



5CTM/D

Single & Three Phase PLC Smart Meters



PRIME
ALLIANCE



5CTD



5CTM

5CTM & 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.

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

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

These meters implement ZIV's own technology for PRIME open standards. This implementation is proven with more than one and a half million ZIV PRIME devices installed worldwide. 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.

Flexibility: designed to fit your needs

Once the smart meter model is selected, a set of configurable parameters makes the 5CTM/D meter the solution for a wide variety of situations. Along with ZIV's meter management software, the user can tune the 5CTM/D meter to completely suit each measurement environment: programmable CT and VT values, load profile integration period, TOU characteristics, synchronization schema, and many more.

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

Key Features

- Instantaneous measurement of voltage, current and power factor per phase, as well as instantaneous network frequency.
- Load profile recording. 6 energy values (imported and exported active energy and reactive in the 4 quadrants) either total or by the corresponding tariff.
- Versatile Time of Use (TOU) module, providing up to three complete and independent contracts, each with an independent tariff configuration, 6 tariff periods per day, 10 types of ordinary days, 12 types of special days, up to 12 seasons, and a maximum of 30 special days.
- Maximum Demand Recording (MDR) for each of the programmed tariffs.
- Time synchronization.
- Event recording. 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 for remote switching operations, power control and demand side management (single/three internal breaking relays).
- Automatic contract end of billing periods.
- Self-diagnostics and monitoring.

Technical Information

	Single Phase (5CTM)	Three Phase (5CTD)
Active energy accuracy	Class B (EN 50470-3)/ class 1 (IEC 62053-21)	Class B (EN 50470-3)/ class 1 (IEC 62053-21)
Reactive energy accuracy	Class 2 (IEC 62053-23)	Class 2 (IEC 62053-23)
Verification test constant	1000 pulses / kWh (kvarh)	1000 pulses / kWh (kvarh)
Current reference value	5 A	3 x 10 A
Starting current	20 mA	40 mA
Maximum current	80 A	80 A
Power absorbed by the current circuit (Iref)	< 0.3 VA	< 0.1 VA
Voltage rated values	127 – 230 V	3 x 127 – 230 V / 220 – 400 V
Consumption	< 10 VA ^(*) ^(*) IEC 62053-61	< 10 VA ^(*) ^(*) IEC 62053-61
Specified operating range	-25°C to +70°C	-25°C to +70°C
Power free output (depending on the model)	280 V _{AC} / 0.5 AacMax	280 V _{AC} / 0.5 AacMax
Built-in breaker nominal values	80 A / 250 V _{AC}	80 A / 250 V _{AC}
Built-in breaker number of operations	10 ⁶	10 ⁶
Optical port	According to IEC 62056-21	According to IEC 62056-21
RS485 serial port (optional)	2 wires / RJ11 connector	2 wires / RJ11 connector
PLC service node	Built-in	Built-in
Dimensions (mm)	212.27 x 123.78 x 64.03	293 x 165 x 66