4CCT

Smart Metering DCU for Secondary Substations

PRIME ALLIANCE®

G3-PLC Alliance

A metering data concentrator that includes an advanced low voltage supervisor and Powerline Communication (PLC) controller with network monitoring functions, in addition to remote smart meter management functions.

It implements protocols widely accepted in smart metering such as DLMS to carry readings and web services to communicate with the utility MDM frontend.

4CCT main functions

The main function of 4CCT is to **continuously poll the metering devices** connected to the same secondary substation where it is connected. The retrieved meter data is stored in the 4CCT and periodically sent to the Management System.

The 4CCT implements **identification and removal of meters** (plug & play), **supervision and control, synchronization of meters, programmable tasks,** and **many other functions**.

PLC communications controller

The 4CCT metering data concentrator implements PRIME or G3 PLC technology, with more than one and a half million ZIV PRIME devices installed in the field.

The 4CCT has an **embedded PRIME or G3 base node.** It ensures high power transmission without distortion and is also optimized for operation over low impedance LV grids, without affecting the line impedance.

High receiver sensitivity and efficient data transfer provide optimized communications over noisy lines. Optimal PLC network stability is a critical feature of 4CCT.

Advanced low voltage supervision

The low voltage supervision function is performed by an **internal three-phase energy meter**, monitoring the secondary of the distribution transformer.

The 4CCT offers easy interaction with this meter, similar to the other meters in the network.

Other functionalities

Remote firmware upgrade, WEB/CLI configuration, connection to ZIV PRIME AMI Manager debugging tool, NTP synchronization, hardware watchdog, SNMP management, access control.

Technical Information

PLC communications	Smart three phase / smart single phase / selectable single phase
Low voltage supervision	➤ 3x127 - 230/400 V ➤ 3x5 (10) A or 3x2 (10) A ➤ Accuracy: Class B for active energy and class 2 for reactive energy
Protocols	➤ Readings: DLMS ➤ MDM: Web services
Ethernet Port	Two 10/100 BaseT connectors
Serial port - SRV	Configuration DB9 serial port protected against discharges
Power supply	➤ Vn: 230 V$_{AC}$, separate terminals ➤ Range 110-250 V$_{AC}$, single phase
Environmental conditions	➤ Operating and storage (-25°C ~ +70°C). ➤ Humidity: < 95% (non-condensing)
Enclosure	ZIV Universal Polycarbonate Box
Dimensions	220 x 140 x 93.6 mm
Mounting options	Wall / Din rail mount

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