



# COUNTIS E0x

Active energy meters

single-phase - direct 32/40 A

Single-circuit metering,  
measurement &  
analysis

**new**



COUNTIS E04 - MID



COUNTIS E02 - MID

## 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.

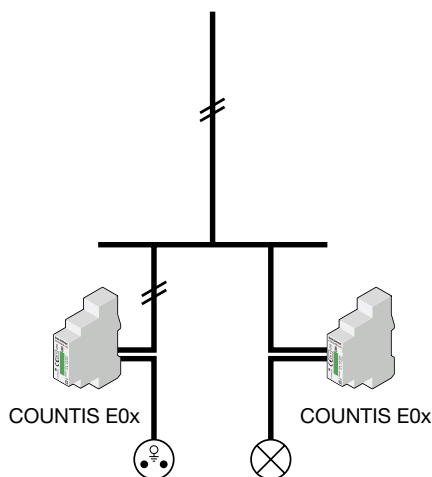
### Output (pulses)

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

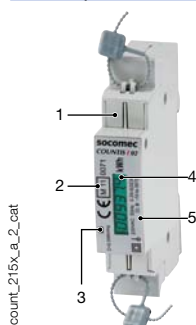


## Common characteristics

- 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

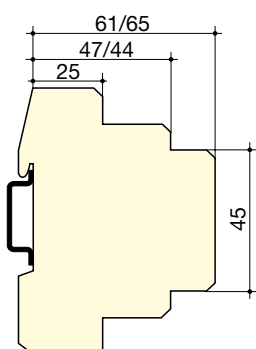
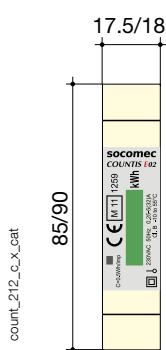


1. Terminal shrouds (COUNTIS E02/E04/E06).
2. MID marking (COUNTIS E02/E04/E06).
3. Metrological LED (2000 pulses/kWh for E00/E02 and 5000 pulses/kWh for E03/E04/E05/E06).
4. kWh display.
5. Serial number (COUNTIS E02).



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



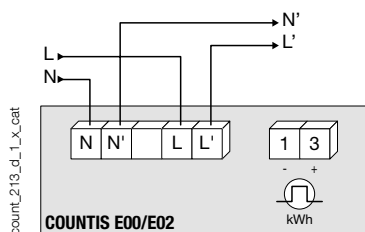
	COUNTIS E00/E02	COUNTIS E03 ... E06
Type	modular	modular
Number of modules	1	1
Dimensions W x H x D (mm)	17.5 x 85 x 61	18 x 90 x 65
Case degree of protection	IP 20	IP 20
Front degree of protection	IP 50	IP 50
Display type	5 + 1 digits LCD	7 digit LCD with backlighting
Rigid cable cross-section	10 mm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

## Electrical characteristics

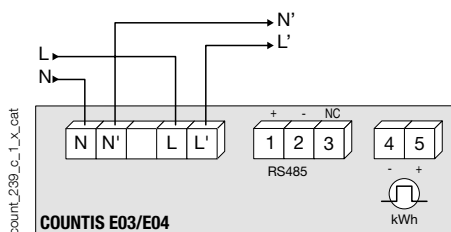
Current measurement (TRMS)	COUNTIS E00/E02	COUNTIS E03 ... 06
Type	direct input	
Input consumption	< 2 VA	< 0.5 VA
Permanent overload	32 A	40 A
Intermittent overload	30 I <sub>max</sub> over 10 ms	
Minimum current measured	20 mA	
Voltage measurements (TRMS)		
Range of measurement	196 ... 264 VAC	184 ... 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

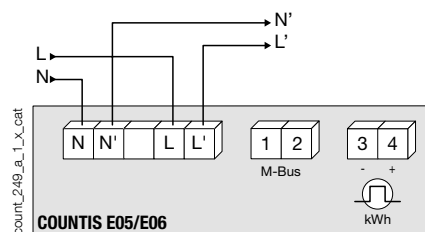


N - L: network input.



N' - L': network output.

1 - 3: pulse output.



## 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