORE



- Cost Effective Solution
- Increases the Plant Up time

AFTER



- RS 485 MODBUS / Wireless Interface / OFC
- Available in 1000VDC or 1500VDC

String Monitoring Board



- Current Channels: 4/8/12/16/20/24
- 1 Input Channel For Voltage: 1000V Or 1500V.
- 4 Digital Inputs & 1 On Board Temperature Sensor.
- RS 485 MODBUS/ Wireless / OFC / Ethernet

RS 485 Repeater/Splitter



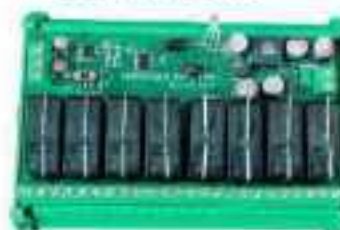
- RS 485 -4 Port (Half Duplex), 1 Port (Full Duplex)
- Output ,Modbus RTU , Modbus TCP/IP
- Supply Input Voltage range 10 to 28 VDC

RS 485 Extension – 5 Port



- RS-485
 - 1) 2 Port - RS485 Extension
 - 2) 5 Port - RS485 Extension
- Supply Input voltage: +10 to +28 VDC
- Output: Modbus RTU / Modbus TCP/IP

DI/DO Card



- To sense the ON, OFF, and TRIP conditions from breakers
- Easily integrated with SCADA through RS-485 output

RMS Products

Solar Water Pump RMS (SWP Log)



- Monitors generation & consumption
- Monitors pump run time and fault analysis
- Enhances drive to monitor & control

On Grid RMS (RuF Log)



- Monitoring for residential & small commercial solar plants
- Daily alert messages and mails
- FTP compatible

Off Grid RMS (PCU Log)



- Monitors battery charge & discharge
- Monitors-Off grid & hybrid systems
- Compatible with Lead acid & Li-ion

Grid EMS (RMS)



- Load monitoring for open access
- Grid monitoring at HT / LT levels
- Daily alerts & historical analysis

BESS Controller



- Power flow control towards load
- PCS, Battery, Grid, DG, Solar can interfaced
- Tripping alarm system
- Priorities based Operation
- Controlling through soft signals & hard signals.
- Time- Based Controlling

Hybrid Controller



- Mini - Micro Grid Interfaced
- Batteries, Grid, DG, GG, Solar, Wind- etc. Interfaced
- Priority wise Operation
- Local and Remote monitoring available
- Time -Based Controlling

Power Plant Controller



- Active Power Curtailing-
- Local & Remote Command
- Reactive Power Curtailing
- Maximum Up - to 20 % Of Inverter Capacity.
- Night Time Reactive Power Management
- Static And Dynamic Controlling



Suryalog RC4G

- Compatible with multiple inverters makes
- Easy to install and configure
- Local data storage and upload to portal in case of internet failure
- suitable for residential & small commercial



Suryalog RM4G

- Local data storage
- RTC & Remote Monitoring
- Internal storage - Max 2-3 months
- Compatible with multiple inverters makes



DC-DC Converter

- Wide Input range: 200/300 to 1000VDC / 1500 VDC
- Efficiency : Up to 86%



RMS Dongle

- Small sized - 4G, 150Mbps, Expandable 8GB
- Portable Wi-Fi USB sticks that can connect to your laptops, phones, or tablets
- Convenient internet access on the go

Soiling Station: Auto Cleaning



- IEC 61725 Compliance
- Manual/ Automatic Cleaning of PV Modules
- Real time Soiling Loss
- Short circuit and MPP (optional) method compliant
- Temperature corrected calculation methods
- Assures data quality by real- time filtering to maximize accuracy

Monofacial + Bifacial Module & Ambient



- Sensor Accuracy : Up to $\pm 0.1^{\circ}\text{C}$
- Measuring Temperature Range -40 to 120°C
- Output-4-20 mA/0-10 VDC/RS -485
- Shield based Ambient Temperature Sensor

Wind Speed & Direction



- **Range** - 0 to 359° & 0 to 70 m/s
- **Output** :- Analog & Digital
Wind Direction Designed accordance with (IEC 61724-1:2021)
Wind Cup Design
Mechanical : Wind Vane

DHI & DNI



- Direct Radiation detect by Sun
- Shadow Ring to avoid direct Sun rays
- Sunrise time, Sunset time Calculation.

Weather Monitoring Station

Weather Datalogger



- Compatible with All Weather Stations
- Easy to configure and Commission
- Flexible to Interface Multiple Sensors
- High Resolution & Accuracy
- Flexible & Configurable
- Internal Storage & Inbuilt GPRS

Weather Mounting Pole with Self Charge



Thermopile Pyranometer sensor



Wind Speed & Direction Sensor



Albedometer Sensor



Ambient Temperature & Humidity Sensor



Monofacial & Bifacial Module Sensor



Rain Gauge Sensor

Photodiode Pyranometer



- Used to measure independent, accurate readings of the total available solar radiation
- Digital and Analog outputs are available
- Faster responsivity
- Monitor the wide solar spectrum with increased accuracy

Thermopile Pyranometer – Type 2 (Class C)



- Used to measure the broad band of the solar radiation flux density from a 180 degree field of view.
- Better response time.
- Digital and Analog outputs are available.
- Class type:
 1. Class-C (type 2)
 2. Class-B

Thermopile Pyranometer– Secondary Standard- (Class A)



- Improved measurement accuracy
- Used to measure the broad band of the solar radiation flux density from a 180 degree field of view.
- Wide selectivity range
- Response time <math><0.65 \text{ sec (50\%)}</math>
<math><1.65 \text{ sec (95\%)}</math>

In-House Calibration- As Per ISO 9846 & 9847



- Artificial light source method
- Direct sunlight method
- Make :- Hukse & flux , Luft , Kipp & Zonen
- Repair of Pyranometer
- Extended one year warranty
- Universal Compatibility for Multiple Makes

Central Management System



Centralize & Single Platform to Digitize & Optimize Renewables



Available In



Portal Snaps

Dashboard



Live all plant parameters like PR, INS, Reports, Inverter status in single screen

Centralize Dashboard



Graphical, Tabular and Map view for all the selected sites. Portfolio level Monitoring & Analytics

Graphical View



Live, Backlog & Unmonitored energy Graphical report Day / Month / year etc.

Tabular View



| Site | PR | INS | Reports | Inverter Status |
|--------|-------|-------|---------|-----------------|
| Site 1 | 95.2% | 12000 | 100% | OK |
| Site 2 | 98.1% | 15000 | 100% | OK |
| Site 3 | 92.5% | 8000 | 95% | Warning |
| Site 4 | 99.0% | 20000 | 100% | OK |
| Site 5 | 96.8% | 18000 | 100% | OK |

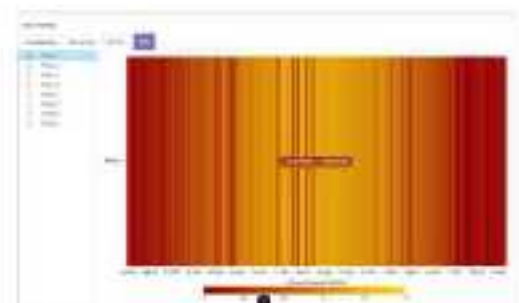
Tabular representation of plant, Inverter, Inverter status logs, DI status log, SMB Wing, Source, Weather

Block Diagram



Complete view of solar power plant starting from solar panels to load

Heat map



A heat map use to monitor multiple inverters in one place for performance analysis

Unique Features

Direct Access For Customization

Self Troubleshooting & Device Errors

Setting Syte & Configure Remotely

Multiple Products Interlacing

Digital And Analog Post Configuration

Local And Remote Monitoring

Mobile Application With Notifications/Alerts

Remote Portal, Protocol JSON,FTP,MQTT,API (Rest API)



Our Solutions

| Roofop Solar | Ground Mount Solar | WMS & Sensor |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • PV-DG Controller • Zero Export Controller • Data Logger • Sensors • Wireless Communication • Master Slave Config • RMS-SWP, PCU, RuF Log • Grid RMS Open Access • RMS Dongle • PLCC converters. | <ul style="list-style-type: none"> • New & Retrofit SMB • New & Retrofit SCADA • Suryalog SCADA • Power Plant Controller • DC-DC Converter • Wireless SMB • SPD's, Media Converters & UPS • AI, DI, DO, RS-485 Extensions • Wireless Comm - above 5km • Hybrid controller | <ul style="list-style-type: none"> • New & Retrofit WMS • Class A, B, C Pyranometers • Weather Data Loggers • Ambient and Module • Temperature sensors • Rain Gauge, Air Pressure • DNI, DHI, Albedometer • Self Charge with Backup • Soiling Station with auto clean • Sensors Repair and calibration |

Portfolio & Presence



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