

COUNTIS P0x

Modular active-energy meters
single-phase - direct 45 A



count-p_001.psd

The solution for

- > Energy
- > Industry
- > Buildings

Strong points

- > Compact design
- > MID certification
- > Extended temperature range
- > 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 P0x are single-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 45 A and are suitable for use in sub-billing applications thanks to their MID certification.

Advantages

Compact design

Only one module wide for measuring single-phase loads up to 45 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.

Wide temperature range

Meters in the COUNTIS P series can operate over a temperature range of -40 to +70°C.

Complete ecosystem for easy integration

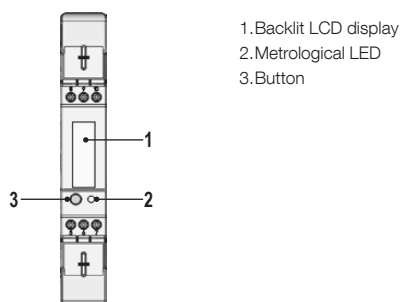
COUNTIS P0x meters are natively compatible with the WEBVIEW energy monitoring software. Thanks to the automatic detection of the meters for quick configuration, this software is very easy to use. It is accessible via a DIRIS Digiware M-70 or D-70 gateway.

Multi-interfaces

COUNTIS P0x meters are equipped with:

- Two pulse outputs, enabling energy consumption information to be emitted 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.
- Up to 4 managed tariffs, to distinguish between consumption according to tariff periods.

Front panel

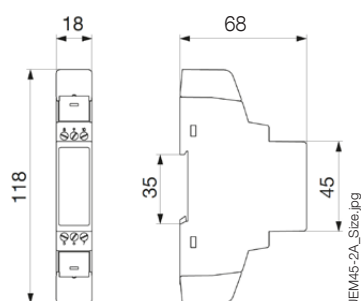


Electrical characteristics

Current measurement (TRMS)	
Type	Single-phase - direct 45 A
Max. consumption	3 VA
Transient overload	30 I _{max} 10ms
Startup current (I _{st})	0.02 A
Base current (I _b)	5 A
Minimum current (I _{min})	0.25 A
Maximum Current (I _{max})	45 A
Voltage measurement (TRMS)	
Overvoltage category	300 V CAT III - UC1 in accordance with IEC 61010-1
AC voltage (U _n)	230 V, Overvoltage category III
Voltage range	176 - 276 VAC
Frequency	45-55Hz (MID), 45-65Hz (IEC)

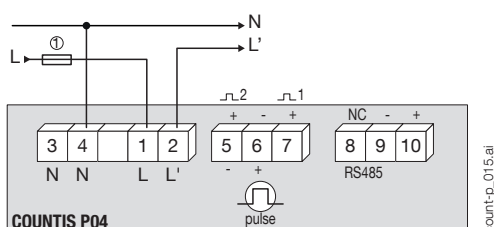
Transient overvoltage withstand	4 kV 1 minute, 6kV 1.2 μs	
Measurement accuracy		
U _i / I / F / P,Q,S / PF	0.5% / 1% / 0.2% / 1% / 1% according to IEC61557-12	
Active energy	Class B in accordance with EN 50470-1/3	
Reactive energy	Class 1 in accordance with IEC 62053-21	
Tariff management	Class 2 in accordance with IEC 62053-23	
4 tariffs, via communication		
Power supply		
Auxiliary power supply	Self-powered	
Pulse output		
Number	2	
Type of optocoupler	5-27 VDC - 27 mA max.	
Pulse duration	60 / 100 / 200 ms	
Pulse output 1	Configurable: 0.001 / 0.01 / 0.1 / 1 kWh per pulse	
Pulse output 2	fixed at 1 Wh / pulse	
Environment		
Operating temperature	-40 to +70°C	
Ambient storage temperature	-40 to +75°C	
Relative humidity	0 to 95%, condensation-free	
Communication		
	P04	P06
Link	RS485	EN 13757-2
Type	2-wires half duplex	2-wires half duplex
Protocol	Modbus RTU	M-BUS
Speed	2.4 / 4.8 / 9.6 / 19.2 / 38.4 kbps	300 / 600 / 1.2k / 2.4 k / 4.8 k / 9.6 kbps

Dimensions (mm)

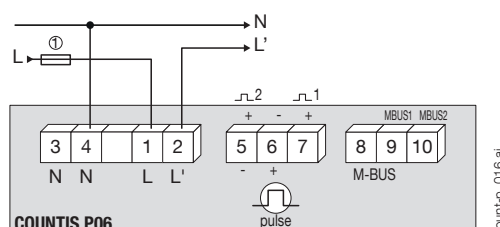


Type	Modular
Number of modules	1
Front degree of protection	IP 51
Case degree of protection	IP20
Dimensions W x H x D	18 x 118 x 68 mm
Display type	Backlit LCD display
Connection cross-section and torque for measuring terminals (A & V)	2.5...10 mm² / 1.5 Nm
Connection cross-section and torque for terminals S0, COM	0.5...1.5 mm² / 0.2 Nm

Connections



N - L: network input.
N' - L': network output.
1. 45 A gG / 45 A class CC fuses.



References

COUNTIS P0x		
P04	45 A direct single-phase - 2 pulse outputs + MODBUS RS485 communication + MID	4850 5004
P06	45 A direct single-phase - 2 pulse outputs + M-BUS communication + MID	4850 5006