



# ***READY FOR REGULATION CEI 0-16***

*Power Plant Controller*



*Our proven **Power Plant Controller (PPC)** for monitoring, control, dispatching services and plant optimization:  
How to align your pv plant with the **regulation CEI 0-16** and connect it successfully to the **Italian medium voltage grid***



# POWER PLANT CONTROLLER

## *CEI 0-16 regulation for the Italian electricity market*

The share of distributed energy resources in the energy system is growing. Therefore, also those power generating plants must contribute to the stability of the grid. In order to make that contribution power generating plants must be equipped with a Power Plant Controller to monitor the local grid parameters and control accordingly.

To align with European Regulations, in particular EU Regulation 2016/631 (Requirements for Generators - RfG), Italy has adapted the regulation CEI 0-16 applicable for active and passive users connected to the distribution system. Annex O of this regulation introduces a Power Plant Controller, which has to be installed in every power generating plant connected to the Italian medium voltage grid with a nominal power equal to or greater than 1 MW.

### ***Required main features of the PPC***

- ✓ **Mandatory** – Monitoring function: the PPC must be able to monitor electrical parameters at the grid connection point and communicate them to the distribution system operator (DSO) via IEC 61850 protocol
- ✓ **Optional** – Control function: if required by the DSO, the PPC must control active and reactive power injection at the grid connection point
- ✓ **Optional** – Dispatching services and plant optimization: the PPC must enable functions that the power generating plant can participate in the dispatching service markets and fulfill the plant operators' optimization needs

## ***Turnkey solution: Our proven Power Plant Controller (PPC)***

meteocontrol provides a holistic solution, including the PPC and all services to align your plant with the regulations and get your plants successfully connected to the Italian grid.



### ***Main features***

- ✓ Communication gateway incl. standard protocols (IEC 61850 and IEC 60870-5-104)
- ✓ Power analyzer to measure grid parameters at the point of connection
- ✓ Precise control of active and reactive power at the grid connection point
- ✓ Manufacturer independent: Monitoring of all devices connected to the PPC
- ✓ Uninterruptible power supply (UPS) for 1h

### ***Included services***

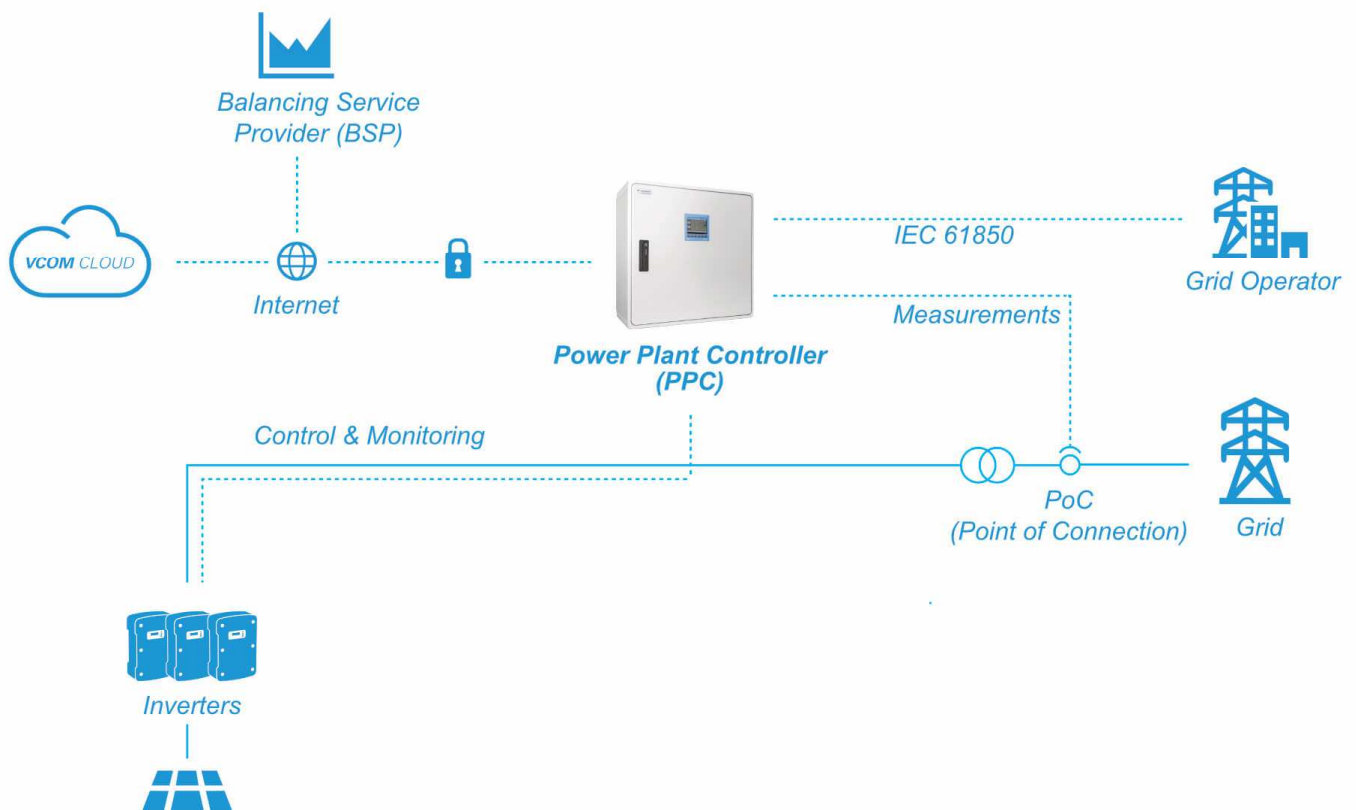
- ✓ Design & project coordination incl. single line diagram & related documentation within the planning phase
- ✓ Project-specific tuning of the controller to adapt to the dynamic requirements
- ✓ Documented parametrization & on-site commissioning of the system to get the plant connected to the grid
- ✓ Testing with the DSO



## Precise regulation

The Power Plant Controller (PPC) facilitates comprehensive regulation of active and reactive power as well as the voltage of heterogeneous PV systems.

A high-accuracy power quality analyzer records all grid parameters during operation. This enables fast and stable control at the grid connection point.



## Additional CEI 0-16:2022-03 requirements

- ✓ Cyber security in compliance with IEC 62443-4-1 / 2
- ✓ Safe communication based on secure profile defined by IEC 62351-3
- ✓ Cryptographic module according the FIPS 140-2
- ✓ Tested for safety requirements of IEC 61010-1 and IEC 61010-2-201
- ✓ Conformity to IEC 61557-12

## Flexible. Modular. Scalable.

Power limitation, reactive power control based on characteristic curve, frequency stability and process data exchange – the Power Plant Controller offers a wide range of functions that ensure the reliable grid integration of PV systems.

This range of functions can be flexibly expanded and adapted to any system topology to meet specific project requirements. All interfaces are modular and provide a high level of scalability as a result.



## Manufacturer independent

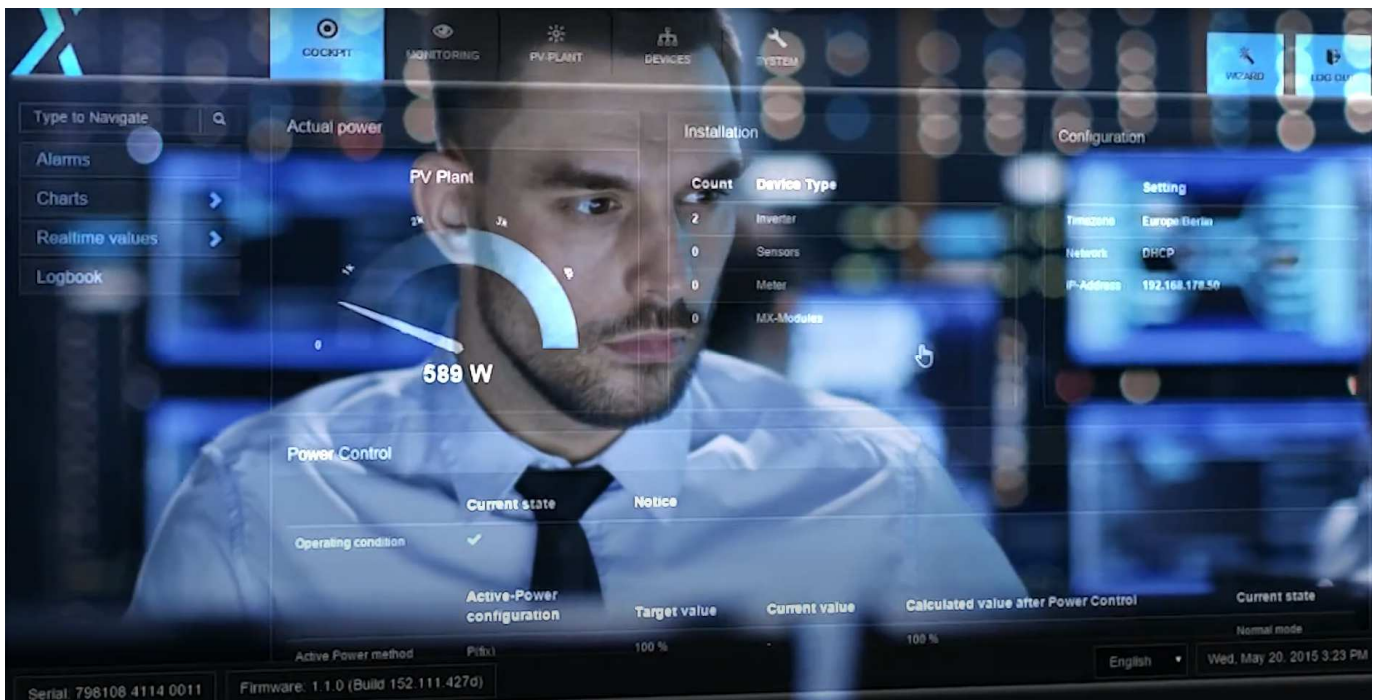
No matter whether you are talking about a mixed park or a heterogeneous portfolio – with the all-in-one driver of the **blue'Log® X-Series** you can meet the requirements of high protocol variety with a maximum level of flexibility. Regular updates will continuously expand the compatibility of your system – for a sustainable, future-proof solution.



## Parameterizing instead of programming

The graphical user interface of the **blue'Log® X-Series** will provide you with optimal support during commissioning and requires no programming knowledge on your part.

Thanks to the clear user interface and the industry-specific menu structure, you can easily and quickly comply with even complex grid connection regulations by parametrizing the blue'Log XC.



## Data backup and analysis

As the basis of the Power Plant Controller, the **blue'Log® X-Series** locally stores the recorded data of your PV system for a few days. In combination with the VCOM, you will also benefit from unlimited long-term archiving.

The plant control can be analyzed in real-time on the controller itself and on the basis of historic measurement values with the help of VCOM or using a wide range of data export options.

As a result, you have total control over the data at all times.



# ***THINK AHEAD***



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