

CIRWATT B 410T

Standard three-phase meter with indirect connection



Description

CIRCUATOR's CIRWATT B 410T is a standard three phase indirect connection meter, as a result of all the technological developments which is experiencing the current market. These changes have created new needs and requirements both in terms of more flexible rates, new communications systems and a price optimization.

Application

CIRWATT B 410T is suitable to be installed in LV and MV networks being the best solution or installations with high and medium consumptions like shopping malls, industries and high consumption households. Providing to the market a robust and competitive meter fully complying with the new European Directive MID (EN 50470) and all the relevant IEC's.

Features

Power supply	
Nominal voltage	3 x 230 (400) V - 3 x 127 (230) V - 3 x 63,5 (110) V
Tolerance	80% ... 115% U_n
Consumption	< 2 W; < 10 V·A
Frequency	50 or 60 Hz
Voltage measurement	
Connection	Asymmetrical
Reference voltage	3 x 230 (400) V - 3 x 127 (230) V - 3 x 63,5 (110) V *
Frequency	50 or 60 Hz
Voltage consumption of the circuit	< 2 W; 10 V·A
Current measurement	
Nominal reference current $I_{ref} (I_{max})$	1 (2) A or 1 (6) A or 2,5 (10) A or 5 (10) A *
Start-up current I_{st}	< 0,04 x I_{tr}
Minimum current I_{min}	< 0,2 x I_{tr}
Current consumption of the circuit	< 0,1 V·A
Accuracy class	
Accuracy measured in active energy	EN 50470 (Class B) - IEC 62053-21 (Class 1)
Accuracy measured in reactive energy	IEC 62053-23 (Class 2)
Memory	
Data	Non-volatile memory
Setup and events	Serial flash
Battery	
Type	Lithium
Working Life	> 20 years @ 30 °C
Clock	
Type	Gregorian calendar
Source	Temperature compensated oscillator
Accuracy (EN 61038)	< 0.5 s / day at 23 °C
Environmental influence	
Operating temperature range	-40 ... +70 °C
Storage temperature range	-40 ... +85 °C
Temperature coefficient	< 15 ppm/K
Humidity	95 % máx.
Insulation	
Insulating voltage	4 kV a 50 Hz during 1 min
Impulse voltage 1.2/50 μ s - IEC 62052-11	8 kV
Protection degree (IEC 62052-11)	II
Display	
Type	LCD
Number of data digits	up to 8
Size of data digits	8 mm
Display data reading when there is no voltage.	Yes

* Request for other configurations

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**Features**

Optical communications interface	
Type	Serial, two-directional
Hardware	IEC 62056-21
Protocol	REE, based on IEC 870-5-102
Tampering detector	
Detection	Opening the terminal cover
Type	Micro-switch
Function	Detects intruders when there is no voltage.
Construction features	
Connection	Asymmetrical
External dimensions	DIN 43857
Enclosing features	DIN 43859
IP Degree (IEC 60529)	IP 51
PLC	
Modulation system	DSCK with repeater system
Hardware	CENELEC A or CENELEC B
Protocol	CirPLC and PEP (PLC Encapsulated Protocol)

Rate programming

Number of days	12
Types of days	10
Contracts	3
Number of Tariffs	9
Discrimination	1 hour
Holidays/festivities	30
Special days	12

Load curve

Number of load curves	2
Integration time	Programmable: 1 ... 253 min
Recording depth	4000

Events

Number of events	200
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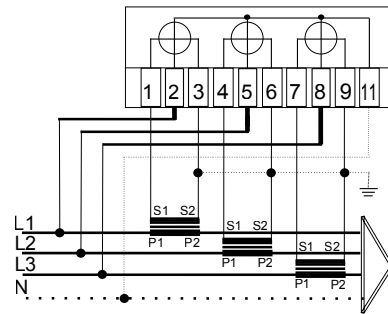
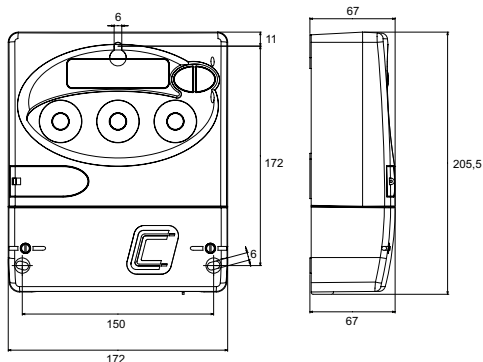
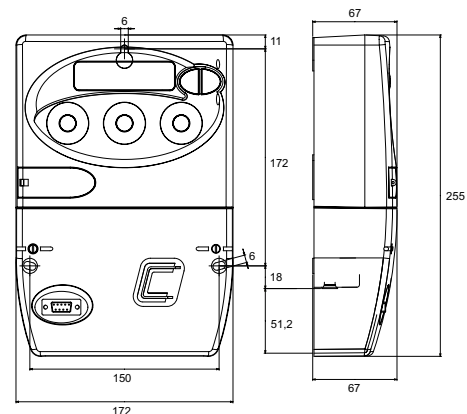
Billing closures

Number of locks	12, per contract
Type	Disabled / Programmable date and hour

Other features

Communications *	Expansion cards *
RS-232 / PLC	Without inputs / outputs
RS-485 / PLC	4 relay outputs (Tariff indicator)
RS-232 / RS-232	2 relay outputs / 4 impulse inputs
RS-485 / RS-485	4 pulse inputs
RS-232 / RS-485	Earth leakage measurement
RS-232 / Ethernet	2 relay outputs / 2 impulse outputs / 2 impulse inputs
R-485 / Ethernet	

* Request for other configurations

Connections**CIRWATT B 410T indirect connection****Dimensions****Terminal cover option****Wire cover option**

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References

Class (Active/ Reactive)	Quadrants	Frequency (Hz)	Measuring range V	Measuring range A	Communication COM1	Communication COM2	Type	Code
B / 2	2	50 or 60 Hz	3x230/400 V	.../5A	RS232	RS232	CIRWATT B 410-QT5A-70B00	QB660
B / 2	2	50 or 60 Hz	3x230/400 V	.../5A	RS485	RS485	CIRWATT B 410-QT5A-80B00	QB6A0
B / 2	2	50 or 60 Hz	3x230/400 V	.../5A	RS232	RS485	CIRWATT B 410-QT5A-90B00	QB670
B / 2	2	50 or 60 Hz	3x230/400 V	.../5A	RS232	ETHERNET	CIRWATT B 410-QT5A-A0B00	QB680
B / 2	2	50 or 60 Hz	3x230/400 V	.../5A	RS485	ETHERNET	CIRWATT B 410-QT5A-D0B00	QB690
B / 2	2	50 or 60 Hz	3x127/220 V	.../5A	RS232	RS232	CIRWATT B 410-NT5A-70B00	QBF60
B / 2	2	50 or 60 Hz	3x127/220 V	.../5A	RS485	RS485	CIRWATT B 410-NT5A-80B00	QBFA0
B / 2	2	50 or 60 Hz	3x127/220 V	.../5A	RS232	RS485	CIRWATT B 410-NT5A-90B00	QBF70
B / 2	2	50 or 60 Hz	3x127/220 V	.../5A	RS232	ETHERNET	CIRWATT B 410-NT5A-A0B00	QBF80
B / 2	2	50 or 60 Hz	3x127/220 V	.../5A	RS485	ETHERNET	CIRWATT B 410-NT5A-D0B00	QBF90