Circutor

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Page 1 of 5

410-QT5A-90B10-TRMC210-200-3.0.TD

410-QT5A-90B10-TRMC210-200-3.0.2, Three-phase energy meter indirect connection

Code: QB870T22

> Type Consumer: 3
> Communications: RS-232 | RS-485
> Class (Active/Reactive): B (1) / 2
> System: Three-phase
> Measure: Indirect
> Measurement Range (V): 3x230/400
> Measurement Range (A): .../5
> Quadrants: 4
> Frequency (Hz): 50

Description

CIRWATT-B410T is an indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21 and Class 2 reactive energy as per IEC-62053-23, with multiple communications options and expansion modules that allow it to be adapted to any type of industrial and tertiary sector installation.

Application

CIRWATT B-410T is perfect for low- and medium-voltage supplies using external current transformers. Offering solutions for a wide variety of installations such as: shopping centres, industries and high-consumption residential areas (Consumer type 3). Available in 2 quadrants for energy consumption or 4 quadrants for photovoltaic plants (energy generation and consumption).

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Page 2 of 5

410-QT5A-90B10-TRMC210-200-3.0.TD

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Code: QB870T22

Specifications

AC power supply

Tolerance	80 % ... 115 % Un
Consumption	< 2 W; < 10 VA
Frequency	50 / 60 Hz
Nominal voltage	3 x 230 (400) V

Battery specification

Performance-guarantee	> 20 years @ 30 ℃
Type	Lithium

Mechanical characteristics

Size (mm) width x height x depth	172 x 255 x 67 (mm)
Envelope	DIN 43859
Weight (kg)	1,9

Environmental characteristics

Relative humidity (without condensation)	95 % max.
Storage temperature	-40 ... +85 ℃
Working temperature	-40 ... +70 ℃

Voltage measurement circuit

Connection	Asymmetrical
Consumption	< 2 W; 10 VA
Nominal frequency	50 / 60 Hz
Nominal voltage	3x230/400 V

Current measurement circuit

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

Optical communication interface

Hardware	IEC 62056-21
Protocol	REE, based on IEC 870-5-136
Type	Serial;bi-directional

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Page 3 of 5

410-QT5A-90B10-TRMC210-200-3.0.TD

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Code: QB870T22

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

PLC

Hardware	CENELEC A or CENELEC B
Protocol	CirPLC & PEP (PLC Encapsulated Protocol)
Modulation system	DSCK with repeater system

Measurement accuracy

Reactive energy measurement (kvarh)	IEC 62053-23 (Class 2)
Active energy measurement (kWh)	EN 50470 (Class B) IEC 62053-21 (Class 1)

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 / PLC ,RS-485 / PLC, RS-232 / RS-232 , RS-485 / RS-485, RS-232 / RS-485, RS-232 / Ethernet, R-485 / Ethernet. Expansion boards: No inputs / outputs, 4 relay outputs (Rate Indicator), 2 relay inputs / 4 pulse outputs, 4 pulse inputs, Differential current measurement, 2 relay outputs / 2 pulse outputs, / 2 pulse 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 ℃)
Type	Gregorian calendar

Serial communication

Protocol	REE, basado en IEC 870-5-102
Technology / Type	RS-232|RS-485

CIRWATT B 410T

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Page 4 of 5

410-QT5A-90B10-TRMC210-200-3.0.TD

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Code: QB870T22

CODE	TYPE	Measurement Range (V)	Measurement Range (A)	Communications	Class (Active/Reactive)	System	Measure
CIRWATT B 410T							
QB860	410-QT5A-70B10	3x230/400	.../5	RS-232 | RS-232	B (1) / 2	Three-phase	Indirect
CIRWATT B 505							
QBN40	410-VT7B-A0B10	3x57/100 ... 3x230/400	.../1	RS-232 | Ethernet	C (0,5S)/1	Three-phase	Indirect
CIRWATT B 410T							
QB8A0	410-QT5A-80B10	3x230/400	.../5	RS-485 | RS-485	B (1) / 2	Three-phase	Indirect
QB870	410-QT5A-90B10	3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB870T21	410-QT5A-90B10-TRMC210-100-3.0.TD	3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB870T22	410-QT5A-90B10-TRMC210-200-3.0.TD	3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB870T23	410-QT5A-90B10-TRMC210-500-3.0.TD	3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB880	410-QT5A-A0B10	3x230/400	.../5	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QB890	410-QT5A-C0B10	3x230/400	.../5	RS-485 | Ethernet	B (1) / 2	Three-phase	Indirect
QBJ10	410-VT5A-90B10	3x57/100 ... 3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBG60	410-NT5A-70B10	3x127/220	.../5	RS-232 | RS-232	B (1) / 2	Three-phase	Indirect
QBJ20	410-VT5A-A0B10	3x57/100 ... 3x230/400	.../5	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBG70	410-NT5A-90B10	3x127/220	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QB8D0	410-QT5B-90B10	3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBGA0	410-NT5A-80B10	3x127/220	.../5	RS-485 | RS-485	B (1) / 2	Three-phase	Indirect
QBG80	410-NT5A-A0B10	3x127/220	.../5	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QB8E0	410-QT5B-A0B10	3x230/400	.../5	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBG90	410-NT5A-C0B10	3x127/220	.../5	RS-485 | Ethernet	B (1) / 2	Three-phase	Indirect
QBJ60	410-VT5B-90B10	3x57/100 ... 3x230/400	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBH20	410-MT5A-70B10	3x63,5/110	.../5	RS-232 | RS-232	B (1) / 2	Three-phase	Indirect
QBJ70	410-VT5B-A0B10	3x57/100 ... 3x230/400	.../5	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBH30	410-MT5A-90B10	3x63,5/110	.../5	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBN0B	410-QT7A-90B10	3x230/400	.../1	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBH61	410-MT5A-80B10	3x63,5/110	.../5	RS-485 | RS-485	B (1) / 2	Three-phase	Indirect
QBH40	410-MT5A-A0B10	3x63,5/110	.../5	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBN1B	410-QT7A-A0B10	3x230/400	.../1	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBH50	410-MT5A-C0B10	3x63,5/110	.../5	RS-485 | Ethernet	B (1) / 2	Three-phase	Indirect
QBN0J	410-VT7A-90B10	3x57/100 ... 3x230/400	.../1	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBN1J	410-VT7A-A0B10	3x57/100 ... 3x230/400	.../1	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBN2B	410-QT7B-90B10	3x230/400	.../1	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBN3B	410-QT7B-A0B10	3x230/400	.../1	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect
QBN2J	410-VT7B-90B10	3x57/100 ... 3x230/400	.../1	RS-232 | RS-485	B (1) / 2	Three-phase	Indirect
QBN3J	410-VT7B-A0B10	3x57/100 ... 3x230/400	.../1	RS-232 | Ethernet	B (1) / 2	Three-phase	Indirect

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

Creation date: 26/07/2025 - CIRCUTOR, SAU reserves the right to make technical changes or modify the content/images of this document without prior notice, in order to improve its reliability, functionality, design or for other reasons.
It accepts no liability for any errors, inaccuracies or possible lack of information in this document.

Page 4 of 5

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Page 5 of 5

410-QT5A-90B10-TRMC210-200-3.0.TD

Indirect multi-rate three-phase meter and logger, Class B in active energy as per the European MID Directive (EN 50470), or Class 1 as per IEC-62053-21

Code: QB870T22

Dimensions