4GWC

PRIME dual 1.3 & 1.4 Gateway

A three-phase PLC modem or gateway with proven **ZIV's own technology** according to PRIME protocol

In summary, the gateway can be used in different scenarios:

- for the transition from PRIME v1.3 to PRIME v1.4
- as a base node for communication with virtual CCTs
- to reach meters in remote locations thanks to its operation as a repeater
  - In Secondary substations with more than one transformer. In these installations just one data concentrator acts as master, and this is connected to more than one PLC base node (one per transformer).
  - The 4GWC is a compact device that provides efficient solutions in the deployment of PLC smart meters.

This device forms part of a remote management system with automatic meter reading (AMR) through the low voltage network (Power Line Communication or PLC).

This device is intended for the interconnection of other devices implementing PRIME PLC technology. This equipment therefore integrates PRIME modem capabilities and LAN connectivity over an ethernet port.

Making the Smart Grid Real

Key Features

- Compact, easy-to-install and ruggedized device designed for indoor installation.
- Embedded PRIME node dual v1.3 & 1.4 in all FCC bands.
- Both reception and transmission can be carried out by any of the 3 phases.
- The application protocol is PRIME through all interfaces (PLC or IP).
- It can operate in the PLC network as a base node, as a service node or as monitor node.
- The device can be listening permanently through all three phases at once. It is capable of identify the node which the communication is referring to and, in the transmission, the 4GWC will use the phase corresponding to this node.
- With LED indicators to give information during installation or maintenance operations.
- Self-Diagnostics and monitoring. Status flags to provide information about the incidences or operations.
- Three event recording logs with independent memory and POP-OUT (once is read, it is removed from the event log) and FIFO (first event generated, first event deleted) operation.
- Management and maintenance systems: WEB server and Telnet.
- PRIME network topology and monitoring through web server or ZIV AMI Manager application.
- Meter Phase detection (mapping) functionality.
- Secured access. TACACS+
- Remote firmware upgrade.

Technical Information

Rated value (Vn) **Operating range**	3x127/400 Vac 50/60Hz 100-265 Vac (-20% /+15%)
PLC module	3 phase Module PRIME dual v1.3 & v1.4 FCC 1 Vrms (120 dBuV) over 2 Ohms Output impedance < 2 Ohms Transmission EVM: up to 35 dBs (depending on the band) Dynamic range: 65 dB Input impedance > 50 Ohms
Ethernet port	IEEE 802.3, 10/100 Base-T Auto MDI-X (crossover) Half / Full duplex
Maximum power consumption (normal conditions)	<3 W /per phase <30 VA / per phase Max. 5 W total
Overvoltage Category	**IV** (IEC 60950)
Cover protection	Class II double isolation
Dielectric insulation Voltage	2 kV
Impulse Voltage	6 kV
Operating and storage range	-25ºC to 70ºC Humidity <95% (non-condensing)
IP/IK classification	IK08/IP20
Connection	Wall or DIN rail
Dimensions (mm)	150 x 98 x 40

Standard DIN rail

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