

# PV REMOTE PRO

The easy way for monitoring

WEB-BASED  
**PV REMOTE PRO**  
ADVANCED

» Maximize solar power yield

» **Advanced diagnostic software**

» Scalable solution

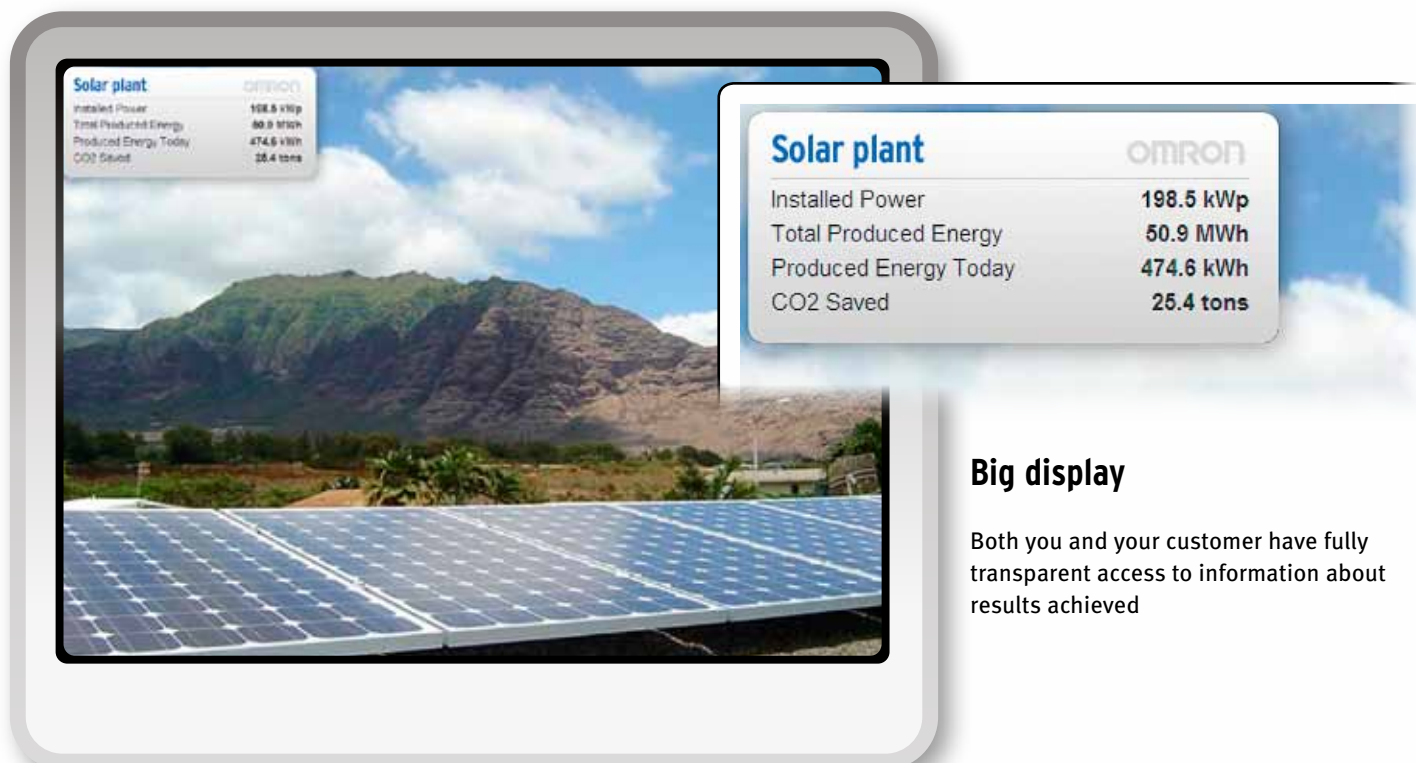
# PV REMOTE PRO

## the Omron solar monitoring solution

*Omron is delighted to announce that its PLC is now ready for monitoring photovoltaic (PV) plant, with PVremote Pro. This is the new, easier solution to remote diagnostics of PV plant, with a unique combination of robust industrial automation and reliable, proven monitoring. This professional web-based tool allows users to keep watch on the performance of PV plant, with access to key data from anywhere in the world where there's internet access. PVremote Pro can easily be integrated into existing computer networks using the PLC-integrated Ethernet interface. The*

*solution is optimised for Omron's PV Inverter, so that users can benefit from a complete and integrated single-source solution. The system enables several PV plants to be controlled in a simple and user-friendly environment, with fast and easy access to both current status and historical data for each connected PV inverter. Smart technology enables users to choose which details and events are to be reviewed, and optional radiation and temperature sensors can be connected to allow environmental conditions of the plant to be accessed.*





## Big display

Both you and your customer have fully transparent access to information about results achieved

## Features

- Individual access rights (system integrator, end-user, guest)
- Interactive line- and bar-graph visualizations
- .csv file downloadable for further investigation
- Customizable email notification system
- Performance evaluation
- Calculation of CO2 saved
- Demo view of real PV plants

## Benefits

- Scalable and compact
- Robust and reliable hardware
- Easy to integrate into any existing network
- Compressed data-package to save communication costs
- Flexibility of settings
- Web based software to allow access from everywhere
- Fully compatible with and optimized for Omron's PV Inverter, delivering unique, total solution from a single vendor

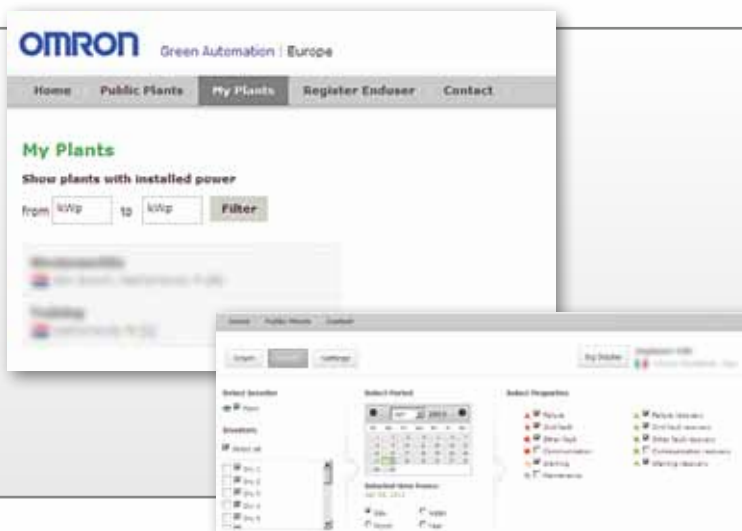
## Production monitoring

Clear view of production by day, week, month, and year



## Diagnostic events

Highly adaptable view, showing all events that occurred within a selected timeframe



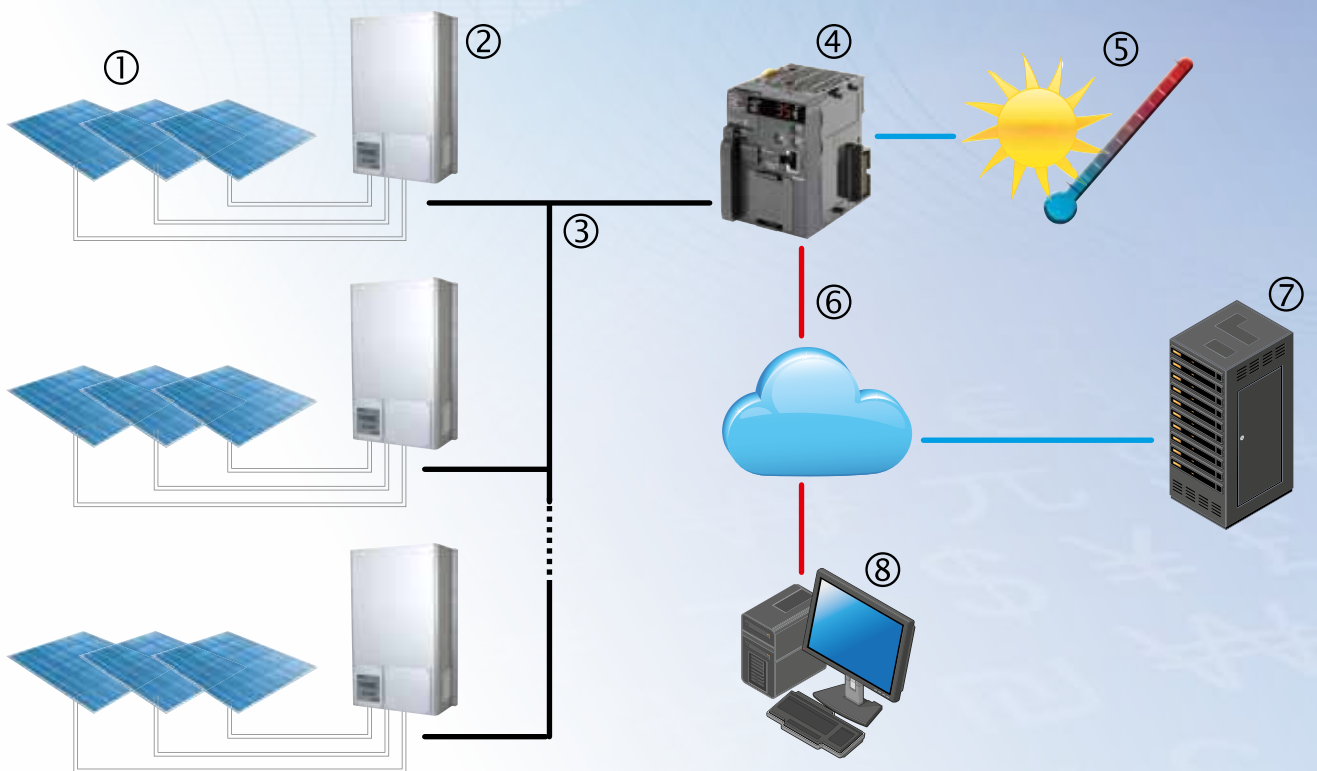
## System management

Emails delivered proactively to you, showing events. Configurable by event type

User administration

User name	Role	Status	Created	Last login	Reset password	Reset email
admin	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>
admin@omron.com	Administrator	OK	2014/01/01		<input type="checkbox"/>	<input type="checkbox"/>

Code	Message	Type	Inclusion		Exclusion	
			<input type="checkbox"/> Incl.	<input type="checkbox"/> Excl.	<input type="checkbox"/> Incl.	<input type="checkbox"/> Excl.
00-0	no grid	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-1	grid voltage (2mV)	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-2	grid voltage (3mV)	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-3	grid frequency (2mV)	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-4	grid frequency (3mV)	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-5	grid voltage phase	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-6	grid voltage imbalance	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-7	grid voltage imbalance (2mV)	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-8	grid voltage imbalance (3mV)	Grid Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-9	grid voltage (DC)	Other Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-10	Ground fault	Other Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
00-11	Insulation resistance fault	Other Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



- ① = Solar module
- ② = PV inverter, KP\_L type
- ③ = RS-485 serial network
- ④ = PLC including Remote Monitoring Function Block
- ⑤ = Environmental data (Temperature sensor, Radiation sensor)
- ⑥ = Data link
- ⑦ = Central system
- ⑧ = User interface

## Technical specifications

Item description		Description
Maximum number of inverters for PLC		50
Maximum RS-485 bus length		500 m
Internet communication		External modem or router (ADSL or WWAN), via Ethernet cable from PLC
Off-line data storage	CJ2M CPU33	Typically 1 day (*)
	CJ2M CPU34	Typically 3 day (*)
Power consumption		4 – 6 W typical
Supply voltage		24V DC
Degree of protection		IP20 (PLC)
CPU dimensions		90mm x 75mm x 62mm (H x D x W)
Weight		190g or less
Ambient operating temperature		0° to 55°C
Ambient storage temperature		-20° to 70°C (battery excluded)
Altitude		2000m or less
Ambient operating humidity		10% to 90% with no condensation
Overvoltage category		Category II: Conforms to IEC 61131-2
Battery		5 years at 25°C
Indicators		One blinking yellow LED indicating RS485 connection active One green LED indicating CPU in RUN mode PRPHL: One blinking yellow LED indicating USB communication active Dedicated Ethernet LEDs Dedicated Analogue Unit LEDs
Interfaces		RS485 LAN / Ethernet (100 Mbps) USB (for programming)
Approval		CE, EMC, LVD (EN61131-2), EN61000-6-2 EN61000-6-4
Sensors (**)		Radiation sensor Temperature sensor

- (\*) Off-line data storage is calculated under the following conditions, based on field tests:
- 20 operating inverters connected
  - PLC sends data to the central server every 15 minutes
  - Four alarm messages for inverter per day
  - Four inverters lost/found messages per day
  - Inverters active for 12 hours per day for the remaining 12 hours, only two analog sensors continue to send data

(\*\*) Optional

## License code scheme

Refer to the following table for license codes needed for free access to the Web Portal. For further information, please do not hesitate to contact your nearest Omron office.

Base license description	Plant power	Item name (B)
Monitoring of a PV-plant for one year (end user access)	up to 20 kWp	KP-RMP-B-1-A
Monitoring of a PV-plant for one year (end user access)	> 20 kWp up to 50 kWp	KP-RMP-B-1-B
Monitoring of a PV-plant for one year (end user access)	> 50 kWp up to 200 kWp	KP-RMP-B-1-C
Monitoring of a PV-plant for one year (end user access)	> 200 kWp up to 1 MWp	KP-RMP-B-1-D
Monitoring of a PV-plant for one year (end user access)	> 1 MWp up to 3 MWp	KP-RMP-B-1-E
Monitoring of a PV-plant for one year (end user access)	above 3 MWp	KP-RMP-B-1-X

Advanced license description	Plant power	Item name (A)
Monitoring and setting of a PV-plant for one year (system-integrator access)	up to 20 kWp	KP-RMP-A-1-A
Monitoring and setting of a PV-plant for one year (system-integrator access)	> 20 kWp up to 50 kWp	KP-RMP-A-1-B
Monitoring and setting of a PV-plant for one year (system-integrator access)	> 50 kWp up to 200 kWp	KP-RMP-A-1-C
Monitoring and setting of a PV-plant for one year (system-integrator access)	> 200 kWp up to 1 MWp	KP-RMP-A-1-D
Monitoring and setting of a PV-plant for one year (system-integrator access)	> 1 MWp up to 3 MWp	KP-RMP-A-1-E
Monitoring and setting of a PV-plant for one year (system-integrator access)	above 3 MWp	KP-RMP-A-1-X

Item name:	KP	-RMP	-A	-1	-A	-
Explanation	PV family	remote pro	license type	duration	class type	blank

### License type are classified as:

A = advanced (SI)  
B = base (EU)

### The power classes are codified as:

A = 20kWp      D = 1MWp  
B = 50kWp      E = 3MWp  
C = 200kWp     X = >3MWp

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