COUNTIS

Active energy meter and concentrator

E30 / E31 / E32 / E33 / E34 / E35 / E36

3-phase - Direct 100 A

➲ Function

The **COUNTIS E3x** is an active electrical energy meter designed for three-phase networks. It is used for direct connections up to 100 A.
The COUNTIS E3x is protected against phase/neutral inversion and detects wiring errors.

➲ Conformity to standards

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

➲ Applications

The **COUNTIS E30** displays the total energy consumed and allows remote access through a pulse output. Metering over a specific period can be managed through a partial counter.

In addition to the **COUNTIS E31** functions, the COUNTIS E30, is a double tariff meter intended for dual tariff invoicing. A partial counter is available for each tariff.

In addition to the COUNTIS E31 functions, the **COUNTIS E32** also offers MID certification. They have no partial counter.

In addition to the COUNTIS E30 functions, the **COUNTIS E33** also offers JBUS/MODBUS RTU communication via RS485.

In addition to the COUNTIS E33 functions, the **COUNTIS E34** also offers MID certification.

In addition to the COUNTIS E30 functions, the **COUNTIS E35** also offers M-BUS communication via RS485.

In addition to the COUNTIS E35 functions, the **COUNTIS E36** also offers MID certification.

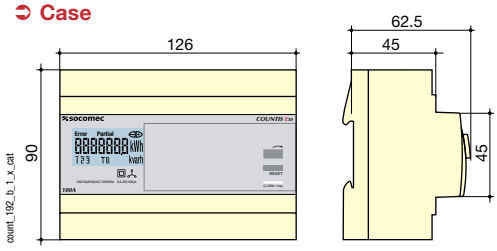
The MID meters have no partial counter and cannot be reset.

Meters with communication do not have a pulse output.
The **COUNTIS E33** and **E35** are bi-directional (i.e. counting energy production or consumption).

Front panel

1. Terminal shrouds (COUNTIS E32, E34 and E36).
2. LCD display.
3. MID marking (COUNTIS E32, E34 and E36).
4. Serial number (COUNTIS E32, E34 and E36).
5. Navigation key.
6. Reset key.
7. Metrological LED.

Case



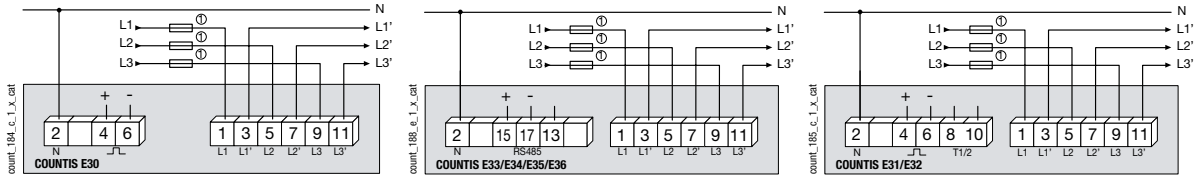
Type	Modular
Number of modules	7
Dimensions W x H x D	126 x 90 x 62.5 mm
Case protection index	IP20
Front protection rating	IP51
Display type	Backlit LCD display
Rigid cable cross-section	2.5 to 35 mm²
Flexible cable cross-section	2.5 to 35 mm²
Weight	490 g

Electrical characteristics

Current measurement	
Type	3-phase - Direct 100 A
Input consumption	0.5 VA max. per phase
Startup current (I_{st})	80 mA
Minimum current (I_{min})	0,5 A(1)
Transition current (I_{tr})	2 A(2)
Reference current (I_{ref})	20 A(3)
Permanent overload (I_{max})	100 A
Intermittent overload	3 000 A max for 10 ms
Voltage measurement	
Range of measurement	230 ... 400 V +/- 20 %
Consumption (VA)	2
Permanent 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
Type of optocoupler	IEC 62053-31 Class A (20 ... 30 VDC)
Fixed pulse weight	100 Wh
Pulse duration	100 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® RTU
JBUS/MODBUS® speed	4 800 … 38 400 bauds
M-BUS speed	300 … 9 600 bauds

(1) $I_{(min)} \leq 0.5 * Itr$
(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



1. 100 A gG / Am fuses max.

References

Type	COUNTIS E30 Reference	COUNTIS E31 Reference	COUNTIS E32 Reference	COUNTIS E33 Reference	COUNTIS E34 Reference	COUNTIS E35 Reference	COUNTIS E36 Reference
3-phase - Direct 100 A	4850 **3005**						
100 A direct - 3-phase - Dual tariff		4850 **3006**					
100 A direct - 3-phase - Dual tariff - MID			4850 **3007**				
100 A direct with JBUS/MODBUS communication via RS485 (1)				4850 **3012**			
100 A direct with JBUS/MODBUS communication via RS485 - MID(1)					4850 **3013**		
100 A direct with M-BUS communication via RS485 (1)						4850 **3025**	
100 A direct with M-BUS communication via RS485 - MID(1)							4850 **3026**

(1) 4 tariffs through RS485 communication.

Management software for COUNTIS

See page

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.