

PRISMA 310A

DATASHEET

Self-consumption power regulator

Complying with all local regulations UNE 217001-IN and RD 244/2019



Figure 1 PRISMA 310A - allows power regulation

PRISMA 310A allows power regulation for one or more inverters in order to limit or eliminate the energy exportation to the main grid.

Integrates in the same device a counter for instantaneous regulation and eliminates the need for other external components in power regulation

Description

The PRISMA 310A is a dynamic power controller that allows regulating the generation level of the inverters of a production facility (photovoltaic, wind, ...) based on instantaneous consumption. The final objective is to limit or eliminate the export of energy, in the most efficient way, managing to maximize production while complying with regulatory and technical restrictions..

Characteristics

This device provides great versatility to be adapted through configuration to different functioning conditions.

- Manage multiple models of inverters from different manufacturers:
 - Communication TCP (Sunspec/Modbus).
 - Communication RS485 RTU (Modbus+...).
 - (mount the accessory REN-TTL-485)
- Adjusted according to local legislation
- Applicable to installations three-phased mode and one-phased mode.
- Provides Modbus / TCP Server for monitoring
- Instantaneous data on screen and through light and acoustic signaling.

- Self-consumption facilities without surplus:
 - The device has a relay to act over a contactor that limits physically the inverter's main grid connection and in consequence, their energy supply to the installation.
 - Complying with all local regulations UNE 217001-IN
- In more complex modalities:
 - Conducting the reading with external meters through the Ethernet network. Up to 5 external meters can be connected simultaneously, regulating
 - With generators (double non-injection control and integrated group protection).
 - Independent regulation of each inverter is possible (Managing on different phases one-phased inverters connected to a three-phased installation).

Despite allowing it's use virtually to any meter model/manufacture that meet the communication necessities, its recommended to verify if the model is compatible with- this product before ordering, or at least, contacting Real Energy Systems to check compatibility with the device providing as well the Modbus/TCP map for the device.

Technical data

Technical properties

Conformity declaration	CE
Power supply	90-265 VAC, 50-60Hz
Work conditions	-20..+50°C // 5-95% HR no condensation
Size	90x158x58
Weight	400gr.
Protection level	IP20
Box material	Plastic PC/ABS auto-extinguishable UL94-V0
Assembly	On DIN rail EN 60715
Fabricated in	Spain. European Union
Primary voltage connections	3x (85-265VAC) (50/60Hz)
Thermic class	Ta70C/B
Electronic denomination	E310A
Disconnection relay/contactor	Dry contact (tension free) Tipo AC1. Máximo 16A / 250VAC. Tipo AC15. Máximo 1,5A / 240V

Other functions:

- Integrated display OLED 1.3" with push button.
- Ethernet RJ45
- 3 voltage readings + 3 intensity readings (5A)
- Disconnection relay.
 - Tipo AC1. Máx 16A / 250VAC.
 - Tipo AC15. Máx 1,5A / 240V
- Integrated continuous power supply (220V)
- Digital input (Group ignition signaling).
- Communications bus TTL (5V). Allows communication with 485 equipment (REN TTL-485) or computer USB (Cable REN TTL/USB).
- Signaling LEDs (2 green/2 orange/2 red)
- Internal buzzer for audible notification.
- Integrated internal clock
- Allows installation on DIN-rack

Communication

Inverter communication	RS-485 Ethernet
Protocols	ComLynx Modbus TCP Modbus RTU (Configurable, includes Sunspec)
Direct metering	Transformer XXX/5A
Communication with external meters	Ethernet
External communication	Servidor Modbus TCP
Firmware denomination	PRISMA 310A

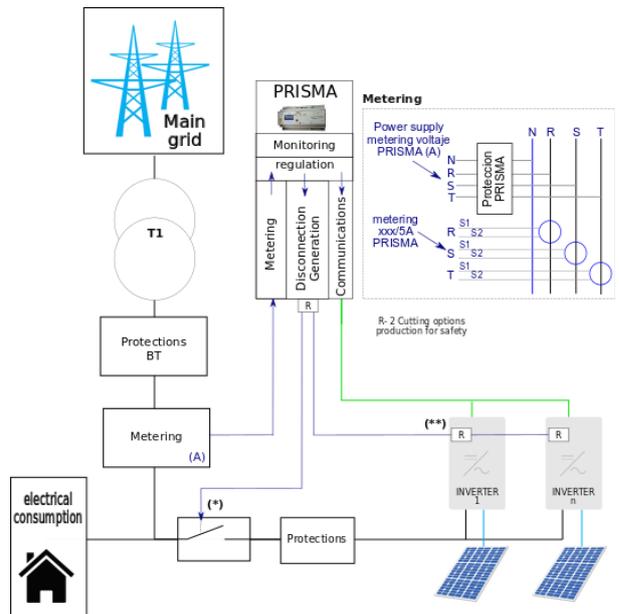


Figure 2 Line diagram

Connection scheme

