

# COUNTIS P3x

## Modular active-energy meters

three-phase - direct 100 A



count-p\_004.psd

### The solution for

- > Energy
- > Industry
- > Buildings

### Strong points

- > Compact design
- > MID certification
- > Versatile
- > Complete ecosystem for easy integration
- > Multi-interfaces

### Associated products

- > For a complete ecosystem, combine with a DIRIS Digiware M-70 or D-70 communication gateway.



DIRIS Digiware M-70 & D-70

### Conformity to standards

- > IEC 62053-21
- > IEC 62053-23
- > IEC 62053-31
- > IEC 62052-11
- > IEC 61010-1
- > EN 50470-1
- > EN 50470-3



### Function

**COUNTIS P3x** are three-phase modular electrical energy meters that enable viewing of the different energies consumed and produced, and also of powers and other measurements directly on the backlit LCD display. They enable direct connection up to 100 A and are suitable for use in sub-billing applications thanks to their MID certification.

### Advantages

#### Compact design

Only four modules wide for measuring three-phase loads up to 100 A to save space in electrical panels.

#### MID certification

The whole range complies with the MID directive to guarantee accuracy and reliability when metering, compulsory for energy billing applications. The "module B+D" certification attests that an external laboratory has verified the design and production process of these devices.

#### Versatile

- Operating temperature range from -40 to +70°C.
- Possibility of connection to a single-phase network with possible per-phase reading of energies.

#### Easy integration

COUNTIS P3x meters are natively compatible with the WEBVIEW energy monitoring software. Thanks to the automatic detection of the meters for quick configuration, this software is very easy to use. It is accessible via a DIRIS Digiware M-70 or D-70 gateway.

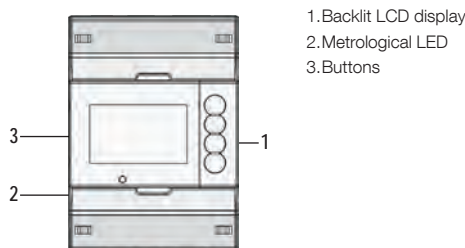
#### Multi-interfaces

COUNTIS P3x meters are equipped with:

- Two pulse outputs, enabling energy consumption information to be sent in the form of pulses.
- An RS485 (MODBUS RTU) or M-BUS communication output, which enables all meter data to be read remotely via the communication protocol.
- A digital input to manage 2 tariffs, or up to 4 tariffs via communication, to distinguish between consumption according to tariff periods.

## Front panel

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1. Backlit LCD display
2. Metrological LED
3. Buttons

## Electrical characteristics

### Current measurement (TRMS)

Type	Three-phase - direct 100 A
Max. consumption	3 VA
Transient overload	30 I <sub>max</sub> 10ms
Startup current (I <sub>st</sub> )	0.04 A
Base current (I <sub>b</sub> )	10 A
Minimum current (I <sub>min</sub> )	0.5 A
Maximum Current (I <sub>max</sub> )	100 A

### Voltage measurement (TRMS)

Overvoltage category	300 V CAT III - UC1 in accordance with IEC 61010-1
AC voltage (U <sub>n</sub> )	400 V, Overvoltage category III
Voltage range	320 - 480 VAC
Frequency	45-55Hz (MID), 45-65Hz (IEC)

Transient overvoltage withstand	4 kV 1 minute, 6kV 1.2 μs
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### Measurement accuracy

U, V / I / F / P, Q, S / PF	0.5% / 1% / 0.2% / 1% / 1% in accordance with IEC61557-12
Active energy	Class B in accordance with EN 50470-1/3
Reactive energy	Class 2 in accordance with IEC 62053-21
Tariff management	2 tariffs, via 0-230 V digital input 4 tariffs, via communication

### Power supply

Auxiliary power supply	Self-powered
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### Pulse output

Number	2
Type of optocoupler	5-27 VDC - 27 mA max.
Pulse duration	60 / 100 / 200 ms
Pulse output 1	Configurable: 0.01 / 0.1 / 1 / 10 / 100 kWh per pulse
Pulse output 2	fixed at 2.5 Wh / pulse

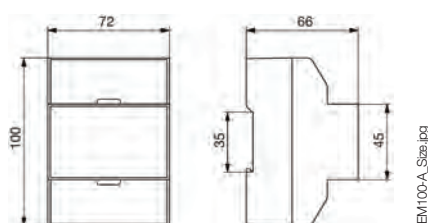
### Environment

Operating temperature	-40 to +70°C
Ambient storage temperature	-40 to +75°C
Relative humidity	0 to 95%, condensation-free

### Communication

	P34	P36
Link	RS485	EN 13757-2
Type	2-wire half duplex	2-wire half duplex
Protocol	Modbus RTU	M-BUS
Speed	2.4 / 4.8 / 9.6 / 19.2 / 38.4 kbps	300 / 600 / 1.2 k / 2.4 k / 4.8 k / 9.6 kbps

## Dimensions (mm)

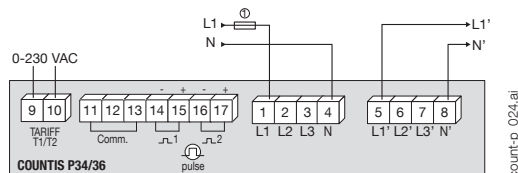


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Type	modular
Number of modules	4
Front degree of protection	IP 51
Case degree of protection	IP20
Dimensions W x H x D	72 x 100 x 66 mm
Display type	Backlit LCD display
Connection cross-section and torque for measuring terminals (A & V)	4...25 mm <sup>2</sup> / 2.5 Nm
Connection cross-section and torque for terminals S0, COM, tariff input	0.5...1.5 mm <sup>2</sup> / 0.2 Nm

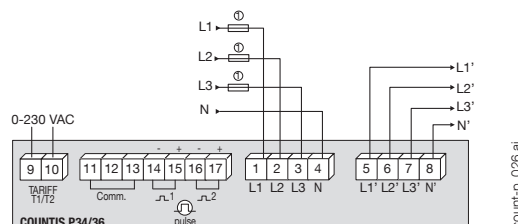
## Connections

### Single-phase 2-wire (1P+N)



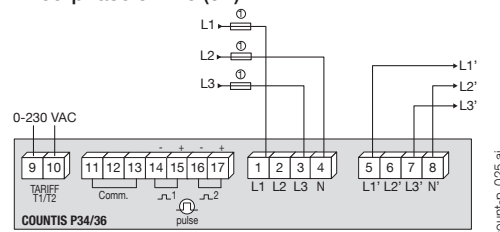
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### Three-phase 4-wire (3P+N)



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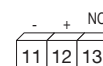
### Three-phase 3-wire (3P)



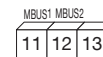
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**N - L:** network input.  
**N' - L':** network output.

**Communication terminals for RS485:**



**Communication terminals for M-bus:**



1. 100 A gG / 100 A class CC fuses.

## References

COUNTIS P3x		
P34	100 A direct three-phase - 2 pulse outputs + MODBUS RS485 communication + MID	4850 5034
P36	100 A direct three-phase - 2 pulse outputs + M-BUS communication + MID	4850 5036