Energymeters are aimed to measure the active energy consumed by an installation. They permit to have under control the real cost of an installation and to divide the consumption between the different appliances.

Characteristics :
- fully compliant with the european standard EN50470-3.
- class B.
- accuracy 1%
- energy readout : 7 digits.
- Backlighted display
- Indication of instantaneous power consumption
- Total / partial counter (except MID references)
- Pulsed ouput
- unlimited saving of measures.
- LED flashing according to consumption.
- Option : tarif 1 / tarif 2.
- Three phases energymeters are adapted to all kind of networks.
- Display indication in case of bad wiring.

EC 051

EC 150

EC 364M

EC370

Designation	*Characteristics*	*Width in 17.5 mm*	*Pack qty.*	*Cat. ref.*
Single phase	230V +/- 15%, 50/60 Hz			
- direct reading 32A	single tariff without pulsed output	1	1	**EC 050**
	single tariff with pulsed output	1	1	**EC 051**
Single phase energymeters direct 63A	230V~ 50/60 Hz starting current = 40mA base current = 10A max current = 63A			
	energymeter with pulsed output and total/partial	3	1	**EC 150**
	energymeter with pulsed output total/partial counter and 2 tariffs	3	1	**EC 152**
	energymeter with pulsed output with MID approval	3	1	**EC 154M**
Three phase energymeters direct 63A	230/400V~ 50/60 Hz starting current = 40mA base current = 10A max current = 63A			
	energymeter with pulsed output and total/partial	4	1	**EC 350**
	energymeter with pulsed output total/partial counter and 2 tariffs	4	1	**EC 352**
Three phase energymeters direct 100A	230/400V~ 50/60 Hz starting current = 80mA base current = 20A max current = 100A			
	energymeter with pulsed output and total/partial	7	1	**EC 360**
	energymeter with pulsed output total/partial counter and 2 tariffs	7	1	**EC 362**
	energymeter with pulsed output with MID approval	7	1	**EC 364M**
	energymeter with bi-directionnal counter	7	1	**EC 365B**
Three phase energymeters connection via current transformers to be connected with CT with 5A on the secondary.	230/400V~ 50/60 Hz starting current = 10mA max current on CT secondary=6A			
	energymeter with pulsed output and total/partial	4	1	**EC 370**
	energymeter with pulsed output total/partial counter and 2 tariffs	4	1	**EC 372**

Description
Multi-function meter measure the extent of electrical values for all LV or LV/HV networks. It allows starting from the front panel to configure and display all the electric parameters and to exploit the functions of measurement, metering and energy management, harmonics analysis, remote control and control the state of devices, communication and detection of high voltages, peaks and voltage disconnections. This device is a multi-function meter for measuring electrical values for single, two and three phase low and high voltage networks.

SM102E:
Measurement in real effective values (TRMS) of:
- current per phase and neutral in instant and maximum value,
- phase-to-neutral and phase-to phase voltages,
- In instant,
- frequency, In instant,
- active positive power total in instant and maximum value,
- reactive positive power total in instant and maximum value,
- apparent positive power total in instant and maximum value,
- power factor (PF) total with inductive or capacitive indication
- harmonic distortion rate (THD) up to 51 on phase-to-neutral and phase-to-phase voltages and currents (THD 3U, THD 3V, THD 3I) energy meters
- positive active energy meter
- positive reactive energy meter - programmable hour run meter

SM103E:
- Same measures as for SM102E with average values,
- active and reactive power on 4 quadrants (±),
- harmonic distortion rate (THD) up to 51 on phase-to-neutral and phase-to-phase voltages and currents (THD 3U, THD 3V, THD 3I, THD In),

Metering:
- active and reactive power meter on 4 quadrants,
- apparent power meter,
- programmable hour run meter.

Common equipments:
- backlit LCD screen,
- direct access key for currents (instantaneous and max. values), current THD and set up wiring correction,
- direct access key for voltages, frequency and voltage THD,
- direct access key for active, reactive and apparent power (instantaneous and max. values) and power factor,
- direct access key for energies and hour meters.

Connection capacity:
- voltage: rigid or flexible conductors 2,5 mm²
- current: rigid or flexible conductors 6 mm²

Comply with
IEC 61 557-12, IEC 62 053-22 class 0.5 S and IEC 62 053-23 class II


SM102E


SM103E

Designation	*Characteristics*	*Cat. Ref.*
Low voltage multi-function meter	measurement of instantaneous and maximum values	**SM102E**
Low and high voltage multi-function meter and network analyser	measurement of instantaneous, average and maximum values	**SM103E**
Pulse output plug-in module 2 pulse outputs cable for configuration (kWh, kvarh,kVah)	for meter SM102E with 1 adjustable output for meter SM103E with 2 adjustable outputs	**SM200** **SM201**
Input / output plug-in module 2 inputs, 2 outputs cable for configuration on various measurement	for meter SM103E (3 modules max. can be connected)	**SM202**
Analogue outputs plug-in module 2 outputs cable for configuration on various measurment	for meter SM103E (3 modules max. can be connected)	**SM203**
Temperature inputs plug-in module Temperature indication: - internal, - external sensor PT 100 (T°C 1), - external sensor PT 100 (T°C 2), - external sensor PT 100 (T°C 3),.)	for meter SM103E	**SM205**
Memory plug-in module - Storing up to a maximum of 62 days of P+, P-, Q+, Q- - Storing of 10 hour-dated last alarms. - Storing of the last minimum and maximum instantaneous values for 3U, 3V, 3I, In, F, ∑P±, Q±, S, THD 3U, THD 3V, THD, 3U, THD, 3V, THD, 3I, THD In. - Storing of 3U, 3V and F average values based on synchronisation function (maximum 60 days).	for meter SM103E	**SM204**
Communication modules		
- RS485 JBUS/MODBUS	**-** for meter SM102E **-** for meter SM103E	**SM210** **SM211**
- Ethernet JBUS/MODBUS	**-** for meter SM103E	**SM213**
- Ethernet + RS485 JBUS/MODBUS	**-** for meter SM103E	**SM214**

Description
SM101E and SM101C are multi-function meters for electrical values for the low voltage network in modular format. They allow visualization of all electrical parameters and to operate the functions of measuring, metering, energy and communication.

Technical data
- voltage rating: 200 to 277 V AC +/- 15 %

Frequency: 50/60Hz

Consumption: < 5VA
Network: 1L, 2L, 3L, 3L + N
- IP degree: IP20 case degree protection and IP51 with front cover
- communication mode: Jbus /Modbus

Connection capacity:
- rigid/flexible conductor 4 mm² (power)
- rigid/flexible conductor 4 mm² (communication)

Complies with
IEC61557-12
IEC62053-22 (class 0.5S)
IEC62053-23 (class 2)


SM101E


SM002

Designation	*Characteristics*	*Width in 17.5 mm*	*Pack qty*	*Cat. Ref.*
Multi-function meters	- measured values: Inst&Max values: I, U, V, F, P, PF, h	4	1	**SM101E**
	- measured values: Inst&Max values: I, U, THD, F, P, PF, E, h - pulses output - RS485 Jbus/Modbus communication			**SM101C**
Flush mounting kit 4 modules width	for SM101C, SM101E, ECxxx modules energy meters, EC700 pulse concentrator	4		**SM002**

Pulse concentrator

Description
The EC700 is a pulse concentrator equipped with 7 digital inputs (logical signal or pulse) and a RS485 JBUS/MODBUS protocol binding. It centralizes and memorizes the impulses or logic signals output of electricity, gas, oil, water, compressed air counters or multi-function meters.

Improved customisation
- Selection of the measuring unit: kWh, m³, liters.
- Selection of the currency unit: €, k€, £, $.

Values can be displayed in the unit of your choice and energy costs can be directly calculated.

Connection solid/stranded:
- 6/4mm² (inputs)
- 2.5/2.5mm² (communication)

Designation	*Characteristics*	*Width in 17.5 mm*	*Pack qty*	*Cat. Ref.*
Pulse concentrator	- IP20 for the case and IP51 for the front - multi-utility meter - total, partial and programmable metering day, week, month, year) - RS485 Jbus/Modbus communication - 7 pulse inputs - 1 digital output - backlight LCD display - power supply U=110...400 VAC ± 10 %	4	1	**EC700**


EC700