

RAIL-MOUNTED SINGLE-PHASE MULTI-TARIFF ELECTRICITY METER CAM40 Series



Electronic Afzar Azma

Since 1980



- According to 5th edition of Tavanir Company
- Static, Single Phase, Active / Reactive Energy Bidirectional
- Supports DLMS COSEM Protocol
- Includes different log files with various event types; Records 500 events
- Remote / Local manual Connection & Disconnection
- Message /Access Authentication & Encryption
- Remote Tariff Programming
- Remote Firmware Update
- Approvals: IEC 62052-11, IEC 62053-21, IEC 62053-23, IEC 62052-21, IEC 62054-21, IEC 62056-61, IEC 62056-21, IEC 60999-1, IEC 62059-31, IEC 62058-31, IEC 62055-31, EN 50470-1, EN 50470-3, ISO/IEC 646, ISO/IEC 1177

Innovation, Future Foundation

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CAM40 Series



Reference Standards	IEC 62052-11, IEC 62053-21, IEC 62053-23, IEC 62052-21, IEC 62054-21, IEC 62056-61, IEC 62056-21, IEC 60999-1, IEC 62059-31, IEC 62058-31, IEC 62055-31, EN 50470-1, EN 50470-3, ISO/IEC 646, ISO/IEC 1177
Interoperability	DLMS, IDIS, FAHAM2
Billing Data	Recording 40 billing periods Automatic demand reset at billing period Daily billing including daily maximum demand
Connection type	Single Phase
Reference Voltage/ Frequency	220V, 230V, 240V/ 50Hz
Operating voltage range	150 - 500V
Over voltage operation	Withstands a voltage of 500V for an indefinite period & preserves accuracy class up to 310V
Power Consumption	Voltage circuit: $\leq 1\text{VA}$, $\leq 0.6\text{Watt}$ @ 230V
Class index	Class 1
Basic Current	5A
Maximum Current	100A (Permanent)
Class accuracy current range	Extended from 50mA up to 100A
Starting Current	$\leq 15\text{mA}$
Short time over current	7KA for 0.5 Cycle, 3.5KA for 5 Cycle
Meter constant	2000 imp/kWh
Insulation Class	Double insulation
Communications	Optical port : DLMS (Mode-E, Direct HDLC), 9600 baud Electrical Port : DLMS (Directed HCLC), 19200, 9600, 4800 baud, RS485
Battery	Internal long life lithium battery to support RTC and R.W.P & ability to add external battery easily
Operating temperature range	-40°C to +70°C
Limit temperature range of operation	-40°C to +70°C
Storage temperature	-40°C to +85°C
Relative humidity	100% Non-Condensed
Mean temperature coefficient	$\leq 0.01\%$ @ PF=1 or PF=0.5 in over -40°C to +75°C
Degree of protection	IP54 without section
Terminal material	Brass/ Steel plated with Geomet
Terminal Cover & Case Material	Polycarbonate
Non-repetitive withstand shocks	>30g, half-sine wave, 18 msec in each 6 directions
Withstand sinusoidal vibration	In comply with IEC 60068-2-6
Flammability	None-flammable, in comply with IEC 60695-2-11
Anti-Tampering Features	Measuring absolute value of energy independent of its direction Terminal/ main cover removal detection Magnetic Field detection
Load Profiles	Hourly: 8 channels, Capacity-60 days, Period-1 hour Daily: 12 channels, Capacity-120 days, Period-1 day
Tariff Structure	4 tariff rates 12 days for weeks 12 weeks for each season 12 switching times for each day 20 exception days 12 seasons for each year
Passive Tariff	Reserved tariff table can be prescheduled for certain dates
Standard Event Log, Fraud Detection Log, Power Failure, Disconnected Log	100 Events
Meter weight	410g
Dimensions	170.5 x 40 x 106.8 mm
Wiring capacity	25 mm ²
None-Volatile Memory	Retention time more than 40 years
Real Time Clock Accuracy	$\leq \pm 0.2$ ppm
Firmware Upgrade	Ability to update firmware remotely / locally
Registers	Up to 4 Tariff Rates (T-1T4) and Total Active Energy (Antifraud) Exports Active and Imports Reactive Energy Maximum Demand for Active/ Reactive Energy with Time Stamp Power Registers: Voltage, Current, PF, Active & Reactive Power, Frequency