MBox

LV Single-phase Smart Meter

A SmartPower Product

Overview

By introducing smart metering programs utilities can benefit from the full power of network automation and management down to the low voltage network, which was previously only possible at the higher levels of the electrical system.

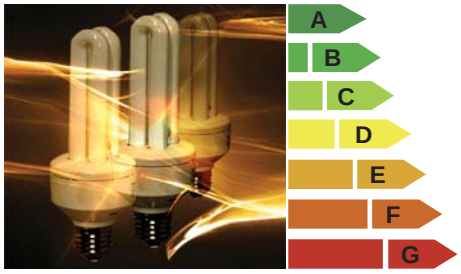
The **M Box** smart meter, part of the Efacec Smart Grid portfolio, enables the cost effective deployment of advanced metering initiatives by integrating residential metering with home automation and providing an infrastructure to drive demand response and energy efficiency programs.

M Box combines certified metering module, control module with high functional expansion capability, grid and home communication modularity with several interface options and straightforward installation procedure.

By providing four quadrant operation together with specific functions **M Box** units can be deployed both in traditional households with one-way energy flow but also in integrated microgeneration applications with bidirectional flows.

Benefits

- High functional expansion capability
- Communication modularity
- Enhances customer relationship
- Simplifies operational management
- Easy to install



Functionalities

- Load profile, selective load shedding
- Switching and restoration capability, and contrated power control
- Extremely adaptable tariff system
- Tamper detection (by opening or neutral current measurement)
- Control functions (commercial, DSM, others)

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Functional Characteristics		
User Interface		
LCD with 3 lines and 16 columns		•
Navigation keys		•
Optical interface	EN 62056-21, DLMS	•
Real time clock	±5 ppm	•
Configurable nameplate		•
Communications		
Plug and play module		•
PRIME PLC		○
Yitran PLC		○
RF Mesh		○
GPRS		○
Others (please contact)		○
Home Automation		
ZigBee		○
Bluetooth		○
Others (please contact)		○
General Characteristics		
Base current (maximum)	10 (80) A	•
Voltage	220 V (-20 %) - 230 V (+15 %)	•
Frequency	50 Hz (±5 %)	•
Connections	1 phase, 2 wires	•
Active energy	Class 1 (IEC 62053-21), Two ways	•
Reactive energy	Class 2 (IEC 62053-23), 4 Quadrants	•
Instantaneous values	Current, Voltage, Power, Power Factor, Frequency	•
Switching device	100 A, 10 k operations	•
Others (please contact)		○

• - Base feature | ○ - Opticional feature

Typical Specifications	
Load diagrams	
Maximum of 6 channels (Measures +A, -A, +R, -R, +Rc, -Rc, +Ri, -Ri, +S, -S and A)	
Maximum of 92 days for periods of 15 minutes considering 2 measure channels	
Tariff	
Maximum number of active tariffs	2
Number of tariff stations with programmable dates	2
Number of programmable dates for the change of legal hour	2
Day types, by tariff and station	Weekdays, Saturdays, Sundays, Holidays (fixed, at least 15 and mobiles, at least 6)
Number of switching times, programmable by day	10
Total records for measures	+A, -A, +R, -R, +Rc, -Rc, +Ri, -Ri, +S, -S and A
Standards	
IEC 62052-11, IEC 62053-21, IEC 62053-23, IEC 60529: IP51	
CE Mark	
MID Certified (2004/22/CE)	

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