

5CTB

Three Phase Smart Meter



A modular smart meter that implements **ZIV's own technology** for PRIME open standard.

PRIME
ALLIANCE

- ✓ **5CTB is a flexible smart meter that incorporates a special sealed holster designed to host a pluggable communication module (e.g. NB-IoT).**
- ✓ **The PLC service node integrated is automatically identified in the PLC network (plug and play).**
- ✓ **Direct & VT-CT connected Smart Meters using DLMS/COSEM Application Data.** Data transferred is encrypted using DLMS Security Suite 0.

It ensures a reliable data transmission, even in the most challenging powerline media conditions: eg. noisy, low impedance lines and the like.

Additionally, it can include a RS-485 port to remotely access the meter through a modem, using RF technology, and another RS-485 port for connecting an In-home Display.



A Flexible and Modular Meter

- The **5CTB** meter provides robust automated meter reading solutions for distribution companies. It integrates energy measurement, load profile and Time of Use (TOU) features.
- A set of **configurable parameters** make it the right solution for a wide variety of situations.
- It is **programmable** via ZIV's meter management software.
- **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.

Key Features

- Dot matrix display for meter readings and standardized messages/symbols, this information is available even during power off.
- Instantaneous measurement of V, A and PF per phase, as well as instantaneous network frequency and THD.
- Energy registers (active, reactive and apparent) and calculated registers (summation)
- Load profile configurable with 10 possible magnitudes for 90 days with a configurable integration period of 30 minutes.
- Monthly and daily billing data.
- Versatile Time of Use (TOU) module, providing up to 8 rates with 10 rate periods per day, 8 daily profiles, 8 weekly profiles and 8 seasons in a year and up to 420 special days (regular and irregular holidays).
- Average and Maximum and cumulative 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 for remote switching operations, power control and demand side management.
- Replaceable battery.
- Self-diagnostics and monitoring.
- Enhanced anti-tampering protection system, including bypass and magnetic field detection.

Technical Information

	3-Phase Direct	3-Phase VT/CT connected
Active / Reactive energy accuracy	Class 1 (IEC 62053-21) / Class 2 (IEC 62053 23)	Class 0.5S (IEC 62053-22) / Class 1 (IEC 62053 24)
Verification test constant	4000 pulses / kWh or kvarh	4000 pulses / kWh or kvarh
Current reference value (max current)	3 x 10 (100) A	3 x 1.5 A (6A)
Starting current	40 mA (Imax=100 A)	6 mA
Power absorbed by the current circuit (Iref)	< 0.2 VA	< 0.1 VA
Voltage rated values	3 x 133 - 230/400 VAC	3 x 63.5 - 230/400 VAC
Consumption	< 2W / 13 VA (EN 62053-61)	
Specified operating range	-10°C to +75°C	
Power free output (depending on the model)	250 V / 1 A Operating time 50-100ms (for meter without in-built breaker).	250 V / 1 A Operating time 50-100ms 2 additional outputs: 24 Vdc /12 mA
Built-in breaker nominal values (number of operations)	120A / 250VAC (106) Only for meters up to 100 A of Imax UC2 according to IEC62055-31	Power free output to send it to an external breaking relay
Optical port	According to IEC 62056-21	
Connection to external modem	RS485 (RJ45 with 12Vdc supply)	
IHD serial port	RS485 (RJ45)	
PLC service node	Built-in (G3 or PRIME 1.4)	
Degree of protection	IP54 (according to IEC 60529)	
Dimensions	269mm x 190 mm x 77 mm	

