

Circutor

Communications interface

CEM M-ETH



INSTRUCTION MANUAL

(M060B01-03-22A)



SAFETY PRECAUTIONS

Follow the warnings described in this manual with the symbols shown below.



DANGER

Warns of a risk, which could result in personal injury or material damage.



ATTENTION

Indicates that special attention should be paid to a specific point.

If you must handle the unit for its installation, start-up or maintenance, the following should be taken into consideration:



Incorrect handling or installation of the device may result in injury to personnel as well as damage to the device. In particular, handling with voltages applied may result in electric shock, which may cause death or serious injury to personnel. Defective installation or maintenance may also lead to the risk of fire.

Read the manual carefully prior to connecting the device. Follow all installation and maintenance instructions throughout the device's working life. Pay special attention to the installation standards of the National Electrical Code.



Refer to the instruction manual before using the device

In this manual, if the instructions marked with this symbol are not respected or carried out correctly, it can result in injury or damage to the device and /or installations.

CIRCUTOR S.A.U. reserves the right to modify features or the product manual without prior notification.

DISCLAIMER

CIRCUTOR S.A.U. reserves the right to make modifications to the device or the unit specifications set out in this instruction manual without prior notice.

CIRCUTOR S.A.U. on its web site, supplies its customers with the latest versions of the device specifications and the most updated manuals.

www.circutor.com



CIRCUTOR S.A.U. recommends using the original cables and accessories that are supplied with the device.

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Note: The images of the devices are solely for the purpose of illustration and may differ from the original unit.

REVISION LOG

Table 1: Revision log.

Date	Revision	Description
11/14	M060B01-03-14A	Initial Version
04/21	M060B01-03-21A	Circuitron logo change
06/21	M060B01-03-21B	Changes in the following sections: 5.
11/22	M060B01-03-22A	Changes in the following sections: 4.5.

1.- VERIFICATION UPON RECEPTION

Check the following points upon receiving the device:

- a) The device meets the specifications described in your order.
- b) The device has not suffered any damage during transport.
- c) Perform an external visual inspection of the device prior to switching it on.
- d) Check that it has been delivered with the following:
 - An installation guide.



If any problem is noticed upon reception, immediately contact the transport company and/or **CIRCUTOR's** after-sales service.

2.- PRODUCT DESCRIPTION

The **CEM M-ETH** optical-electric interface converts the optical service port of any device of the **CEM** range into an Ethernet port with **MODBUS/TCP** protocol.



The unit features:

- 3 indicator **LEDs**: **POWER**, **LINK** and **LINK/ACT**.

The device is installed on 2-step DIN rails, on the left of any device of the **CEM** range.

3.- DEVICE INSTALLATION

3.1.- PRELIMINARY RECOMMENDATIONS



In order to use the device safely, it is critical that the individuals who handle it follow the safety measures set out in the standards of the country where it is being used, use the necessary personal protective equipment and pay attention to the various warnings indicated in this instruction manual.

The **CEM M-ETH** device must be installed by authorised and qualified staff.

The power supply plug must be disconnected before handling, altering the connections or replacing the device. It is dangerous to handle the unit while it is powered.

Also, it is critical to keep the cables in perfect condition in order to avoid accidents, personal injury and damage to installations.

The manufacturer of the device is not responsible for any damage resulting from failure by the user or installer to observe the warnings and/or recommendations set out in this manual, nor for damage resulting from the use of non-original products or accessories or those made by other manufacturers.

If an anomaly or malfunction is detected in the device, do not use the device to take any measurements.

Inspect the work area before taking any measurements. Do not take measurements in dangerous areas or where there is a risk of explosion.



Disconnect the device from the power supply (unit and measuring system power supply) before maintaining, repairing or handling the device's connections. Please contact the after-sales service if you suspect that there is an operational fault in the device.

3.2.- INSTALLATION

On the side of the device are all of the indications adjusted to the CEI 62052-11 standard.

The device is installed on a DIN rail.

Before connecting the device, you must couple it to a **CEM** energy meter as shown in **Figure 1** and **Figure 2**.

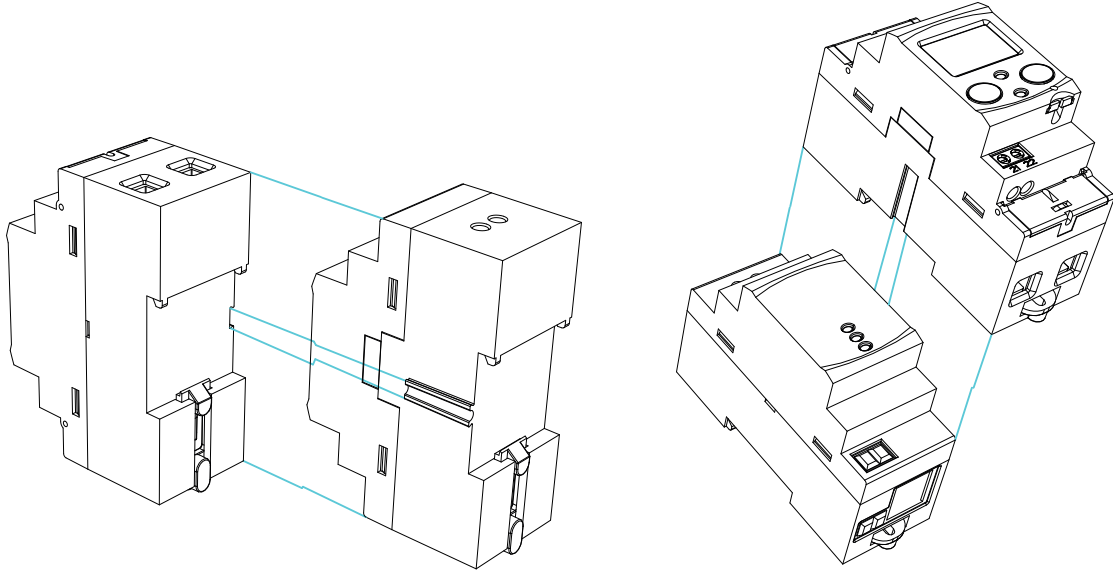


Figure 1: Coupling the CEM M-ETH to a CEM energy meter.

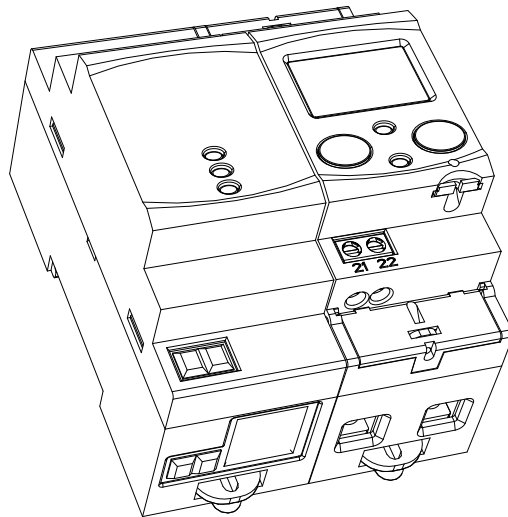


Figure 2: Coupled CEM M-ETH and CEM.



Terminals, opening covers or removing elements can expose parts that are hazardous to the touch while the unit is powered. Do not use the device until it is fully installed.

The device must be connected to a power circuit that is protected with gL fuses (IEC 60269) or M fuses, with a rating of 0.5 to 2 A. It must be fitted with a circuit breaker switch or equivalent device for disconnecting the device from the power supply mains.

The RCCB or equivalent device must be in the immediate vicinity of the device and must be easily accessible.

The power circuit is connected with a cable with a section measuring up to 2.5 mm².



The device's operating temperature is between -25°C and +70°C; always use connection cables that can withstand these temperatures.

3.3.- DEVICE TERMINALS

Table 2:List of CEM M-ETH terminals

Device terminals
1: Auxiliary power supply.
2: Auxiliary power supply.
3: Ethernet.

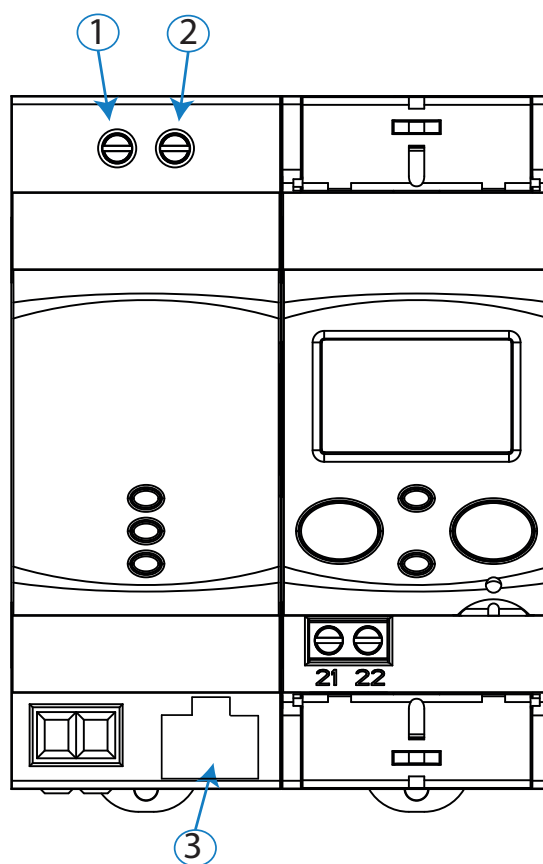


Figure 3:CEM M-ETH terminals.

3.4.- CONNECTION DIAGRAM

The connection between the **CEM M-ETH** and the Ethernet network must be made with a twisted pair cable (100Base-TX: 100Mbit/s on two pairs of wires of Category 5 or higher). The segment length of the 100Base-T, 10BaseT and 1000Base-T cables is limited to 100 m.

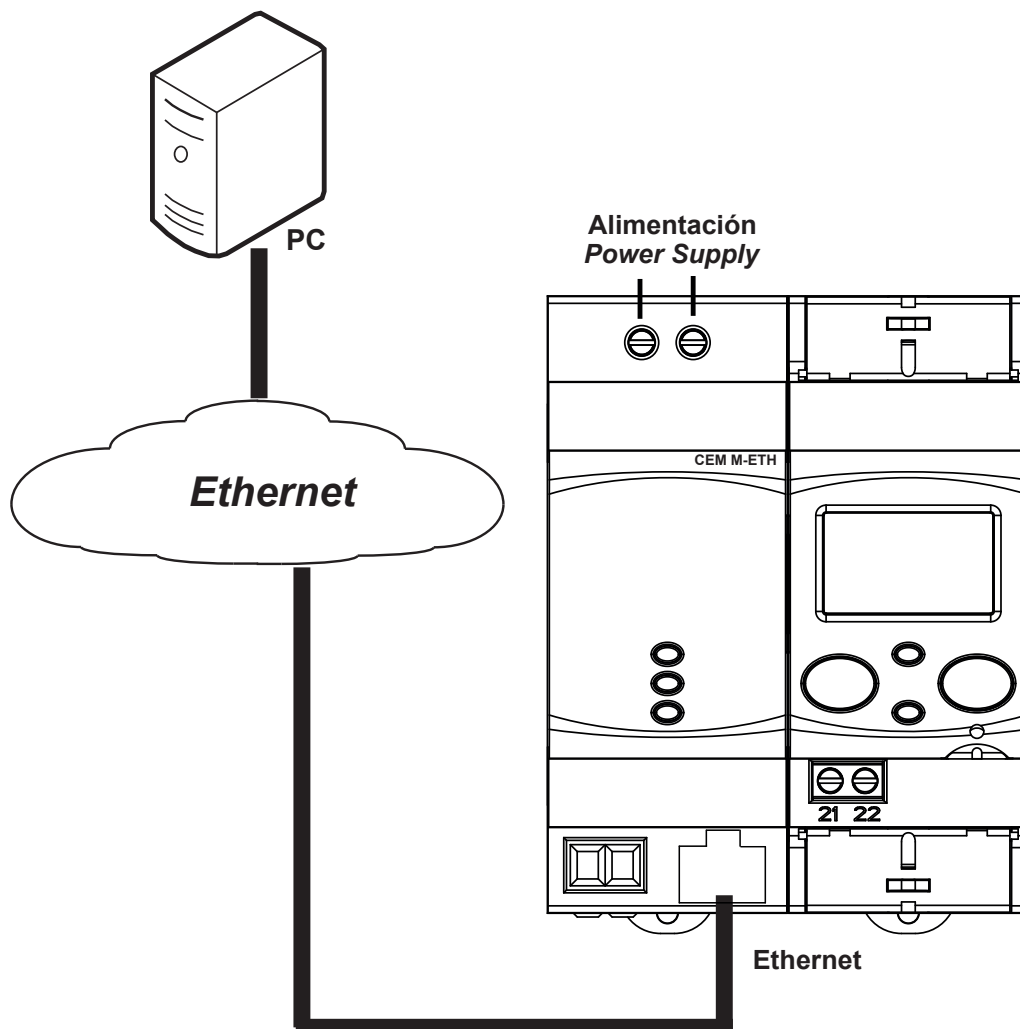


Figure 4: CEM M-ETH connection diagram

4.- OPERATION

The **CEM M-ETH** is designed to be used as a Ethernet port for any device in the **CEM** family, using the mechanical coupling next to the optical port.

4.1.- OPERATING PRINCIPLE

The **CEM M-ETH** is an optional accessory for electrical energy meters from the **CEM** range that are mounted on DIN rails.

The **CEM M-ETH** provides **CEM** units with Ethernet communications with the **MODBUS/TCP** protocol.

Once the device is coupled to the **CEM** energy meter (See "**3.2.- INSTALLATION**") the **LINK** LED turns green to let the user know that the link has been made correctly.

From this point onward, the new **CEM** energy meter + **CEM M-ETH** assembly functions as a single device.

4.2.- LED INDICATORS

The device has three indicator LEDs:

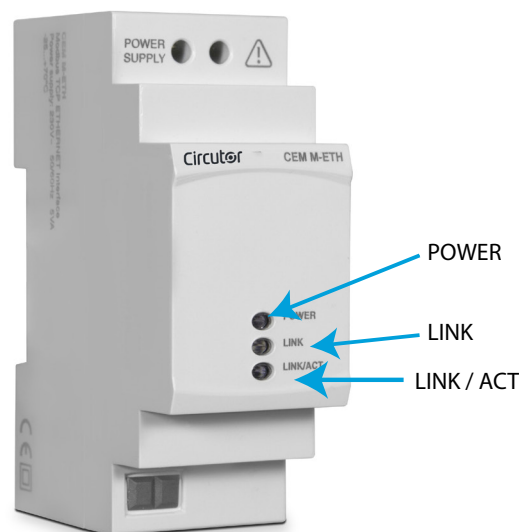


Figure 5:CEM M-ETH indicator LEDs

- ✓ **POWER** LED: Indicates that the device is connected to a power supply.
- ✓ **LINK** LED: Indicates the status of the link with the **CEM** unit. (Table 3)

Table 3: LINK LED, colour codes

LINK LED	
Colour	Status
Flashing red	Device not linked
Steady green	Device linked

✓ LED LINK/ACT, indicates the state of the Ethernet connection, Table 4.

Table 4: LED LINK/ACT

LED LINK/ ACT	
Colour	Status
On	Ethernet link
Off	No Ethernet link
Flashing	Activity on this port

4.3.- OPTICAL COMMUNICATIONS PORT

The device has an optical serial communications port on its right side, in accordance with the UNE EN 62056-21:2003 standard, in order to communicate with other devices in the CEM family.

4.4- RS-485 COMMUNICATIONS

4.4.1.- MODBUS/TCP PROTOCOL

The MODBUS/TPC protocol is the MODBUS RTU protocol with a TCP interface that runs on Ethernet.

MODBUS/TCP uses TCP/IP and Ethernet to manage the data of MODBUS messages between compatible devices.

The MODBUS/TCP protocol embeds a standard MODBUS data frame in a TCP frame without the Modbus checksum, as shown in the diagram in the figure.

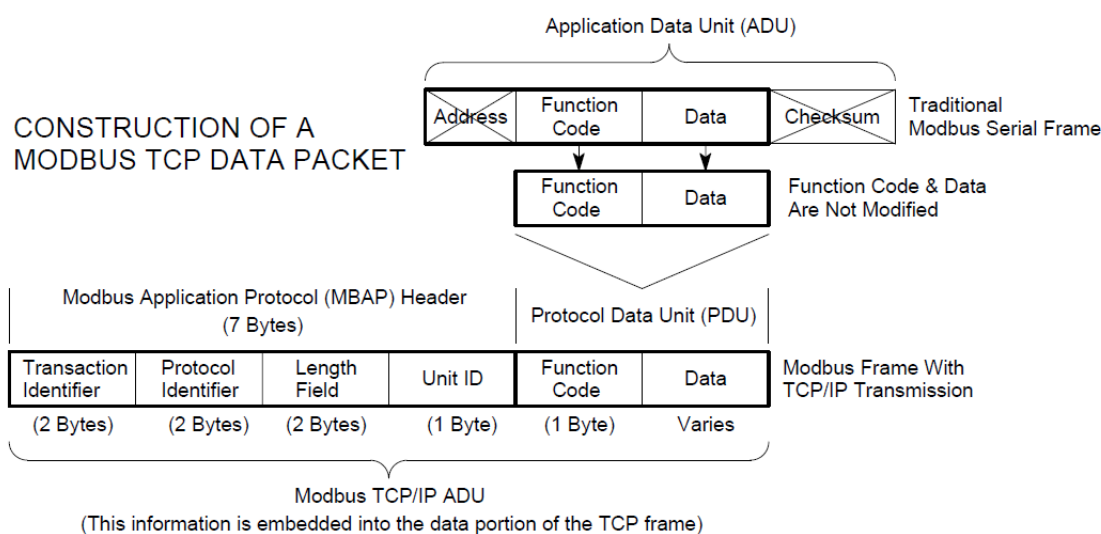


Figure 6: Construction of a MODBUS/TCP data frame.

Table 5 shows the format of the **MODBUS/TCP** frame.

Table 5: MODBUS/TCP frame format

Name	Length	Function
Transaction identifier	2	For message synchronisation between the server and client.
Protocol identifier	2	Value 0 for MODBUS/TCP
Field length	2	Number of bytes remaining in the frame
Unit identifier	1	Peripheral number
Function code	1	Modbus function number
Data bytes	n	Response or command data

The **MODBUS** functions implemented in the device are:

Functions 03 and 04: Reading of logs.

Function 10: Writing of multiple logs.

4.4.2.- VARIABLES MODBUS

All **MODBUS** map addresses are hexadecimal.

4.4.2.1.- Configuration variables

The **Read** and **Write** functions are implemented for these variables.

Table 6: Modbus configuration variables CEM M-RS485.

Description	Address	Size	Valid data range	Default value
Impulse output type	0x0080	16 bits	0: Active energy, 1: Reactive energy	0
Impulse output weight	0x0081	16 bits	Wh/impulse 0 ... 99999	-
Cost per kWh	0x00B0	32 bits	0.0000 ... 9999.9999 with 4 decimal places of resolution	-
KgCO ₂	0x00B2	32 bits	0.0000 ... 9.0000 with 4 decimal places of resolution	-

Note: Some **MODBUS** variables may not be available depending on the **CEM** energy meter coupled to the **CEM M-ETH**. See "4.4.2.7.- Available addresses by device".

4.4.2.2.- Energy

The **Read** function is implemented for these variables.

Table 7: Modbus variables: Energy

Description	Address	Size	Units
Total values			
Imported active energy	0x0000	32 bits	Wh
Exported active energy	0x0002	32 bits	Wh
Q1 reactive energy	0x0004	32 bits	varh
Q2 reactive energy	0x0006	32 bits	varh
Q3 reactive energy	0x0008	32 bits	varh
Q4 reactive energy	0x000A	32 bits	varh
Partial values			
Partial imported active energy	0x0030	32 bits	Wh
Partial exported active energy	0x0032	32 bits	Wh
Q1 partial reactive energy	0x0034	32 bits	varh
Q2 partial reactive energy	0x0036	32 bits	varh
Q3 partial reactive energy	0x0038	32 bits	varh
Q4 partial reactive energy	0x003A	32 bits	varh

Note: Some **MODBUS** variables may not be available depending on the **CEM** energy meter coupled to the **CEM M-ETH**. See "**4.4.2.7.- Available addresses by device**".

4.4.2.3.- Operating time, cost and KgCO₂ atmospheric emissions

The **Read** function is implemented for these variables.

Table 8: Modbus variables: Operating time, costs and KgCO₂

Description	Address	Size	Units
Cost of the partial consumption	0x00C0	32 bits	-
KgCO ₂ atmospheric emissions of the partial consumption	0x00C2	32 bits	-
Hours of partial operation	0x00C4	32 bits	(1 decimal place)
Hours of total operation	0x00C6	32 bits	(1 decimal place)

Note: Some **MODBUS** variables may not be available depending on the **CEM** energy meter coupled to the **CEM M-ETH**. See "**4.4.2.7.- Available addresses by device**".

4.4.2.4.- Instantaneous values

The **Read** function is implemented for these variables.

Table 9: Modbus variables: Instantaneous values.

Description	Address	Size	Units
Phase 1 voltage	0x0732	32 bits	V (1 primary decimal place)
Phase 2 voltage	0x0734	32 bits	V (1 primary decimal place)
Phase 3 voltage	0x0736	32 bits	V (1 primary decimal place)
Phase 1 current	0x0738	32 bits	A (2 primary decimal places)
Phase 2 current	0x073A	32 bits	A (2 primary decimal places)
Phase 3 current	0x073C	32 bits	A (2 primary decimal places)
Phase 1 cos φ	0x073E	32 bits	2 decimal places

Table 9 (Continuation): Modbus variables: Instantaneous values.

Description	Address	Size	Units
Phase 2 cos φ	0x0740	32 bits	2 decimal places
Phase 3 cos φ	0x0742	32 bits	2 decimal places
Phase 1 active power	0x0746	32 bits	W
Phase 2 active power	0x0748	32 bits	W
Phase 3 active power	0x074A	32 bits	W
Total active power	0x074C	32 bits	W
Phase 1 reactive power	0x074E	32 bits	var
Phase 2 reactive power	0x0750	32 bits	var
Phase 3 reactive power	0x0752	32 bits	var
Total reactive power	0x0754	32 bits	var
Phase 1 apparent power	0x0756	32 bits	VA
Phase 2 apparent power	0x0758	32 bits	VA
Phase 3 apparent power	0x075A	32 bits	VA
Total apparent power	0x075C	32 bits	VA

Note: Some **MODBUS** variables may not be available depending on the **CEM** energy meter coupled to the **CEM M-ETH**. See "4.4.2.7.- Available addresses by device".

4.4.2.5.- Other parameters

The **Read** function is implemented for these variables.

Table 10: Modbus variables: Other parameters.

Description	Address	Size	Units
Energy meter model ¹⁾	0xF010	6x16 bits	12 bytes in ASCII format
Serial no	0x2710	32 bits	-
Transformation ratios			
Voltage primary	0x044C	32 bits	V (1 decimal place)
Voltage secondary	0x044E	32 bits	V (1 decimal place)
Current primary	0x0450	32 bits	A (1 decimal place)
Current secondary	0x0452	32 bits	A (1 decimal place)
Energy meter firmware version			
Higher firmware version	0x0050	16 bits	-
Lower firmware version	0x0051	16 bits	-
Revised firmware version	0x0052	16 bits	-
Communications module firmware version			
Higher firmware version	0x0578	16 bits	-
Lower firmware version	0x0579	16 bits	-
Revised firmware version	0x057A	16 bits	-

Note: Some **MODBUS** variables may not be available depending on the **CEM** energy meter coupled to the **CEM M-ETH**. See "4.4.2.7.- Available addresses by device".

⁽¹⁾ Energy meter model description table, **Table 11**.

Table 11: Energy meter model description table.

Options		C10	C20	C30	bytes in ASCII format
Connection mode	2 wires	✓			2
	4 wires		✓	✓	4
Accuracy	Class B active / Does not measure reactive energy	✓	✓	✓	10
	Class B active / Class 2.0 reactive	✓	✓	✓	12
Measurement voltage	1x230	✓			E
	1x127	✓			B
	3x127/220 ... 3x230/400 V		✓		U
	3x127/220 V		✓	✓	N
	3x230/400 V		✓	✓	Q
	3x57/100 ... 3x230/400 V			✓	V
	3x57/100 V			✓	L
	3x63.5/110 V			✓	M
Current measurement	Shunt 10(60) A	✓			S4
	Shunt 5(65) A	✓			S7
	Direct 10(60)A		✓		D4
	Direct 5(65)A		✓		D7
	Transformer 5(10) A			✓	T5
	Transformer 5(6) A			✓	T6
Frequency	50Hz	✓	✓	✓	A
	60 Hz	✓	✓	✓	B
	Automatic (50/60Hz)	✓	✓	✓	C
Communications	Without communications	✓	✓	✓	0
	Side optical service port	✓	✓	✓	1
Expansion	Without inputs/outputs	✓	✓	✓	0
	Input/Output (Optocoupler)	✓	✓	✓	1
Model	Box for assembly on DIN rail	✓	✓	✓	E
Number of quadrants	2 quadrants	✓	✓	✓	0
	4 quadrants	✓	✓	✓	1
	Storage in both directions	✓	✓	✓	2
Additional features	No special features	✓	✓	✓	0

4.4.2.6.- Partial energy reset

The 0x05 function is implemented for this variable.

Table 12: Modbus variables: Energy

Description	Address	Activation
Partial energy reset	0x0800	0xFF00

4.4.2.7.- Available addresses by device

Table 13: Modbus variables: Available addresses by device.

Address	C10	C20	C30	Description
0x03E8	✓	✓	✓	Modbus Address
0x03E9	✓	✓	✓	Transmission speed
0x03EA	✓	✓	✓	Communications configuration
0x0080	✓	✓	✓	Impulse output type
0x0081	✓	✓	✓	Impulse output weight
0x00B0	✓	✓	✓	Cost per kWh
0x00B2	✓	✓	✓	KgCO ₂
0x0000	✓	✓	✓	Imported active energy
0x0002	✓	✓	✓	Exported active energy
0x0004	✓	✓	✓	Q1 reactive energy
0x0006	✓	✓	✓	Q2 reactive energy
0x0008	✓	✓	✓	Q3 reactive energy
0x000A	✓	✓	✓	Q4 Reactive energy
0x0030	✓	✓	✓	Partial imported active energy
0x0032	✓	✓	✓	Partial exported active energy
0x0034	✓	✓	✓	Q1 partial reactive energy
0x0036	✓	✓	✓	Q2 partial reactive energy
0x0038	✓	✓	✓	Q3 partial reactive energy
0x003A	✓	✓	✓	Q4 partial reactive energy
0x00C0	✓	✓	✓	Cost of the partial consumption
0x00C2	✓	✓	✓	KgCO ₂ atmospheric emissions of the partial consumption
0x00C4	✓	✓	✓	Partial operating time
0x00C6	✓	✓	✓	Total operating time
0x0732	✓	✓	✓	Phase 1 voltage
0x0734		✓	✓	Phase 2 voltage
0x0736		✓	✓	Phase 3 voltage
0x0738	✓	✓	✓	Phase 1 current
0x073A		✓	✓	Phase 2 current
0x073C		✓	✓	Phase 3 current
0x073E	✓	✓	✓	Phase 1 cos φ
0x0740		✓	✓	Phase 2 cos φ
0x0742		✓	✓	Phase 3 cos φ
0x0746	✓	✓	✓	Phase 1 active power
0x0748		✓	✓	Phase 2 active power
0x074A		✓	✓	Phase 3 active power
0x074C	✓	✓	✓	Total active power
0x074E	✓	✓	✓	Phase 1 reactive power
0x0750		✓	✓	Phase 2 reactive power
0x0752		✓	✓	Phase 3 reactive power
0x0754	✓	✓	✓	Total reactive power
0x0756	✓	✓	✓	Phase 1 apparent power
0x0758		✓	✓	Phase 2 apparent power
0x075A		✓	✓	Phase 3 apparent power

Table 13 (Continuation): Modbus variables: Available addresses by device.

Address	C10	C20	C30	Description
0x075C	✓	✓	✓	Total apparent power
0xF010	✓	✓	✓	Energy meter model
0x2710	✓	✓	✓	Serial no.
0x044C			✓	Voltage primary
0x044E			✓	Voltage secondary
0x0450			✓	Current primary
0x0452			✓	Current secondary
0x0050	✓	✓	✓	Higher firmware version
0x0051	✓	✓	✓	Lower firmware version
0x0052	✓	✓	✓	Revised firmware version

4.5- CONFIGURATION WEBSITE

To access the internal configuration website, the device’s IP address has to be entered into the browser address bar.

To access the configuration website, open the screen shown in **Figure 7** and enter the Username and Password. The default values are shown in **Table 14**.

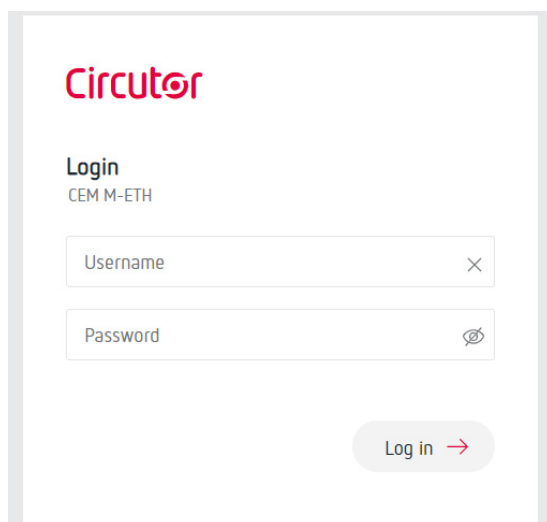


Figure 7: Accessing the configuration website.

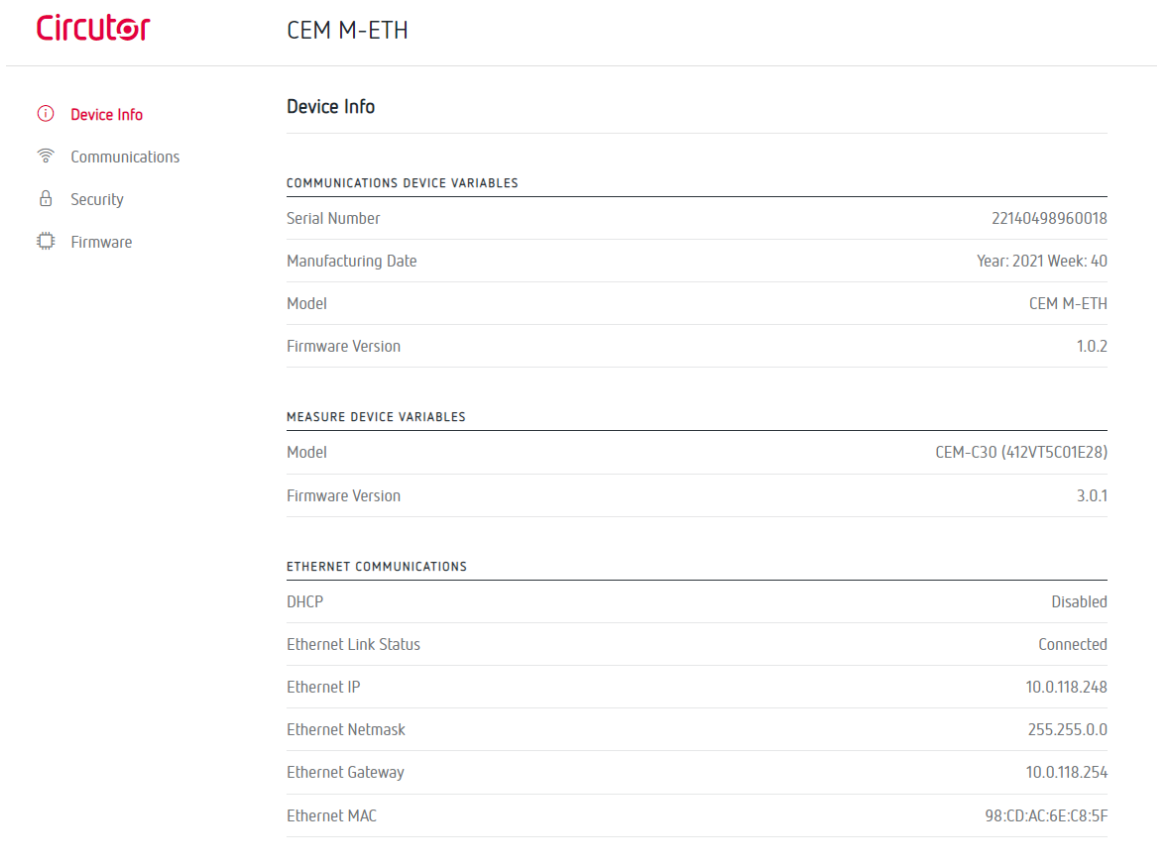
Table 14: Accessing the configuration website.

Accessing the configuration website	
Username	admin
Password	circutor

Note: For security reasons, you need to change the login password. You can change it on the **Security** screen, **Figure 10**.

The website of the device can be used to:

- ✓ On the **Device Info** screen, view the device's information and settings for Ethernet communications (Figure 8).

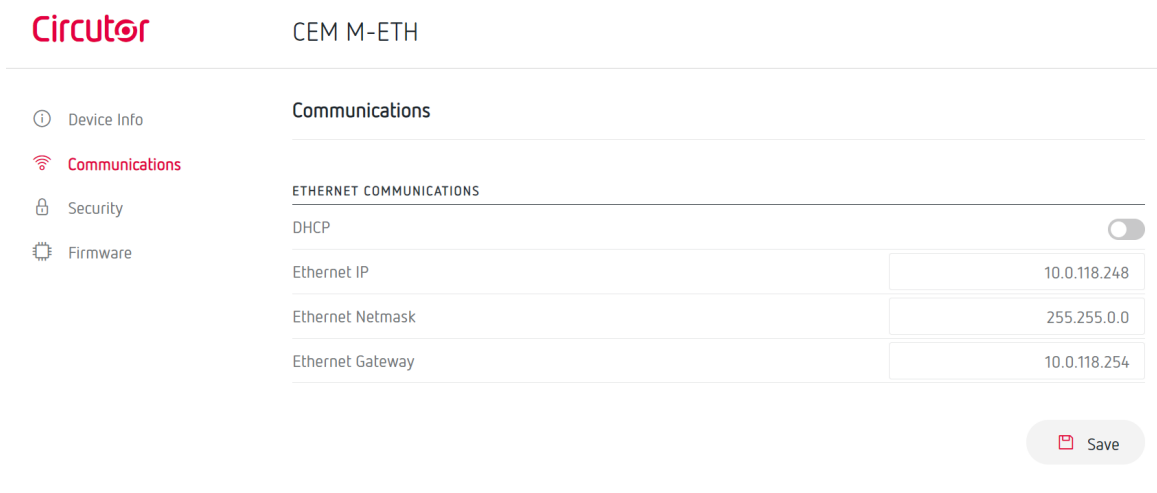


The screenshot shows the Circutor website interface for the CEM M-ETH device. The left sidebar contains navigation options: Device Info (selected), Communications, Security, and Firmware. The main content area is titled 'Device Info' and is divided into three sections:

- COMMUNICATIONS DEVICE VARIABLES:**
 - Serial Number: 22140498960018
 - Manufacturing Date: Year: 2021 Week: 40
 - Model: CEM M-ETH
 - Firmware Version: 1.0.2
- MEASURE DEVICE VARIABLES:**
 - Model: CEM-C30 (412VT5C01E28)
 - Firmware Version: 3.0.1
- ETHERNET COMMUNICATIONS:**
 - DHCP: Disabled
 - Ethernet Link Status: Connected
 - Ethernet IP: 10.0.118.248
 - Ethernet Netmask: 255.255.0.0
 - Ethernet Gateway: 10.0.118.254
 - Ethernet MAC: 98:CD:AC:6E:C8:5F

Figure 8: Website: Device Info.

- ✓ On the **Communications** screen, edit the Ethernet communications settings (Figure 9).



The screenshot shows the Circutor website interface for the CEM M-ETH device, specifically the 'Communications' screen. The left sidebar contains navigation options: Device Info, Communications (selected), Security, and Firmware. The main content area is titled 'Communications' and displays the following settings:

- ETHERNET COMMUNICATIONS:**
 - DHCP: (toggle switch)
 - Ethernet IP:
 - Ethernet Netmask:
 - Ethernet Gateway:

A 'Save' button is located at the bottom right of the settings area.

Figure 9: Website: Communications.

- ✓ On the **Security** screen (Figure 10) change the login password to the configuration website.

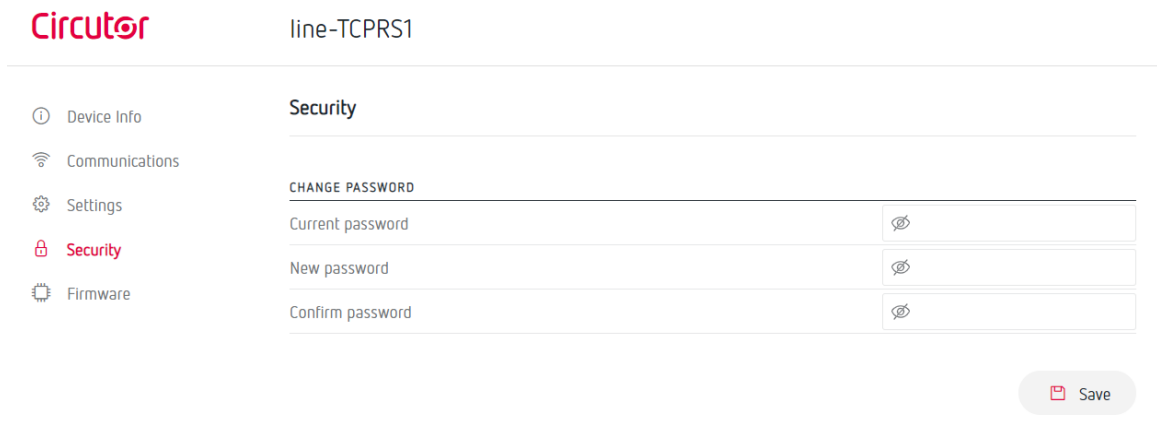


Figure 10: Website: Security.

- ✓ On the **Firmware** screen, update the device's firmware (Figure 11).

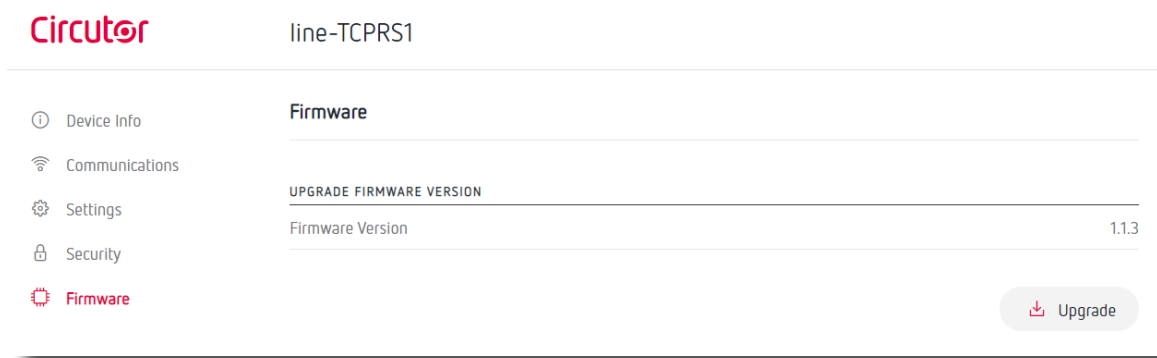


Figure 11: Website: Firmware.

5.- TECHNICAL FEATURES

Power supply	
Rated voltage	230 V~ ± 20%
Consumption	2.4 ... 2.7 VA
Frequency	50/60 Hz with no differentiation
Installation category	CAT III 300 V
Insulation	
AC voltage	4kV RMS 50Hz during 1 minute
Overimpulse	
1.2/50ms 0Ω source impedance	6 kV at 60° and 240°, with positive and negative polarization
Memory	
Setup, events, load curve	Non-volatile EEPROM memory
User interface	
LED	3 LEDs (POWER - LINK - LINL/ACT)
Communication	
Communications protocol	Modbus/TCP
Environmental features	
Operating temperature	-25°C... +70°C
Storage temperature	-35°C... +80°C
Relative humidity (non-condensing)	5 ... 95%
Maximum altitude	2,000 m
Protection degree IP	IP 51 installed IP 40 in the terminal area
Protection degree IK	IK08
Pollution degree	2
Use	indoor
Mechanical features	
Dimensions (mm)	Figure 12
Enclosure	ABS + V0 polycarbonate
Weight	100 g.
Standards	
Safety requirements for electrical units for measurement, control and laboratory use. Part 1: General requirements.	EN 61010-1: 2010
Electromagnetic compatibility (CEM). Part 6-2: Generic standards. Immunity for industrial environments.	EN 61000-6-2: 2005
Electromagnetic compatibility (CEM). Part 6-3: Generic standards. Emission standard for residential, commercial and light industry environments.	EN 61000-6-3: 2007

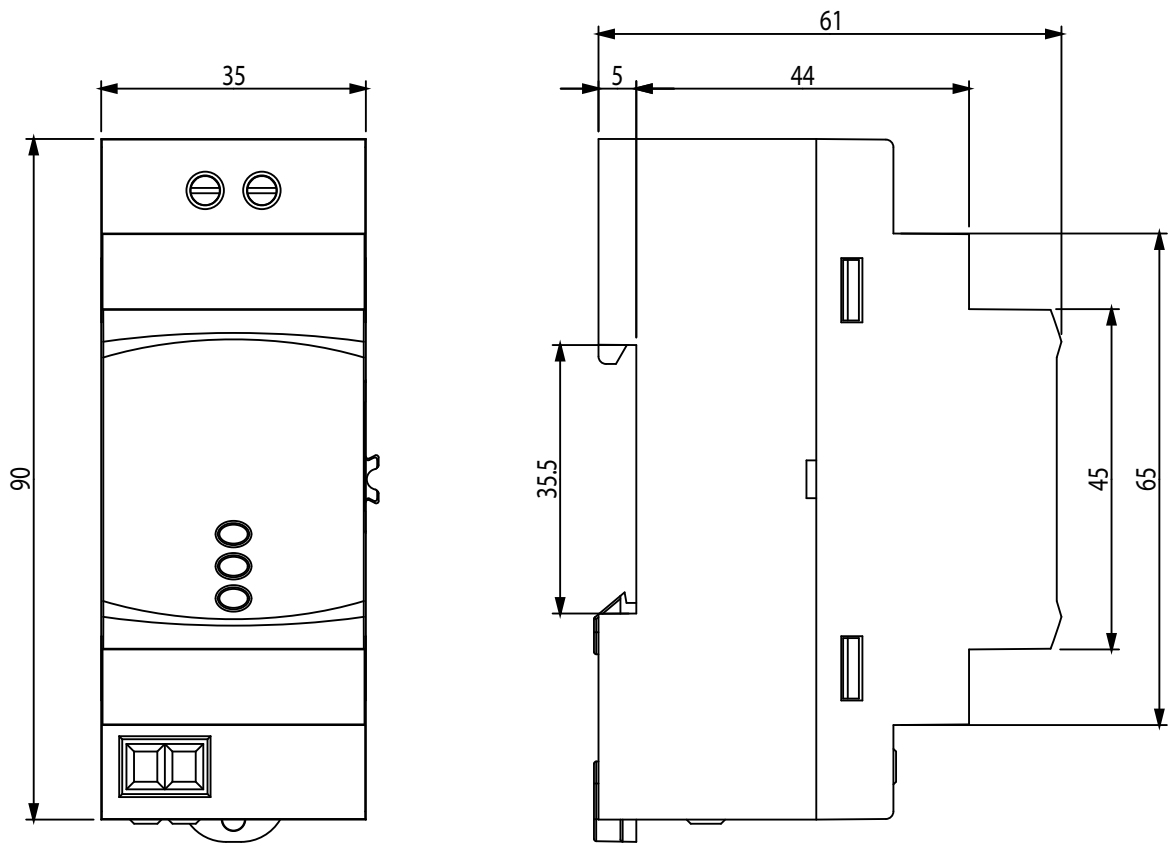


Figure 12: CEM M-ETH dimensions

6.- MAINTENANCE AND TECHNICAL SERVICE

The device does not need any type of maintenance.

In the case of any query in relation to device operation or malfunction, please contact the **CIRCUTOR S.A.U.** Technical Support Service.

Technical Assistance Service

Vial Sant Jordi, s/n, 08232 - Viladecavalls (Barcelona)

Tel: 902 449 459 (Spain) / +34 937 452 919 (outside of Spain)

email: sat@circutor.com

7.- GUARANTEE

CIRCUTOR guarantees its products against any manufacturing defect for two years after the delivery of the units.

CIRCUTOR will repair or replace any defective factory product returned during the guarantee period.



- No returns will be accepted and no unit will be repaired or replaced if it is not accompanied by a report indicating the defect detected or the reason for the return.
- The guarantee will be void if the units has been improperly used or the storage, installation and maintenance instructions listed in this manual have not been followed. "Improper usage" is defined as any operating or storage condition contrary to the national electrical code or that surpasses the limits indicated in the technical and environmental features of this manual.
- **CIRCUTOR** accepts no liability due to the possible damage to the unit or other parts of the installation, nor will it cover any possible sanctions derived from a possible failure, improper installation or "improper usage" of the unit. Consequently, this guarantee does not apply to failures occurring in the following cases:
 - Overvoltages and/or electrical disturbances in the supply;
 - Water, if the product does not have the appropriate IP classification;
 - Poor ventilation and/or excessive temperatures;
 - Improper installation and/or lack of maintenance;
 - Buyer repairs or modifications without the manufacturer's authorisation.

8.- EU DECLARATION OF CONFORMITY



CIRCUITOR, SA – Vial Sant Jordi, s/n
08232 Viladecavalls (Barcelona) Spain
(+34) 937 452 900 – info@circuitor.com



DECLARACIÓN UE DE CONFORMIDAD

La presente declaración de conformidad se expide bajo la exclusiva responsabilidad de CIRCUITOR con dirección en Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) España

Producto:

Contadores de energía trifásicos indirecto con módulo comunicaciones

Serie:

CEM C30 C30-312, CEM-C30-312 MID +
CEM M-RS-485, CEM-M-ETH

Marca:

CIRCUITOR

EL objeto de la declaración es conforme con la legislación de armonización pertinente en la UE, siempre que sea instalado, mantenido y usado en la aplicación para la que ha sido fabricado, de acuerdo con las normas de instalación aplicables y las instrucciones del fabricante

2014/32/CE: Measuring Instrument Directive R . D . 1 . 1 . 1 . 0 / 2 . 0 . 0 . 7
2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

Está en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativos(s):
IEC 61000-6-3:2006 Ed 2.0
EN 50470-1:2006 Ed 1.0 IEC 62053-23:2003 Ed 1.0
IEC 61010-1:2010-AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Año de marcado "CE":

2014



EU DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of CIRCUITOR with registered address at Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) Spain

Product:

Indirect three-phase energy meters with communications module

Series:

CEM C30 C30-312, CEM-C30-312 MID +
CEM M-RS-485, CEM-M-ETH

Brand:

CIRCUITOR

The object of the declaration is in conformity with the relevant EU harmonisation legislation, provided that it is installed, maintained and used for the application for which it was manufactured, in accordance with the applicable installation standards and the manufacturer's instructions

2014/32/CE: Measuring Instrument Directive R . D . 1 . 1 . 1 . 0 / 2 . 0 . 0 . 7
2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

It is in conformity with the following standard(s) or other regulatory document(s):
IEC 61000-6-3:2006 Ed 2.0
EN 50470-1:2006 Ed 1.0 IEC 62053-23:2003 Ed 1.0
IEC 61010-1:2010-AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Year of CE mark:

2014



DECLARATION UE DE CONFORMITÉ

La présente déclaration de conformité est délivrée sous la responsabilité exclusive de CIRCUITOR dont l'adresse postale est Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) Espagne

Produit:

mesureurs d'énergie triphasés connexion indirectes avec module communication

Série:

CEM C30 C30-312, CEM-C30-312 MID +
CEM M-RS-485, CEM-M-ETH

Marque:

CIRCUITOR

L'objet de la déclaration est conforme à la législation d'harmonisation pertinente dans l'UE, à condition d'avoir été installé, entretenu et utilisé dans l'application pour laquelle il a été fabriqué, conformément aux normes d'installation applicables et aux instructions du fabricant

2014/32/CE: Measuring Instrument Directive R . D . 1 . 1 . 1 . 0 / 2 . 0 . 0 . 7
2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

Il est en conformité avec la(les) suivante(s) norme(s) ou autre(s) document(s) réglementaire(s):
IEC 61000-6-3:2006 Ed 2.0
EN 50470-1:2006 Ed 1.0 IEC 62053-23:2003 Ed 1.0
IEC 61010-1:2010-AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Année de marquage « CE »:

2014



Viladecavalls (Spain), 20/09/2017
General Manager: Ferran Gil Torné



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KONFORMITÄTSERKLÄRUNG UE

Vorliegende Konformitätserklärung wird unter alleiniger Verantwortung von CIRCUITOR mit der Anschrift, Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) Spanien, ausgestellt

Produkt:

Dreiphasen-Energiezähler indirekter Anschluss und Kommunikationmodule

Série:

**CEM C30 C30-312, CEM-C30-312 MID +
CEM M-RS-485, CEM-M-ETH**

Marke:

CIRCUITOR

Der Gegenstand der Konformitätserklärung ist Konform mit der geltenden Gesetzgebung zur Harmonisierung der EU, sofern die Installation, Wartung und Verwendung der Anwendung seinem Verwendungszweck entsprechend gemäß den geltenden Installationsstandards und der Vorgaben des Herstellers erfolgt.

2014/32/CE: Measuring Instrument Directive R . D . 1 1 1 0 / 2 0 0 7

2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

Es besteht Konformität mit der/den folgenden Norm/Normen oder Regelwerk/Regelwerken

IEC 61000-6-3:2006 Ed 2.0

EN 50470-1:2006 EN 50470-3:2006

IEC 62053-21:2003 Ed 1.0 IEC 62053-23:2003 Ed 1.0

IEC 61010-1:2010+AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Jahr der CE-Kennzeichnung:

2014



DECLARAÇÃO DA UE DE CONFORMIDADE

A presente declaração de conformidade é expedida sob a exclusiva responsabilidade da CIRCUITOR com morada em Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) Espanha

Produto:

Contadores de energia trifásicos ligação indireta e modulo de comunicação

Série:

**CEM C30 C30-312, CEM-C30-312 MID +
CEM M-RS-485, CEM-M-ETH**

Marca:

CIRCUITOR

O objeto da declaração está conforme a legislação de harmonização pertinente na UE, sempre que seja instalado, mantido e utilizado na aplicação para a qual foi fabricado, de acordo com as normas de instalação aplicáveis e as instruções do fabricante.

2014/32/CE: Measuring Instrument Directive R . D . 1 1 1 0 / 2 0 0 7

2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

Está em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s):

IEC 61000-6-3:2006 Ed 2.0

EN 50470-1:2006 EN 50470-3:2006

IEC 62053-21:2003 Ed 1.0 IEC 62053-23:2003 Ed 1.0

IEC 61010-1:2010+AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Ano de marcação "CE":

2014



DICHIARAZIONE DI CONFORMITÀ UE

La presente dichiarazione di conformità viene rilasciata sotto la responsabilità esclusiva di CIRCUITOR, con sede in Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) Spagna

prodotto:

Contatori di energia trifase indiretto con modulo comunicazioni

Serie:

**CEM C30 C30-312, CEM-C30-312 MID +
CEM M-RS-485, CEM-M-ETH**

MARCHIO:

CIRCUITOR

L'oggetto della dichiarazione è conforme alla pertinente normativa di armonizzazione dell'Unione Europea, a condizione che venga installato, mantenuto e utilizzato nell'ambito dell'applicazione per cui è stato prodotto, secondo le norme di installazione applicabili e le istruzioni del produttore.

2014/32/CE: Measuring Instrument Directive R . D . 1 1 1 0 / 2 0 0 7

2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

È conforme alle seguenti normative o altri documenti normativi:

IEC 61000-6-3:2006 Ed 2.0

EN 50470-1:2006 EN 50470-3:2006

IEC 62053-21:2003 Ed 1.0 IEC 62053-23:2003 Ed 1.0

IEC 61010-1:2010+AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Anno di marcatura "CE":

2014



Viladecavalls (Spain), 20/09/2017
General Manager: Ferran Gil Torné





CIRCUTOR, SA – Vial Sant Jordi, s/n
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DEKLARACJA ZGODNOŚCI UE

Niniejsza deklaracja zgodności zostaje wydana na wyłączną odpowiedzialność firmy CIRCUTOR z siedzibą pod adresem: Vial Sant Jordi, s/n – 08232 Viladecavalls (Barcelona) Hiszpania

produkt:

trójfazowe liczniki energii podłączenie pośrednie i Moduły komunikacyjne

Seria:

CEM C30 C30-312, CEM-C30-312 MID +
CEM MI-RS-485, CEM-M-ETH

marka:

CIRCUTOR

Przedmiot deklaracji jest zgodny z odnośnymi wymaganiami prawodawstwa harmonizacyjnego w Unii Europejskiej pod warunkiem, że będzie instalowany, konserwowany i użytkowany zgodnie z przeznaczeniem, dla którego został wyprodukowany, zgodnie z mającymi zastosowanie normami dotyczącymi instalacji oraz instrukcjami producenta

2014/32/CE: Measuring Instrument Directive R . D . 1 1 1 0 / 2 0 0 7
2014/35/UE: Low Voltage Directive 2014/30/UE: Electromagnetic Compatibility Directive

Jest zgodny z następującą(y)mi normą(ami) lub innym(i) dokumentem(ami) normatywnym(i):

IEC 61000-6-3:2006 Ed 2.0 EN 50470-1:2006 EN 50470-3:2006
IEC 62053-21:2003 Ed 1.0 IEC 62053-23:2003 Ed 1.0
IEC 61010-1:2010+AMD1:2016 CSV Ed 3.0 IEC 61000-6-2:2016 Ed 3.0

Rok oznakowania "CE":

2014



Viladecavalls (Spain), 20/09/2017
General Manager: Ferran Gil Torné

CIRCUTOR S.A.U.

Vial Sant Jordi, s/n

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