

NEW



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.

➤ Applications

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

The **COUNTIS E31** is a double tariff meter meant for dual tariff invoicing. For each tariff a partial counter is available.

In addition to the **COUNTIS E31** functions, the **COUNTIS E32** also offers MID certification.

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.

COUNTIS E32 and **E34** cannot be reset.

The **COUNTIS E33** 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

➔ 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
Short-time over-current	3000 A max for 10 ms

Voltage measurement

Range of measurement	230 ... 400 V +/- 20 %
Consumption on inrush (VA)	2
Permanente 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 weight of impulses	100 Wh
Impulse duration	100 ms

Operating conditions

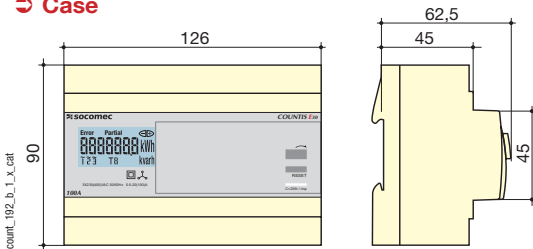
Operating temperature	-10 to 55 °C
Storage temperature	-20 to 70 °C
Relative humidity	85 %

Communication

Link	RS485
Type	2 ... 3 half duplex wires
Protocol	JBUS/MODBUS® en mode RTU
JBUS/MODBUS® speed	3800 ... 38400 bauds

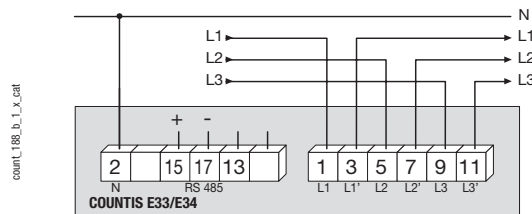
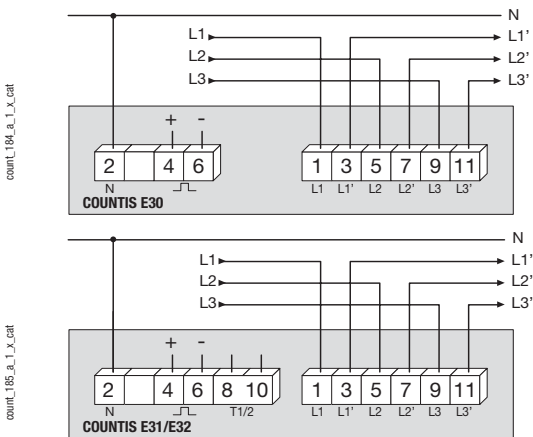
- (1) $I_{min} \leq 0.5 \cdot I_r$
 (2) The accuracy class is guaranteed between I_{tr} et I_{max} .
 (3) $I_{ref} = I_{(b)}$ (base current) = $10 \cdot I_{(b)}$ for direct connection COUNTIS.

➔ Case



Type	Modular
Number of optional 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 connection section	2.5 to 35 mm ²
Flexible cable connection section	2.5 to 35 mm ²
Weight	490 g

➔ Connection



➔ References

Type	COUNTIS E30 Reference	COUNTIS E31 Reference	COUNTIS E32 Reference	COUNTIS E33 Reference	COUNTIS E34 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				4850 3012	
100 A direct with JBUS/MODBUS communication via RS485 - MID					4850 3013

➔ 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.

