



COUNTIS E0x

Active energy meters
single-phase - direct 32/40 A

Single-circuit metering,
measurement &
analysis

new



The solution for

- > Industry
- > Marinas
- > Shopping centers
- > Data center



Strong points

- > Compactness
- > Output (pulses)
- > MID certified B+D module
- > RS485 (MODBUS) and M-Bus communication

MID certification

- > COUNTIS E units comply with the MID directive to guarantee accuracy and reliability when metering, compulsory for energy billing applications.
- > COUNTIS E MID feature tamper-proof components to prevent fraud.



Conformity to standards

- > IEC 62053-21 class 1
- > IEC 62053-31
- > IEC 62052-11
- > EN 50470-1
- > EN 50470-3



Function

The **COUNTIS E0x** is a modular active electrical energy meter displaying the total energy consumed (kWh), allowing direct connection up to 32/40 A. COUNTIS E02, E04 and E06 are also MID-certified.

Advantages

Compactness

Only 1 module wide.

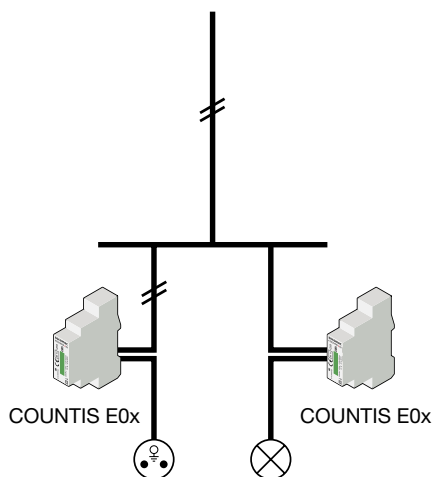
Output (pulses)

The pulse output enables the kWh consumption to be reported to a remote system (PC/BMS) so that it can be analysed for billing, energy saving or energy cost management purposes.

MID certified B+D module

COUNTIS E units comply with the MID directive to guarantee accuracy and reliability when metering, compulsory for energy billing applications. "Module B+D" certification guarantees that the design and manufacturing process of products are approved by an accredited laboratory.

Functional diagram

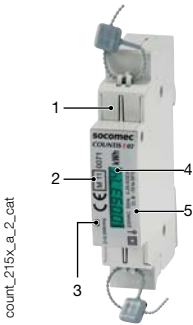


Common characteristics

- Compact dimensions.
- Measurement accuracy: 1%.
- Displayed on backlit screen.

Models	Model-related specifications
E00	Pulse output
E02	Pulse output + MID
E03	Dual tariff + Pulse output + RS485 MODBUS communication
E04	Dual tariff + Pulse output + RS485 MODBUS communication + MID
E05	Dual tariff + Pulse output + M-Bus communication
E06	Dual tariff + Pulse output + M-Bus communication + MID

Front panel

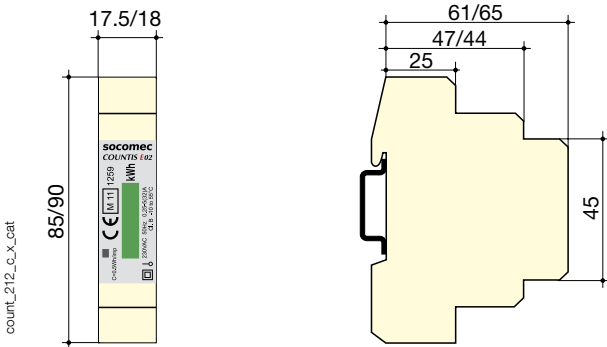


1. Terminal shrouds (COUNTIS E02/E04/E06).
2. MID marking (COUNTIS E02/E04/E06).
3. Metrological LED (2000 pulses/kWh for E00/E02 and 5000 pulses/kWh for E03/E04/E05/E06).
4. kWh display.
5. Serial number (COUNTIS E02).



1. Neutral terminal
2. M-Bus/Modbus connection
3. Metrological LED
4. Navigation button.
5. Backlit LCD display
6. Pulse output
7. Current and voltage terminals

Case



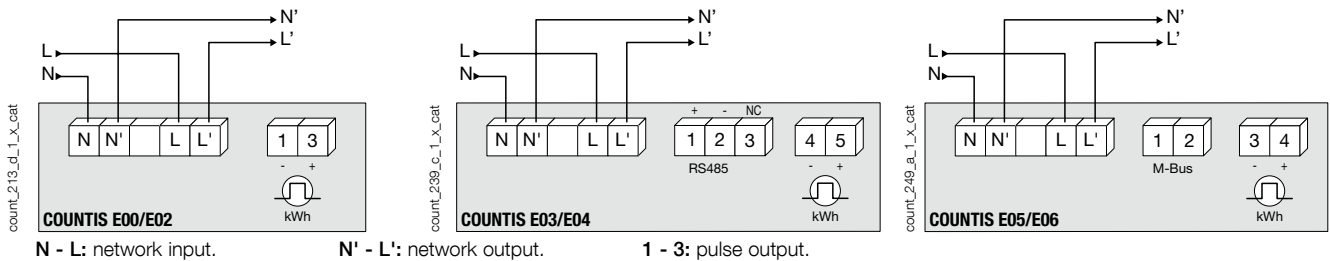
	COUNTIS E00/E02	COUNTIS E03 ... E06
Type	modular	modular
Number of modules	1	1
Dimensions W x H x D (mm)	17.5 x 85 x 61	18 x 90 x 65
Case degree of protection	IP 20	IP 20
Front degree of protection	IP 50	IP 50
Display type	5 + 1 digits LCD	7 digit LCD with backlighting
Rigid cable cross-section	10 mm ²	1.5 ... 6 mm ²
Flexible cable cross-section	6 mm ²	1.5 ... 6 mm ²
Weight	150 g	100 g E03/04 80 g E05/06

Electrical characteristics

Current measurement (TRMS)	COUNTIS E00/E02	COUNTIS E03 ... 06
Type	direct input	
Input consumption	< 2 VA	< 0.5 VA
Permanent overload	32 A	40 A
Intermittent overload	30 I _{max} over 10 ms	
Minimum current measured	20 mA	
Voltage measurements (TRMS)		
Range of measurement	196 ... 264 VAC	184 ... 276 VAC
Input consumption	8 VA	Max. 1.5 VA for E03/04 Max. 1 VA for E05/06
Permanent overload	264 VAC	280 VAC
Energy accuracy		
Active (according to IEC 62053-21)	Class 1	
Active (according to EN 50470)	Class B	
Power supply		
Self-powered	yes	

Output (pulses)	COUNTIS E00/E02	COUNTIS E03 ... 06
Number	1	
Type of optocoupler	Max. 15 VDC	27 VDC - 27 mA (IEC 62053-31)
Fixed pulse weight	100 Wh	
Pulse duration	100 ms	
Operating conditions		
Operating temperature	-10 ... +55°C	-25 ... +55°C
Storage temperature	-20 ... +70°C	-40 ... +75°C
Relative humidity	95%	80%
Communication	COUNTIS E03/E04	COUNTIS E05/E06
Link	RS485	Wired
Type	2 ... 3 half duplex wires	2 half duplex
Protocol	MODBUS in RTU mode	M-Bus
Speed	2400 ... 38400 bauds	300, 2400, 9600 bps

Terminals and connections



References

Type	COUNTIS E00 Reference	COUNTIS E02 Reference	COUNTIS E03 Reference	COUNTIS E04 Reference	COUNTIS E05 Reference	COUNTIS E06 Reference
Direct 32 A	4850 3019					
Direct 32 A - MID		4850 3020				
Direct 40 A - Dual tariff + RS485 MODBUS communication			4850 3039			
Direct 40 A - Dual tariff + RS485 MODBUS communication + MID				4850 3040		
Direct 40 A - Dual tariff + M-Bus communication					4850 3041	
Direct 40 A - Dual tariff + M-Bus communication + MID						4850 3042