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Электрические счетчики трехфазные Socomec Countis E50 / E53 - брошюра на продукцию. Юниджет

Постоянная ссылка на страницу: https://www.uni-jet.com/catalog/commutation/schetchiki/socomec-countis-e50-e53.html

COUNTIS *E5x*

Active energy meters
three-phase - via CT up to 6000 A

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COUNTIS E53 up to 6000 A via CT

Function

The **COUNTIS E5x** is a panel mounted active and reactive electrical energy meter displaying energy and multi-measurement values directly on its large backlit LCD display. It is designed for utilisation on three-phase or single-phase networks with connection via CT and is suitable for applications of up to 6000 A. The CT ratio can be configured by the user via the keypad and the display, or via RS485 MODBUS communication (E53).

Common characteristics

- Measurement accuracy: 0.5%.
- Large backlit LCD display.
- Direct access to multi-measurement and metering values.
- Detects connection errors.

Advantages

RS485 MODBUS communication or pulse output

To enable the remote reporting of energy consumption, COUNTIS E5x are provided with either a pulse output (E50) or an RS485 MODBUS communication output (E53).

Remote configuration of the Countis E53 is possible via RS485 MODBUS communication.

Detection of connection errors

The COUNTIS E5x is protected against phase/neutral inversion and has an integrated test function which can be utilised to detect wiring errors. This function enables CT installation errors to be corrected without having to remake connections. This simplifies the installation and commissioning, thereby reducing associated costs, and ensures that the device operates correctly.

Large backlit LCD display

Thanks to its large backlit LCD display and its multiple viewing screens with direct pushbutton access, COUNTIS E5x provide clear readings and are easy to use.

Principle diagram

COUNTIS E50

COUNTIS E50

COUNTIS E50

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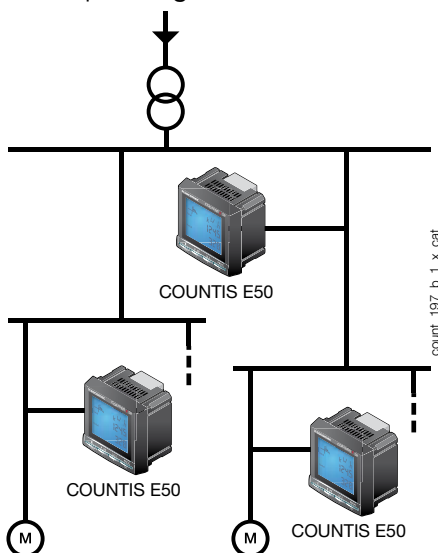
They directly display a number of total/partial metering and multi-measurement values :
+/- kWh, +/- kvarh, kVAh, I, U, V, S, PF, etc.

Direct display of multi-measurement and metering values

Multi-measurement

- Currents: instantaneous: I1, I2, I3
- Voltages: instantaneous: V1, V2, V3, U12, U23, U31
- Power:
  - instantaneous: 3P, 3Q, 3S
  - maximum average: 3P
- Power factor:
  - instantaneous: 3PF

Metering

- Active energy: +/- kWh
- Reactive energy: +/- kvarh
- Apparent energy: kVAh

The solution for

- > Industry
- > Infrastructure
- > Data centres

Strong points

- > RS485 MODBUS communication or pulse output
- > Large backlit LCD display
- > Detection of connection errors
- > Direct display of multi-measurement and metering values

Conformity to standards

- > IEC 62053-23 class 2
- > IEC 62053-22 class 0.5S
- > IEC 61557-12

Management software

- > To get the most effective use from your Socomec measurement and metering devices, we offer a range of dedicated software tools. See page 142.

models	Key characteristics
E50	Pulse output
E53	RS485 MODBUS communication

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COUNTIS E5x
Active energy meters
three-phase - via CT up to 6000 A

References

Electrical characteristics

| Current measurement	
Type	three-phase on CT/5A up to 6000 A
Input consumption	< 0.6 VA
Startup current (I_{st})	40 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
Intermittent overload	50 A for 1 s
Voltage measurement	
Range of measurement	86 … 520 VAC
Input consumption	< 0.1 VA
Permanent overload	800 VAC
Energy accuracy	
Reactive (according to IEC 62053-23)	Class 2
Active (according to IEC 62053-22)	Class 0.5S
Power supply	
Self-supplied	no
Auxiliary power supply U_s	110 … 400 VAC / 125… 350 VDC +/-10 %
Frequency	45 … 65 Hz
Output (pulsed)	
Number	1
Type	100 VDC - 0.5 A - 10 VA
Max. number of operations	$\leq 10^8$
Operating conditions	
Operating temperature	-10 … 55 °C
Storage temperature	-20 … 85 °C
Relative humidity	95 %
Communication	
Link	RS485
Type	2 … 3 half duplex wires
Protocol	MODBUS RTU
MODBUS® speed	1400 … 38400 bauds

Front panel

1. Backlit LCD display
2. Energy display and test function key
3. Power and power factor display key
4. Current and voltage display key
5. Programming mode access key

Case
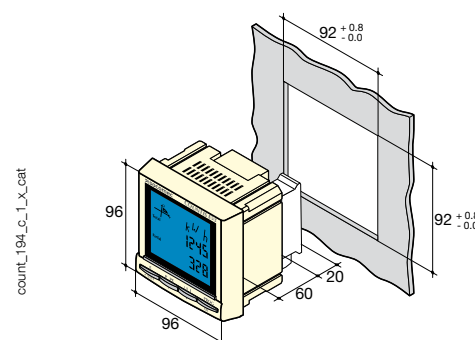
Type	Panel mounting
Dimensions W x H x D	96 x 96 x 80 mm
Case degree of protection	IP30
Front degree of protection	IP52
Display type	backlit LCD display
Voltage and current connection cross-section	0.5 … 2.5 mm²
Current connection cross-section	1.5 … 6 mm²
Weight	370 g

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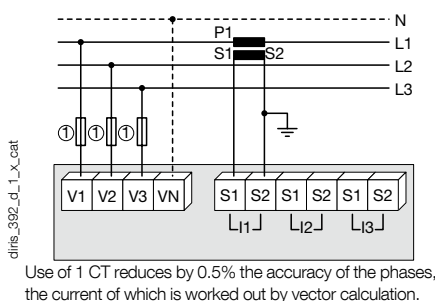*(3) $I_{(ref)} = I_{(b)}$ (base current) = 10 * $I_{(tr)}$ for direct connection COUNTIS.*
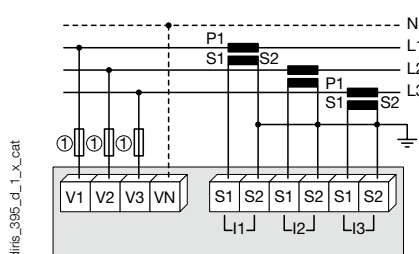
Connection

Recommendation:
- For IT earthing systems, it is recommended that the CT secondary is not connected to earth.

- When disconnecting the COUNTIS, the secondary of each current transformer must be short-circuited. This operation can be carried out automatically by a SOCOMEC PTI, an accessory which is included in this catalogue. Please consult us.
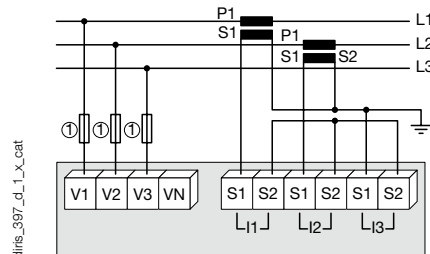
Low voltage balanced network
3/4 wires with 1 CT

Use of 1 CT reduces by 0.5% the accuracy of the phases, the current of which is worked out by vector calculation.

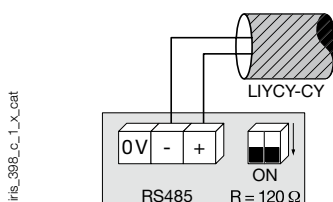### Low voltage unbalanced network
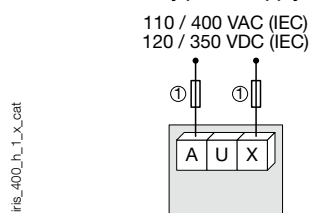**3/4 wires with 3 CTs**

3 wires with 2 CTs

Use of 2 CT reduces by 0.5% the accuracy of the phases, the current of which is worked out by vector calculation.

Additional information

Communication via RS485 link

LIYCY-CY

AC & DC auxiliary power supply

110 / 400 VAC (IEC)
120 / 350 VDC (IEC)

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

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