537204B

socomec
Innovative Power Solutions

COUNTIS E40 / E41

**Three phase kWh meter,
measure via CT 50 to 6000 A**

USER MANUAL

EN

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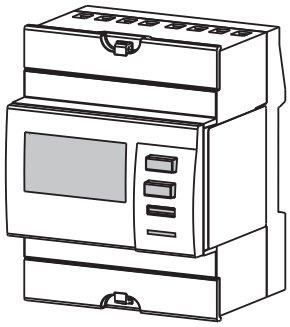

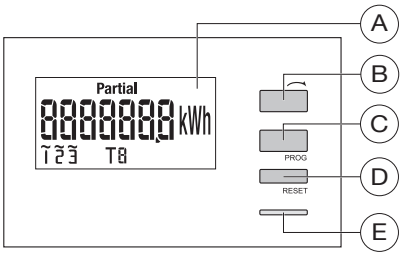

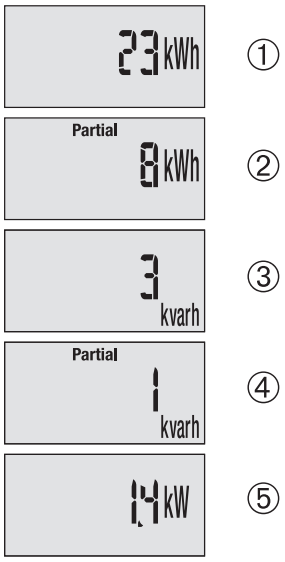

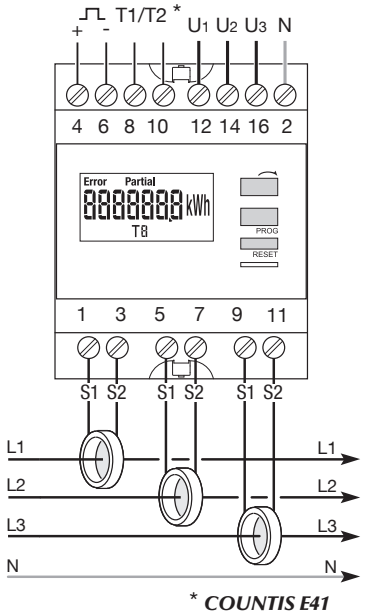

* *COUNTIS E41*

Operating principle

This kilowatt hour meter measures the active and reactive electrical energy used in an electrical installation.
This device has a digital LCD to display energy used and power.
This device has a total counter and a partial resettable counter.
In case of two tari levels, the COUNTIS E41 will count separetely the energy used in tari 1 and in tari 2.

Product presentation

A LCD display.
B Key to scroll readings.
C «Prog» key to set up the CT ratio and the type of network.
D Reset to reset the partial counter.
E Metrological LED (1 Wh = 10 impulses).

Meter setup

The following settings have to be made before the meter can be put to use :
- CT ratio.
- Type of network (single or three-phase).
- Type of three-phase installation (balanced or unbalanced

1. Press the Prog key during 3 sec. to enter the setup mode.
2. The CT ratio setting is displayed (100A). Press the key «Read» repeatedly to scroll the possible CT values (50,60,75,100,125,150,160,200,250,300,400,500,600,700,750,800,1000,1200,1250,1500,1600,2000,2500,3000,4000,5000,6000A).
3. Press «Prog» to conrm and switch to the next setting.
4. The type of network (1L+N, 2L, 3L, 3L+N) is displayed. Press the key «Read» repeatedly to scroll the possible values and select the type of network.
5. Press «Prog» to conrm and switch to the next setting.
6. On three-phase installations, the type of installation is displayed as «Balanced/ Unbalanced» (Bl, Unbl). Press the key «Read» to scroll the values and select the type of installation.
7. Press «Prog» to conrm.
8. Press the Prog key during 3 sec. to exit the programming mode.

Display of readings

The various datas can be scrolled by pressing the Key «Read».
The Default display will indicate power consumption according to the current tari.

COUNTIS E40:
1 1st pressure : backlight switches ON. Total active energy consumption (kWh).
2 2nd pressure: partial active energy consumption (kWh).
3 3rd pressure: total reactive energy consumption (kVAR).
4 4th pressure: partial reactive energy consumption (kVAR).
5 5th pressure: instant power consumption (kW).

COUNTIS E41:
The COUNTIS E41 provides detailed display of the total/partial active energy consumptions according to tari (T1 or T2) and in total (T).

To reset the partial meter

- Press the scrolling key several times in order to display partial energy.
- Press the reset button during 3 sec.

The partial meters (active and reactive energy) will be set to zero.

ERROR message:
In case of bad wiring, an «ERROR» message will be displayed.
- Check for each phase that current (I1, I2, I3) and voltage (L1, L2, L3) are measured on the right phase.
- Check the correct wiring of the product (L/N).

Note :
The information ĩ ẽ ẽ on the display indicates that the corresponding phase (1, 2,3) is under voltage. The information is available only when the neutral is connected.

Technical specifications

Metrological characteristics
- Accuracy class B (1%) according to EN50470-3
- Metrological LED:
  1 pulse = 0.1Wh current transformer ratio
  e.g. in a installation with a 100/5A C.T.,
  1 pulse = 0.1Wh /20 pulses = 2Wh
- Starting current: 10 mA
- Basic current: 5 A
- Max current: 6 A

Technical characteristics
- Consumption: < 0,6 W et 2,8 VA max per phase
- Supply: 230/400 VAC +/- 15%
- Frequency: 50/60 Hz +/- 2 Hz
- Savings of measures are made regularly and in case of power failure in EEPROM

Note:
in a unbalanced network, please connect 1 C.T. for each phase. If the installation settings is related to a "balanced network", 1 C.T. on the phase 1 has to be connected.

- Characteristic of tari input COUNTIS E41: tari 1 = 0 V, tari 2 = 230 VAC +/- 15%
- Impulse output characteristics:
  • 1 pulse: 100 Wh
  • Pulse duration: 100 ms
  • External supply: 20 ... 30 VDC

Mechanical characteristics
- Modular casing 4 M (72 mm)
- Protection degree (casing) : IP20
- Protection degree noze: IP50/IK03
- Insulation class: II

Environment
- Storage temperature: -25 °C to +70 °C
- Working temperature: -10 °C to +55 °C
- Connection capacity:
  • exible: 1 à 6 mm²
  • rigid: 1,5 à 10 mm²

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Recto / papier blanc offset 70g/m² / noir et blanc / format ouvert : 210x297 mm / format plié 70x75 mm. Subject to change without notice.