

405-VT5A-C0B10

405-VT5A-C0B10, Three-phase energy meter indirect connection

Code: QBK30

> Type Consumer: 2
> Communications: RS-485 | Ethernet
> Class (Active/Reactive): C (0,5S)/1
> System: Three-phase
> Measure: Indirect
> Measurement Range (V): 3x57/100 ... 3x230/400
> Measurement Range (A): .../5
> Quadrants: 4
> Frequency (Hz): 50

Description

The CIRWATT-B505 is an indirect three-phase meter, recorder, and multi-tariff device, classified as Class C for active energy as per the European MID Directive (EN 50470) or Class 0.5s as per IEC-62053-22, and reactive energy Class 1 as per IEC-62053-23. It offers multiple communication options and expansion modules, allowing it to adapt to any type of industrial or tertiary sector installation.

Application

CIRWATT B-505 is ideal for medium-voltage supplies using external voltage and current transformers. Offering solutions for large industry with a power between 450 kW and 10 MW (Consumer type 2). Available in 2 quadrants for energy consumption or 4 quadrants for photovoltaic plants (energy generation and consumption).



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Specifications

AC power supply

Tolerance	80 % ... 115 % Un
Consumption	< 2 W; < 10 VA
Frequency	50 Hz
Nominal voltage	3 x 57 (100) V... 3 x 230 (400) V

Battery specification

Performance-guarantee	> 20 years @ 30 °C
Type	Lithium

Mechanical characteristics

Size (mm) width x height x depth	172 x 255 x 67 (mm)
Envelope	DIN 43859
Weight (kg)	1,12

Environmental characteristics

Protection class	IP51
Relative humidity (without condensation)	95 % max.
Storage temperature	-40 ... +85 °C
Working temperature	-25 ... +70 °C

Voltage measurement circuit

Connection	Asymmetrical
Consumption	< 2 W; 10 VA
Nominal frequency	50 Hz
Nominal voltage	3 x 57 (100) V... 3 x 230 (400) V

Current measurement circuit

Consumption	< 0,1 VA
Reference current (Iref)	.../ 5 A
Maximum current	10 A
Minimum current measurement	< 0,5 x Itr

Communication Network

Protocol	3 x 57 (100) V... 3 x 230 (400) V
Technology / Interface	Ethernet



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Optical communication interface

Hardware	IEC 62056-21
Protocol	REE (IEC 870-5-102)
Type	Serial;bi-directional

User interface

Resolution of the display	up to 8 digits (8 mm)
Display type	LCD

Memory

Memory capacity	Data: non-volatile memory, Setup and events: serial-flash
Write time	4000
Type	Serial flash

Standards

Standards	UNE-EN 50470-1 Electricity metering equipment (a.c.) -- Part 1: General requirements, tests and test conditions - Metering equipment -class indexes B-) UNE-EN 50470-3 Electricity metering equipment (a.c.) -- Part 3: Particular requirements - Static meters for active energy -class indexes B-) IEC 62052-11, IEC 62053-22 UNE-EN 55022 (Conducted Emissions: Class B, Radiated Emissions: Class B) UNE-EN 61000-4-2, UNE-EN 61000-4-3, UNE-EN 61000-4-4, UNE-EN 61000-4-5, UNE-EN 61000-4-6, UNE-EN 61000-4-8, UNE-EN 61000-4-11

Measurement accuracy

Reactive energy measurement (kvarh)	IEC 62053 (Class 1)
Active energy measurement (kWh)	EN 50470 (Class C)IEC 62053-22 (Class 0,5S)

Features / performance

Billing closures	12 locks per contract. Programable date and hour
Load curve	2 load curves, programmable integration time (1 ... 253 min)
Optional	Communications: RS-232 / RS-232 , RS-485 / RS-485, RS-232 / RS-485, RS-232 / Ethernet, R-485 / Ethernet.Expansion boards: No inputs / Auxiliar supply 24...48 Vcc / 6 digital outputs / 4 digital outputs and 2 digital inputs
Tariff programming	12 days 10 types of data 9 types of tariffs 30 public holidays 12 special days

Clock

Source	Temperature compensated oscillator
Accuracy (EN 61038)	< 0,5 s/day (23 °C)
Type	Gregorian calendar

Serial communication

Protocol	REE (IEC 870-5-102) o Modbus RTU



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Technology / Type	RS-485

CIRWATT B 505

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CODE	TYPE	Measurement Range (V)	Measurement Range (A)	Communications	Class (Active/Reactive)	System	Measure
CIRWATT B 505							
QBP1E	405-MT5A-90B10	3x63,5/110	.../5	RS-232 | RS-485	C (0,5S)/1	Three-phase	Indirect
QBP1F	405-MT5A-A0B10	3x63,5/110	.../5	RS-232 | Ethernet	C (0,5S)/1	Three-phase	Indirect
QBP1K	405-MT5A-C0B10	3x63,5/110	.../5	RS-485 | Ethernet	C (0,5S)/1	Three-phase	Indirect
QBP1I	405-MT5A-70B10	3x63,5/110	.../5	RS-232 | RS-232	C (0,5S)/1	Three-phase	Indirect
QBP1J	405-MT5A-80B10	3x63,5/110	.../5	RS-485 | RS-485	C (0,5S)/1	Three-phase	Indirect
QBK10	405-VT5A-90B10	3x57/100 ... 3x230/400	.../5	RS-232 | RS-485	C (0,5S)/1	Three-phase	Indirect
QBK20	405-VT5A-A0B10	3x57/100 ... 3x230/400	.../5	RS-232 | Ethernet	C (0,5S)/1	Three-phase	Indirect
QBK30	405-VT5A-C0B10	3x57/100 ... 3x230/400	.../5	RS-485 | Ethernet	C (0,5S)/1	Three-phase	Indirect
QBN00	405-VT7A-90B10	3x57/100 ... 3x230/400	.../ 1	RS-232 | RS-485	C (0,5S)/1	Three-phase	Indirect
QBN10	405-VT7A-A0B10	3x57/100 ... 3x230/400	.../ 1	RS-232 | Ethernet	C (0,5S)/1	Three-phase	Indirect
QBN30	405-VT7B-90B10	3x57/100 ... 3x230/400	.../ 1	RS-232 | RS-485	C (0,5S)/1	Three-phase	Indirect
QBK10T24	405-VT5A-90B10-TRMC400-1000-3.0.2	3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect

Please contact us for other configurations (Inputs, outputs and other communications)

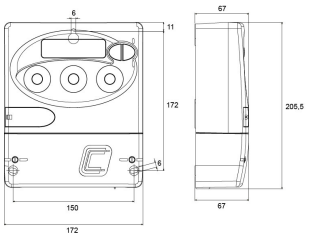


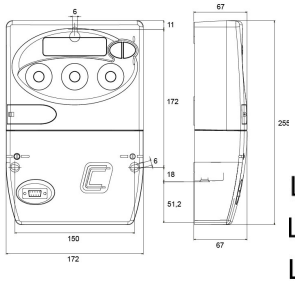
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Dimensions





Connections

