



5CTD

Three Phase PLC Smart Meter



Direct & CT connected smart meters using DLMS/COSEM application data.
Data transferred is encrypted using DLMS security suite 0

Bidirectional communication using PRIME technology (Open Standards with ZIV technology)

5CTD meters provide robust automated meter reading solutions for distribution companies.

They integrate energy measurement, load profile and Time of Use (TOU) features.

Local and remote communication capabilities enable complete meter operation. This includes data reading, configuration setting changes, date synchronization and operation of the built-in breaker.

PRIME
ALLIANCE

G3-PLC
Alliance

5CTD smart meters **integrate a PLC service node** that is automatically identified in the PLC network (plug & play).

These meters implement **ZIV's own technology** for PLC standards. It ensures a high-power transmission without distortion optimized also for low impedance lines, without affecting line impedance. High receiver sensitivity and efficient data provide optimized communications over noisy lines.

Additionally, the meters can include a RS-485 port to remotely access the meter through a modem or other purposes.



Making the Smart Grid Real

Flexibility: designed to fit your needs

Once the smart meter model is selected, a set of configurable parameters makes the **5CTD** meter the solution for a wide variety of situations: programmable CT values, load profile integration period, TOU characteristics, synchronization schema, and many more.

5CTD smart meters can be operated using DLMS/COSEM application data. This implementation can be adapted to different companion standards.

Key Features

- LCD display for meter readings and standardized messages/symbols.
- Instantaneous measurement of V, A and PF per phase.
- Bidirectional energy registers (active/reactive).
- As option: instantaneous values profile (12 channels: V1, I1, V2, I2, V3, I3, ITOTAL, P+, P-, Q+, Q-, PF) with a configurable integration period.
- Load profile (6 channels: A+, A-, R1, R2, R3, R4) with a configurable integration period.
- Monthly (15 registers) and daily billing data (45 registers).
- Versatile Time of Use (TOU) module, providing 3 identical and independent contract configurations, with up to 4 rates and 24 rate periods per day, 24 daily profiles, 12 weekly profiles and 12 seasons in a year and up to 30 special days per contract.
- Maximum Demand Recording for each of the programmed tariffs.
- Time synchronization.
- Event and alarm recording with a broad set of manageable events.
- Power Quality recording. Voltage variations outside the established thresholds and long-term voltage interruptions.
- Breaking and reconnection elements (inbuilt-breaker and auxiliary output) for remote switching operations, power control and demand side management.
- Self-diagnostics and monitoring.
- Enhanced anti-tampering protection system, including magnetic field detection and cover and terminal cover opening.
- Internal battery for RTC and tampering events.

Technical Information

5CTD	3-Phase Direct	3-Phase VT/CT connected
Active / Reactive energy accuracy	Class 1 (IEC 62053-21) / Class 2 (IEC 62053 23)	
Verification test constant	1000 pulses / kWh or kvarh	4000 pulses / kWh or kvarh
Current reference value (max current)	3 x 10 (100) A 3 x 10 (80) A	3 x 5 A (10A)
Starting current	40 mA	10 mA
Power absorbed by the current circuit (Iref)	< 0.2 VA	< 0.1 VA
Voltage rated values	3 x 220/380 VAC 3 x 127...230/400 VAC	3 x 63.5 - 220/380 VAC 3 x 63.5...230/400 VAC
Consumption	< 2W / 13 VA (EN 62053-61)	
Specified operating range	-20°C to +70°C	
Potential free output	230 V / 2 A * (option depending on model)	
Built-in breaker nominal values (number of operations)	100A / 250VAC (10 ⁶) UC2 according to IEC62055-31	Not Applicable
Optical port	According to IEC 62056-21	
Connection to external modem	RS485 (RJ11) * (option depending on model)	
PLC service node	Built-in (PRIME 1.4 in CENELEC A band)	
Degree of protection	IP51 (according to IEC 60529)	
Dimensions	293mm x 165mm x 66 mm	

