RETROFIT Line

MID active energy meter dedicated to existing installations

COUNTIS E44R

TC0 36
400 A

The solution for

- Light Industry
- Infrastructure
- Data centers

Strong points

- High overall accuracy
- Easy installation
- Proven products
- Communication to a Monitoring system
- Guaranteed connections

Conformity to standards

COUNTIS:

- IEC 62053-21
- IEC 62053-22
- IEC 62053-23
- IEC 62053-31
- EN 50470-3
- EN 50470-1

Function

Existing sites, having been built before optimised energy consumption was a consideration, are especially in need of a dedicated energy efficient solution.

COUNTIS products with MID certification provide the guaranteed accuracy required for applications in which sub-billing of the electrical energy consumed is necessary.

To meet this requirement, the **RETROFIT Line** allows you to easily add metering points in electrical enclosures which are very restricted in terms of integration.

The RETROFIT Line consists of COUNTIS meters combined with TCO split-core current transformers. Together they allow measuring and metering single and three phase networks up to 600 A, even inside the most confined cabinet spaces.

Advantages

High overall accuracy
A global system measuring accuracy of better than 1% in energy from 10 to 120% of nominal current.

Easy installation
TCO split-core transformers mean the power cables do not need to be disconnected. Operations are quicker and minimise the electrical disconnection time.

Proven products
The COUNTIS products are based on standard SOCOMEC ranges.

Communication to Monitoring
The data from RETROFIT products can be transferred to a central monitoring system.

Guaranteed connections
The product is protected against phase/neutral inversion and detects wiring errors. Commissioning has been simplified to ensure the device operates correctly: installation costs are therefore reduced.

Meters

Function

The **COUNTIS E4xR** is an active electrical energy meter designed for three-phase networks. It is used for connection via TCO up to 600 A.

The **COUNTIS E42R** is a totalising meter allowing direct reading of the power consumed, using a pulse output. It is a dual tariff meter for dual tariff invoicing.

The **COUNTIS E44R pack** offers MODBUS RTU communication via RS485 and includes 4 tariffs.

COUNTIS E42R and E44R are MID-certified (B + D module).

Technical characteristics(1)

	COUNTIS E42R	COUNTIS E44R
Current measurement		
Type	TC/1 up to 600 A	TC/1 up to 600 A
Input consumption	0.2 VA per phase	0.2 VA per phase
Overload	24 A / 0.5 s	24 A / 0.5 s
Permanent overload	1.2 A	1.2 A
Minimum current measured	10 mA	10 mA
Voltage measurement		
Range of measurement	230 … 400 V ± 15 %	230 … 400 V ± 15 %
Input consumption	2 VA	2 VA
Permanent overload	280 V	280 V
Energy accuracy		
Active (according to EN 50470)	Class C	Class C

(1) Features not mentioned are identical to those of COUNTIS E4x standard products.

Front panel, terminals, case, connection

See the standard COUNTIS E range catalogue pages.

References

Meters	Reference
COUNTIS E42R	4850 **3021**
COUNTIS E44R	4850 **3022**

Current transformers	Reference
TCO 24 100/1	182T **4910**
TCO 24 250/1	182T **4925**
TCO 36 400/1	182T **4940**
TCO 36 600/1	182T **4960**

What are the advantages of a MID meter?

It allows to resell electricity

The MID directive guarantees safe and reliable metering. The meter is tamper-proof and its accuracy is guaranteed thanks to calibration on a metrology bench.

COUNTIS E42R and **E44R** are MID-certified (B + D module). It is mandatory and this means SOCOMEC is required to supply products which meet the design and manufacturing requirements imposed by this standard.

The specificity of MID product

- Standardised accuracy A, B or C: Socomec MID meters have a guaranteed accuracy class C ± 0.5%.
- Tamper-proof devices: protection cover and seals are provided.
- Mandatory markings: CE + MID front and side marking confirms the compliance to modules B + D.
- Related Certificate: provided by Socomec, it formalizes the accuracy verification of the energy meter at four different current levels.

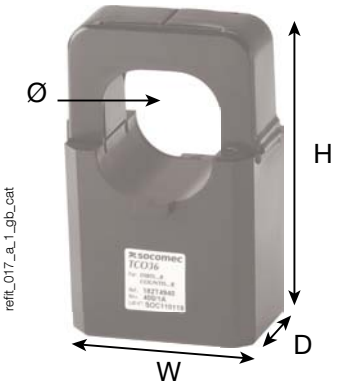
TCO - split-core current transformers

Function

The TCO small split-core current transformers must be only combined with COUNTIS RETROFIT energy meters.

The RETROFIT pack guarantees overall accuracy to within less than 1%.

Technical characteristics



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	TCO 24	TCO 36
Internal diameter (mm)	24	36
Overall accuracy class(1)	1	1
Dimensions H x W x D (mm)	74.5 x 45 x 34	91 x 57 x 40.5

(1) Overall accuracy of the COUNTIS RETROFIT + TCO combination: (1) Global accuracy guaranteed when associating COUNTIS Retrofit + split-core CT with load between 10 % to 120 % of In.

The advantages of TCO split-core current transformers

Wide current range

The TCOs accept a primary current between 100 and 600 A making it possible to connect at different points in the installation.

A guaranteed overall accuracy

Combined with the COUNTIS RETROFIT products, the TCO guarantees overall accuracy is better than 1%.

Compact

With their compact and open design, the TCOs are easily positioned on existing installations without the need to disconnect/reconnect the cables or modify the installation. Measurement points can therefore be placed in the most confined panels.

Services

Take advantage of the advice offered by an energy specialist

Socomec offers a full range of customised services for your energy efficiency requirements and can help you find the best solution:

- Implementation
- Training
- Electrical facility audit
- Project engineering.

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For more details download our Service brochure available on our web site: www.socomec.com or contact your SOCOMEC office.

Zoom

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Think about it

COUNTIS Eci

Communicate consumption information whatever the energy (electricity, water, gas...) to a PC or PLC. Please see the COUNTIS Eci catalogue pages.