

Monitoring options for Conext RL

By Srikanta Prasad and Ranjeet Kuberkar

Abstract

In an environment of ever-diminishing FITs, monitoring the PV plant performance is becoming increasingly important in order to maximize the ROI. To fulfill this need, Conext RL provides the users with an option to monitor the PV plant performance locally as well as remotely. Additionally the data logger from Schneider Electric can be used as a control unit to facilitate remote active power management of the inverter as per the regulatory requirements in some countries. To enhance your ability to use other third party monitoring solutions for your PV plant, Schneider Electric consistently works with the leading independent monitoring solutions providers to make sure their monitoring solutions are compatible with Conext RL.

Introduction

The new single phase grid tie inverter “Conext RL” from Schneider Electric comes with the following two monitoring options:

Local monitoring: You can use the Ethernet card from Schneider Electric to monitor the performance of the PV plant from the comfort of the home.

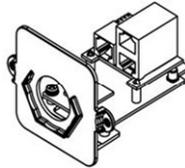


Figure 1 – Ethernet card

Remote monitoring: You can use Conext Monitor 20 from Schneider Electric to log the data to a web portal. You can then access this web portal on your computer/laptop/tablet from anywhere using a web browser.

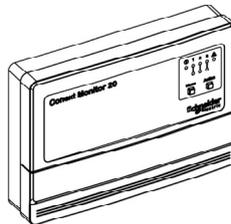


Figure 2 – Conext Monitor 20

This application note explains the key features of these monitoring options available with Conext RL.

Local monitoring

“I just need to monitor basic PV plant performance when I am at home”

As shown in Figure 3 below, you can choose the Ethernet card to monitor the PV plant performance from the comfort of the home. With the Ethernet card you can connect the Inverter to your computer/laptop and access the PV plant performance using a web browser.

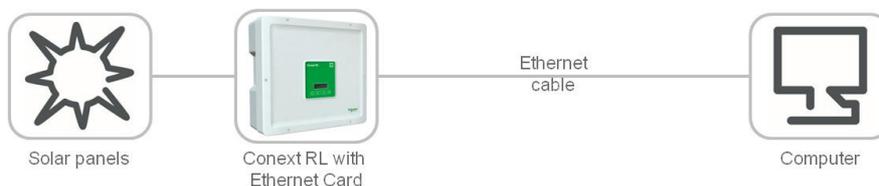


Figure 3 – Local monitoring options for Conext RL: wired access

You can also connect the Ethernet card to a wireless router and access the PV plant performance in a wireless manner on your computer/ laptop/tablet. That brings added comfort to you to access the monitoring web pages without the need of connecting an Ethernet cable to your computer/laptop/tablet.

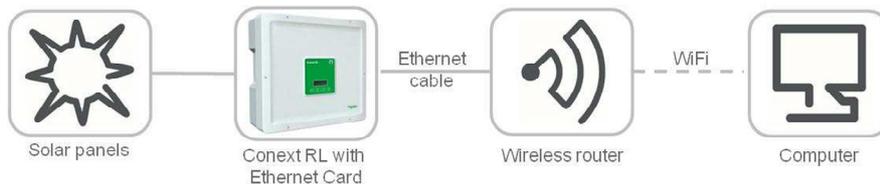


Figure 4 – Local monitoring options for Conext RL: wireless access

The Ethernet card is easy to install and configure. Refer to the detailed user manual of the product at www.schneiderelectric.com/solar for more details about the installation and configuration.

With Ethernet card, you are able to access the dashboard as shown in Figure 5 below.



Figure 5 – Dashboard of Ethernet card web pages

The important information represented in the dashboard is:

- **Current power and energy generation:** Details about current power and energy generated.
- **Historical energy generation details:** Details about historical energy generation by day, month and year. Such analysis is important to monitor the trend in the energy generation and to identify issues, if any, proactively.
- **Other important details:** In addition to the above mentioned details, the dashboard also helps you to monitor remuneration, environmental impact, inverter status, inverter power factor and current power limit.

In addition to the dashboard, as a plant owner, you get access to user-friendly screens for configuration of the Ethernet card. For the installer, the application provides access to advanced inverter configuration and firmware upgrade functionality.

Remote monitoring

“I need bit more details of PV plant performance and flexibility in access location”

If you want a little advanced information of your PV plant performance and want to access the PV plant performance irrespective of location, then you can choose Conext Monitor 20.

Conext Monitor 20 is a compact, low-cost monitoring and control unit. It is suitable for PV systems upto 20kW (not more than three inverters). Conext Monitor 20 allows simple configuration and start-up.



Figure 6 – Conext Monitor 20

As shown in Figure 7 below, connecting the Conext Monitor 20 to the Internet via Ethernet allows the operating data to be visualized and monitored regardless of the location using the web portal.



Figure 7 – Remote monitoring option for Conext RL: Conext Monitor 20

After you login into the web portal of Conext Monitor 20 (i.e., Conext Monitor Web), you get access to the dashboard of the application as shown in Figure 8 below.

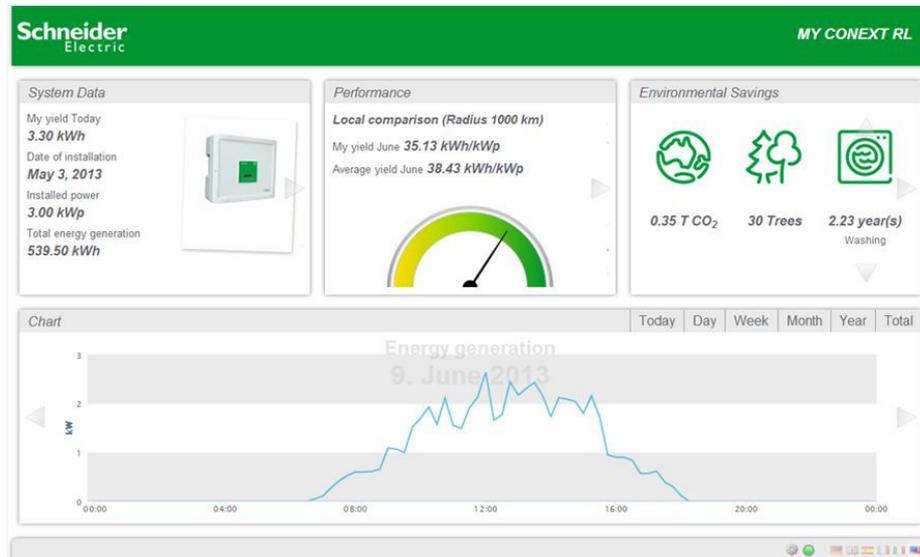


Figure 8 – Dashboard of Conext Monitor Web

The dashboard displays key information as below:

- **System data:** Data regarding today's yield, date of installation, installed power, total energy generation, and the technical data (entered at the time of registration).
- **Performance:** Local and regional benchmarking of the yield in the current month and the current year as well as yield in the past month and the past year.
- **Environmental savings:** Information regarding environmental impact due to the installation of the PV plant e.g., CO₂ emission avoided, number of trees saved, etc.
- **Historical energy generation:** The charts provide information about the energy generated by hour/day/week/month/year.

Additionally, the portal also provides you information about remuneration through the FIT and functionality to check the current inverter status.

The data logger has a value-added feature of being able to act as a control unit in case the local regulations mandate remote active power management. You can also set up an audible alarm to alert you in the event of a fault.

Refer to the user manual of Conext Monitor 20 at www.schneiderelectric.com/solar for detailed information about installation and configuration.

Choice of monitoring option

“So which of the two monitoring options should I choose?”

You can refer to the following comparison of the local and remote monitoring features of Conext RL to make a decision on what option you need:

Table 1 – Comparison of local and remote monitoring features

Requirement	Local Monitoring using Ethernet card	Remote Monitoring using Conext Monitor 20
Current and historical energy generation data	Y	Y
Regional benchmarking of PV plant performance	N	Y
Environmental impact	Y	Y
Remuneration	Y	Y
Access to monitoring data irrespective of location	N	Y
Monitor more than one inverters	N	Y (max plant size 20kW, up to 3 inverters)
Remote active power management	N	Y
Audible alarm in case of a fault	N	Y

Third-party monitoring solution

“I would like to use a third party monitoring solution”

If you would like to use a third-party solution from an independent monitoring solutions provider, that is perfectly fine with us. We work with the leading independent monitoring solutions providers in the world to make sure their monitoring solutions are compatible with our inverters.

The following is the list of the vendors and their data loggers that are compatible with Conext RL

Table 2 – Third party monitoring solutions compatible with Conext RL

Vendor	Data logger
Meteocontrol	WEB'log Residential, WEB'log Comfort

Visit our website www.schneiderelectric.com/solar for the updated list of third party solutions with which Conext RL is compatible and for the related application notes.

If we have not included any of the popular third party monitoring solution providers in your country, do not hesitate to get in touch with our customer support team. We would consider working with the suggested vendor to ensure compatibility with Conext RL.

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