

Mk32

ABACUS – Class 1 and Class 2

Advanced Single Phase Meter

Designed for residential use, Mk32 is a single phase meter with integrated 100A UC3 compliant relays. It is able to operate in either STS compliant prepaid mode or post-paid mode. Mk32 can operate with the EDM I CIU (Customer Interface Unit) - HD18 and HD21 wirelessly as a split meter.



Key Features



STS
COMPLIANT



DISCONNECT
RELAY



ANTI TAMPER



FIRMWARE
UPGRADE



RF WIRELESS
TRANSCIVER



NEUTRAL CURRENT
MEASUREMENT

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Standards and Compliance

- Class 1 and Class 2
- IEC 62052-11, 62053-21, 62053-23, 62055-31, 62055-41, 62055-51

Measurement

- 1 phase 2 wire (optional neutral current measurement)

Voltage

- Nominal voltage: 220V - 240V
- Operating range: 0.5Un to 1.2Un
- Withstand range: 0V to 456V
- Impulse voltage: 4kV

Current

- WC range: 5/60A, 10/60A, 5/100A, 10/100A
- WC limit: 30 times I_{max} for 0.5 cycles
- Phase current measurement sensor: Shunt
- Neutral current measurement sensor: CT

Terminal

- Terminal cross-section: 58.24mm²

Power Consumption

- Voltage circuit: <10VA/phase, 2W @ V_n
- Current circuit: <2.5VA/phase @ I_n

Frequency

- 50Hz/60Hz

Inputs/Outputs Configuration

- Up to 5 x LED indicators
- Up to 2 x outputs

Relay

- Up to two internal disconnect relays (80A or 120A)

Battery

- Internal lithium battery (3.6V)
- Internal super capacitor
- Backup time: 5 years without power (lithium battery)
- Backup time: 48 hours without power (super capacitor)

Data Memory

- 2MB of non-volatile memory

Display

- 8 Character of eight-segment display (9mm x 4.96mm)
- Display available without mains power
- Option for backlight

Keypad

- Option of silicone keypad

Real-time Clock

- Precision clock accuracy: <5ppm (15 seconds per month) at 23°C

Measured Values

- 1 element 4 quadrants
- Import/Export/Absolute Wh and varh
- Per quadrant Wh and varh
- W, var, VA, Vrms, Irms
- Power factor, frequency

Load Survey/Profile

- Up to 8 channels and 2 independent surveys
- Intervals programmable from 1 to 60 minutes
- Energy, instantaneous readings, pulsing inputs as channel sources
- Ability to store average/minimum/maximum values for interval duration

Time of Use

- Up to 8 rates plus unified rate
- Up to 8 separate import and export registers
- Daily, weekly, monthly, yearly and special days
- Up to 48 previous periods plus period totals
- Block maximum demand
- Time of maximum demand

Calendar

- Supports Daylight Saving Time

Tamper Detection and Alarms

- Provision for sealing with conventional wire or plastic seals
- Ultrasonic welding option for lid cover and base assembly
- Reverse current detection

- Line and neutral current unbalance detection
- Meter cover and terminal cover detection
- Faulty load relay detection
- Overload detection
- Magnetic tamper detection (optional)
- Alarms are stored in event logs

Security

- Multi-level security (username and password including encrypted log-in)
- Up to 10 independent security levels
- Up to 8 individual users

Operation Mode

- Postpaid/Prepaid

Communications

- Up to 3 independently working communication ports:
 - Optical port: FLAG (IEC 62056-21)
- Built-in communication
 - RF: 300MHz to 950MHz (configurable)
 - RS-485 screw terminal (2-wire)

Protocol

- EDMI command line

Environmental

- Specified operating range:
 - 25°C to +55°C
- Operating range limit:
 - 40°C to +70°C
- Storage range limit:
 - 40°C to +85°C
- Relative humidity:
 - Up to 75% mean, 95% non-condensing for 30 days
- Ingress protection: IP54 (without suction)

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