

## MONITORING SMALL ROOFTOP SOLAR PLANTS

- Monitor small rooftop solar plants ( 5KW to 50KW)
- Monitor solar plant generation performance
- Reverse power flow monitoring and alarm
- Monitor Inverter Level Parameters
- Cloud based solar plant monitoring
- Remote user access
- Very economical monitoring solution

### ROOFTOP SOLAR PLANT MONITORING

There is increasing use of grid connected roof top small solar power plants. Small rooftop solar plants requires economical solution to provide net metering and to monitor performance of the solar plant.



\*Image show for description purpose only

Solar plant grid interface parameters should be monitored to provide following in-formation :

- Operating hours for the solar plant.
- Electrical energy generated by the solar plant.
- Performance of the solar plant.
- Net import / export of energy to the grid.
- Provide reports on the solar plant operation

All the above information should be provided to the owner via cloud based service.

### SATEC EM133- SMART SOLUTION



SATEC EM133 with Cellular Modem

SATEC intelligent MFT EM133 with cellular modem is perfectly suited for this application. SATEC four quadrant MFT EM133 will be installed in the roof top solar power plant. It will monitor and collect grid interface electrical parameters for the solar plant.

SATEC EM133 operates directly up-to 63Amps, hence no CT's are required.

The MFT will monitor power flow for import and export of energy. Parameters Import Energy, Export Energy and Net Energy are provided.

Set points feature in EM133 enables generation of alarms and events.

The DIN rail mounted MFT will transmit all the parameters to eXpertpower cloud service via cellular modem.

Cellular service (2G, 3G or 4G) can be used from any service provider.

User will be able to log-in to eXpertpower cloud service using user name and pass-word assigned to him and view all the parameters and reports.

EM133 has internal data-log memory to save parameters if link to eXpertpower is lost. This information will be transmitted to eXpertpower on restoration of the cellular service.

The system is supplied complete with wall mounted enclosure.

## SATEC EM133- SMART SOLUTION

SATEC eXpertpower cloud service communicates with multiple devices installed at remote sites via cloud and collects all required parameters.

**eXpertpower service will provide the following features :**

- Login for user using user and password via any standard web browser.
- Display solar plant operating parameters.
- Display solar plant energy parameters (import, export and net).
- Provide operating hours for the solar plant.
- Provide alerts via email based on alarm set points.
- Provide reports on plant performance via email at set intervals.
- Economical solution for monitoring rooftop solar plants
- Required information is available any place and any time.
- Our flexible infrastructure supports tailored applications for specific customer needs

eXpertpower service can be subscribed for minimum twelve months. Subscription charges are based on number of solar plants and number of users.



## TECHNICAL SPECIFICATIONS EM133

**Features of EM133 are as follows :**

- PT input up to 690VAC (Line to line)
- CT input via CT or 63A direct.
- Four quadrant measurement.
- All parameters updated on cycle to cycle basis and sampling rate 128 samples per cycle.
- Accuracy class 0.5S as per IEC-62053-22:2003.
- Input frequency: 45-65 Hz.
- Front panel LED for calibration check and communication.
- Digital inputs –2
- Relay Output –1
- Ambient operating temperature: -20 to 60°C.
- Ambient operating humidity: 0 to 95% non-condensing.
- Operating power supply: 40- 260V DC/AC
- DIN Rail mounted.



SATEC EM133 with Cellular Modem

## INFORMATION REQUEST

**Please provide following information while submitting your request for proposal :**

- Rating of the solar plant
- Three phase or single phase
- Number of inverters, their rating and make
- Number of concurrent users required



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