

COUNTIS E0x

Active energy meters for electrical distribution
single-phase - direct 40 A



COUNTIS E04 - MID

Function

The **COUNTIS E0x** is a modular electrical power meter. It shows kWh and kVAh readings and other measurements on its backlit LCD. These devices connect directly to a 40 A circuit.

The COUNTIS E0x is fully integrated into the SOCOMEC monitoring ecosystem (Webview, screens, gateways, configuration software, etc.). COUNTIS E02, E04 and E06 are MID-certified.

Advantages

Compact

Only one module wide.

Communication via RS485 MODBUS, M-BUS or pulse output

COUNTIS E0x units have either one pulse output or an RS485 (MODBUS) or M-BUS communication output.

The pulse output transmits the consumption reading in kWh to a remote system (PC/BMS) so you can use it for billing purposes, to save energy and manage your energy costs.

B+D module, MID-certified

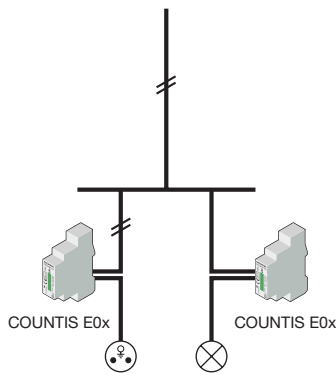
COUNTIS E units meet MID standards and ensure accurate and reliable metering (all crucial prerequisites of power-billing applications).

The "module B+D" certification proves that an external laboratory has verified the design and production process of these devices.

Socomec monitoring ecosystem: user software, remote displays

Inherent compatibility with energy management systems and Socomec gateways (Webview, screens, gateways, etc.).

Functional diagram



count_211_a_1_x_cat.eps

Common characteristics

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

Models	Specific features
E00	Output (pulses)
E02	Pulse output + MID
E03	Dual-tariff + pulse output + communication via RS485 MODBUS
E04	Dual-tariff + pulse output + communication via RS485 MODBUS + MID
E05	Dual-tariff + pulse output + communication via M-BUS
E06	Dual-tariff + pulse output + communication via M-BUS + MID

The solution for

- > Data centre
- > Building
- > Industrial process



Strong points

- > Compact
- > Communication via RS485 MODBUS, M-BUS or pulse output
- > B+D module, MID-certified
- > Socomec monitoring ecosystem: user software, remote displays

MID certification

- > COUNTIS E units meet MID standards and provide accurate and reliable metering for power-billing applications.
- > The COUNTIS E MID has tamper-proof accessories to prevent fraud.



Compliance with standards

- > IEC 62053-21 Class 1
- > IEC 62053-23 Class 2
- > IEC 62053-31
- > IEC 62052-11
- > EN 50470-1
- > EN 50470-3

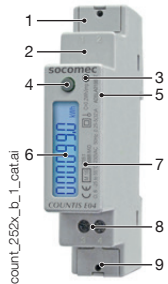


Associated current transformers



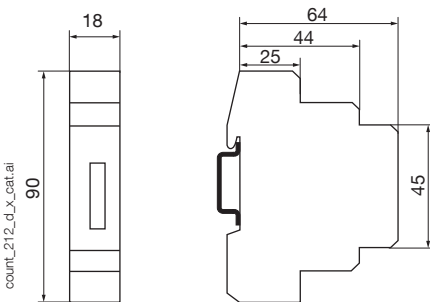
See "Current transformers".

Front panel



1. Neutral terminal with terminal shroud (COUNTIS E02/E04/E06).
2. M-Bus/MODBUS connection.
3. Metrological LED.
4. Navigation button.
5. Serial number.
6. Backlit LCD.
7. MID marking (COUNTIS E02/E04/E06).
8. Pulse output.
9. Voltage and current terminals.

Dimensions (mm)



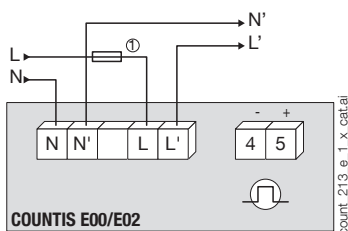
Type	Modular
Number of modules	1
Dimensions W x H x D	18 x 90 x 64 (mm)
Casing protection degree	IP 20
Front panel protection degree	IP 51 ⁽¹⁾
Display type	LCD 7 digits with backlighting
Cross-section of rigid connecting cable	1.5 to 6 mm ²
Cross-section of flexible connecting cable	1.5 to 6 mm ²
Weight	100 g E03/E04 80 g E00/E02/E05/E06

(1) Cabinet installations require a protection degree of at least IP51.

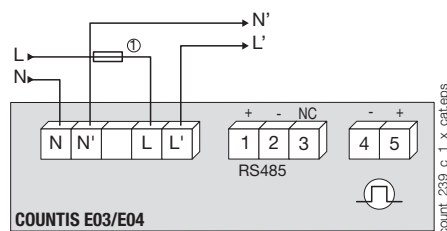
Electrical characteristics

Current monitoring (TRMS)		
Type	Single-phase - direct 40 A	
Input consumption	Max. 0.5 VA	
Permanent overload	40 A	
Transient overload	30 I _{max} over 10 ms	
Inrush current (I _{cfst} /c _f)	20 mA	
Minimum current (I _{min})	0.25 A	
Transient current (I _{cftr} /c _f)	0.5 A	
Reference current (I _{ref})	5 A	
Voltage measurements (TRMS)		
Measurement range	184 to 276 V AC	
Input consumption	1.5 VA max. E00/E02/E03/E04 1 VA max. E05/E06	
Permanent overload	280 V AC	
Power monitoring accuracy		
Active (according to IEC 62053-21)	Class 1	
Active (according to EN 50470)	Class B	
Reactive (according to IEC 62053-22)	Class 2	
Power supply		
Self-powered	Yes	
Frequency	50/60 Hz	
Output (pulses)		
Number	1	
Type of optical coupler	27 V DC - 27 mA (IEC 62053-31)	
Fixed pulses	100 Wh	
Pulse duration	100 ms	
Environment		
Operating temperature	-25 to +55°C	
Storage temperature	-40 to +75°C	
Relative humidity	80%	
Communication		
	COUNTIS E03/E04	COUNTIS E05/E06
Link	RS485	Wired
Type	2 to 3 half duplex wires	2 half duplex
Protocol	MODBUS in RTU mode	M-Bus
Baudrate	2400 to 38400 bauds	300, 2400, 9600 bps

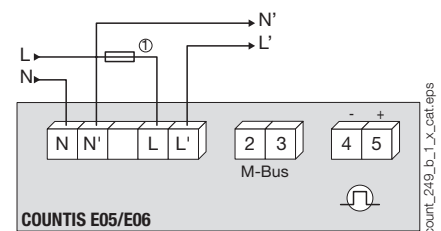
Connections



N - L: network input.



N' - L': network output.



1. 0.5 A gG / 0.5 A class CC fuses.

References

Type	COUNTIS E00 Reference	COUNTIS E02 Reference	COUNTIS E03 Reference	COUNTIS E04 Reference	COUNTIS E05 Reference	COUNTIS E06 Reference
Direct 40 A	4850 3058					
Direct 40 A - MID		4850 3059				
Direct 40 A - Dual-tariff + communication via RS485 MODBUS			4850 3039			
Direct 40 A - Dual-tariff + communication via RS485 MODBUS + MID				4850 3040		
Direct 40 A - Dual-tariff + communication via M-BUS					4850 3041	
Direct 40 A - Dual-tariff + communication via M-BUS + MID						4850 3042
Accessories	Available for order in multiples of				Reference	
10x 1U sealing kits					4850 305U	
Fuse disconnect switches for voltage input protection (RM type) 1-pole					6 5702 5001	
gG 14x51 40 A fuses					10 6022 0040	