COUNTIS

Active energy meter and concentrator

E40 / E41 / E42 / E43 / E44

3-phase - Via CT up to 6000 A

➲ Function

The **COUNTIS E4x** is an active and reactive electrical energy meter designed for three-phase networks. It is used for connection via CT up to 6000 A.
COUNTIS E4x are protected against phase/neutral inversion and detect wiring errors.

➲ Applications

The **COUNTIS E40** displays the total energy consumed and allows remote access through pulse output.
Metering over specific period can be managed though a partial counter.

The **COUNTIS E41** is a double tariff meter meant for dual tariff invoicing. For each tariff a partial counter is available.

In addition to the COUNTIS E41 functions, the **COUNTIS E42** also offers MID certification.

In addition to the COUNTIS E40 functions, the **COUNTIS E43** also offers JBUS/ MODBUS RTU communication via RS485.

In addition to the COUNTIS E43 functions, the **COUNTIS E44** also offers MID certification.

COUNTIS E42 and **E44** cannot be reset.

The **COUNTIS E43** is bi-directional (import and export).

➲ Conformity to standards

- IEC 62053-21 class 1
- IEC 62053-23 class 2
- EN 50470-1
- EN 50470-3

Front panel

1. LCD display
2. Navigation key
3. Reset key
4. Metrological LED
5. Programming key

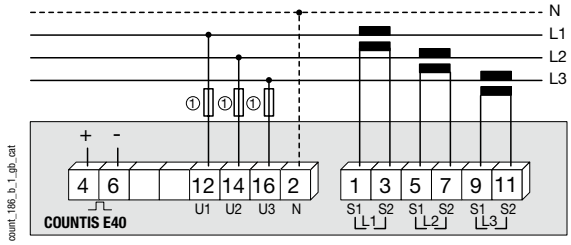
Electrical characteristics

Current measurement	
Type	Three-phase on CT/5A up to 6000 A
Input consumption	0.2 VA per phase
Startup current (I_{st})	10 mA
Minimum current (I_{min})	50 mA(1)
Transition current (I_{tr})	250 mA(2)
Reference current (I_{ref})	5 A(3)
Permanent overload (I_{max})	6 A
Short-time over-current	120 A for 0.5 s
Voltage measurement	
Range of measurement	230 ... 400 V +/- 20 %
Consumption (VA)	2 VA
Sustained overload	280 V phase-neutral / 480 V phase-phase
Energy accuracy	
Active (according to IEC 62053-21)	Class 1
Active (according to EN 50470)	Class B
Power supply	
Self supplied	Yes
Frequency	50 / 60 Hz
Output (pulsed)	
Number	1 (except E43)
Type of optocoupler	IEC 62053-31 Class A (20 ... 30 VDC)
Fixed weight of impulses	100 Wh, 1 KWh, 10 KWh, 100 KWh
Pulse duration	50 ms, 100 ms, 200 ms, 400 ms, 800 ms, 1000 ms, 1500 ms
Operating conditions	
Operating temperature	-10 to 55 °C
Storage temperature	-20 to 70 °C
Relative humidity	85 %
Communication	
Link	RS485
Type	2 … 3 half duplex wires
Protocol	JBUS/MODBUS® en mode RTU
JBUS/MODBUS® speed	1400 … 38400 bauds

(1) $I_{(min)} \leq 0.5 * I_{tr}$
(2) The accuracy class is guaranteed between Itr et Imax.
*(3) $I_{(ref)} = I_{(b)}$ (base current) = 10 * $I_{(tr)}$ for direct connection COUNTIS.*

Connection

① = Fus. 0,5 A gG / 0,5 A classe CC



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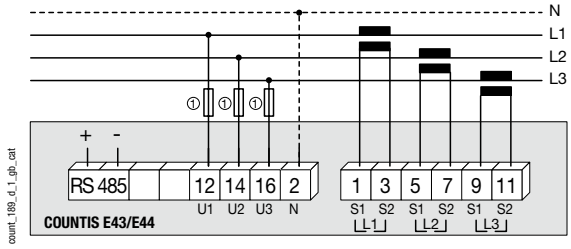

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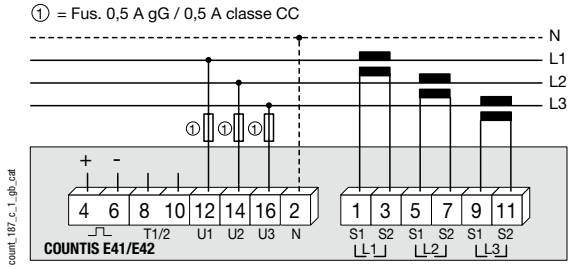
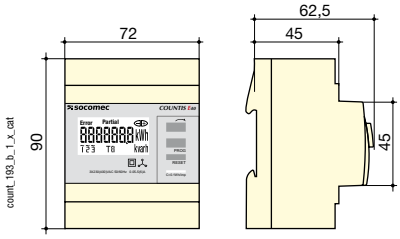


Case



Type	Modular
Number of optional modules	4
Dimensions W x H x D	73 x 90 x 62.5 mm
Case protection index	IP20
Front protection rating	IP51
Display type	Backlit LCD display
Rigid cable connection section	1.5 to 10 mm²
Flexible cable connection section	1 to 6 mm²
Weight	230 g

References

	COUNTIS E40	COUNTIS E41	COUNTIS E42	COUNTIS E43	COUNTIS E44
Type	**Reference**	**Reference**	**Reference**	**Reference**	**Reference**
Via CT	4850 **3008**				
Via CT - Dual tariff		4850 **3009**			
Via CT - Dual tariff - MID			4850 **3015**		
Via CT with JBUS MODBUS communication via RS485(1)				4850 **3017**	
Via CT with JBUS MODBUS communication via RS485 - MID(1)					4850 **3014**

(1) 4 tariffs via RS485 communication.

MID certification

The Measuring Instruments Directive (MID) authorises the use of MID Countis in applications for which sub-billing of the electrical energy consumed is necessary (apartments, commercial units, etc.).
It guarantees each user that meters meets a high level of accuracy, quality design and manufacturing through a 3rd party verification.