ELECTRICITY

Mk31

PAPILLON – Class 1 and Class 2

Basic Single Phase
Electronic Revenue Meter

Built on the Papillon metering platform, Mk31 is a multi-functional meter with advanced features such as tamper detection, multi-tariff capability, neutral current measurement and multiple communication options including RS-485 and RF.

| Key Features

AMI	88			
AMI READY	LARGE LCD DISPLAY	ANTI TAMPER	MULTIPLE COMMS OPTIONS	LARGE DATA STORAGE

Mk31

PAPILLON - Class 1 and Class 2

Basic Single Phase
Electronic Revenue Meter

106mm (W)

180.5mm (H)

51.8mm (D)

Weight: 0.65kg

Standards and Compliance

- Class 1 and Class 2
- IEC 62052-11, 62053-21

Measurement

- 1 phase 2 wire with optional neutral current measurement
- Measurement sensor: CT/CT or CT/Shunt

Voltage

- Nominal voltage: 110V – 120V/220V - 240V
- Operating range: 0.7Un - 1.3Un (Max: 300V)
- Power consumption: <10VA 2W

Current

- WC range: 5/100A, 10/100A
- Power consumption: <2.5VA

Frequency

- 50Hz or 60Hz

Meter Constant

- 1600imp/kWh or 3200imp/kWh

Inputs/Outputs Configuration

- Pulsing LED for energy indication, LED for communication indication
- Energy pulsing output port, real-time clock (second) pulsing output port (optional)
- 3 spare LED indicators

Battery

- Internal battery

Real-time Clock

- Accuracy (internal) within 0.5 seconds per day at 23ºC
- Built-in calendar, timing and leap year auto-adjustment functions
- Backup time: 5 years without power (Lithium Battery)

Data Memory

- Basic 2 MB storage and expandable to 8 MB

Display

- Display digit size: 16mm x 7.1mm
- Display available without main power
- Option for backlight

Measured Values

- Import/Export Wh, varh
- Voltage, current, line frequency, PF

Load Survey/Profile

- Up to 8 channels can be defined
- Each channel contains 9600 records

Time of Use

- Up to 8 rates plus unified, 14 intervals
- Weekdays, weekends, holidays and special days
- Tariff switch over through dry contact
- Auto/manual billing reset
- Billing reset through communication
- Storage of last 12 monthly billing data (energy)
- Max demand: kW
- Accumulated max demand
- Block or rolling maximum demand
- Customise interval from 5 - 255 minutes

Tamper Detection and Alarms

- Provision for sealing with conventional wire or plastic seals
- Reverse current detection
- Line and neutral current un-balance detection
- Meter cover and terminal cover detection
- Overload detection
- Magnetic tamper detection
- Measure energy in condition of absence neutral input
- Missing neutral detection
- Alarms LED, enunciator, tamper event logs

Communications

- Optical interface (IEC 62056-21) or modulated infrared interface port (DL/T 645)
- RS-485 for multi-drop communications
- Built-in low power RF module: (optional)
  - Open air communication distance >100m
  - Frequency 300MHz - 950MHz (configurable)
  - 17dB (50mW)

Protocol

- DL/T 645-2007

Environmental

- Specified operating range:
  -25˚C to +60˚C
- Operating range limit:
  -40˚C to +70˚C
- Storage range limit:
  -40˚C to +85˚C
- Relative humidity:
  Up to 95% non-condensing for 30 days

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