SUBMETERING
ELECTRICAL BOXES

HOSPITALS

INDUSTRIES

NEIGHBOURHOOD COMMUNITIES

PUBLIC BUILDINGS

CCM 2W

1 Phase + WIFI
Energy Meter

HOTELS

SHOPPING CENTER

INDUSTRIAL
*Perfect **TOOL***

- Analysis
- Energy Efficiency

DOMESTIC
*Perfect **SOLUTION***

- Save Energy
- Alerts & phone

Take care of YOUR PLANET...
...**Take care** of YOURSELF

SINGLE-PHASE AND NEUTRAL METERING DEVICE FOR MEASURING ELECTRICAL VARIABLES IN SWITCHES

CcM2-W is one of the devices from the CcM product family designed to measure electrical parameters (voltage, current, energy, etc.) in one-phase installations with a neutral wire.

CcM product`s range consists of a set of devices used for the monitoring of electrical parameters inside the electrical switchboard in single- and three-phase installations. It is best suitable for installation in thermal-magnetic switches or residual-current circuit breakers.

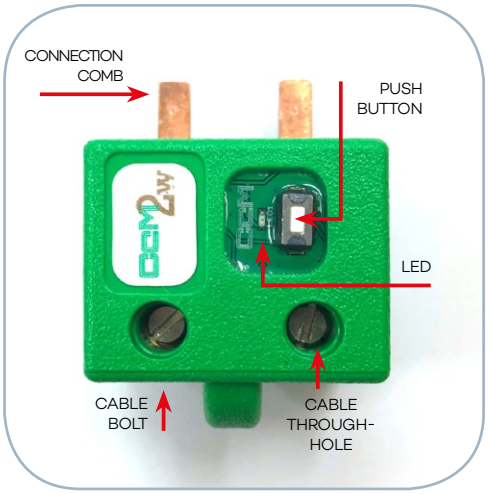
The CcM product range includes various types: the “main” devices, which may connect to form a main communications bus; “secondary” devices, which connect to the main devices to form a secondary communications bus with the main device as a master providing power supply through the connecting cable; and isolated devices, which communicate via WiFi.
In the specific case of CcM2-W the user will be able to have a wireless access to the collected data using a WiFi interface integrated in the device.

The device behaves similarly to an energy meter or a grid analyser. Inserted directly into a thermal-magnetic switch or a one-phase residual-current circuit breaker, the device is connected in series with the consumption line, registering voltage, intensity, power, active and reactive energy.

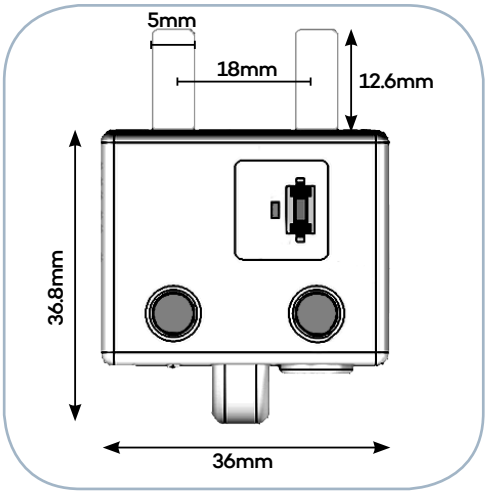
As it can be combined and used with different devices within the product range, Monsol’s product family offers multiple configuration options and allows users to configure the most convenient solution for both, their domestic and industrial installations. Installations can be wireless or connected with a communication cable. The devices can be connected to each other and create communication buses, establishing configurable master-slave hierarchies. If it is needed for the installation, it is also possible to have a device isolated from the rest like in the case of CcM2-W. Using data reading software, it is possible to complement the remaining devices using metering in remote and concrete spots, which could be the individual area of a hotel room with the remaining metering of the general areas.

CcM2-W (single-phase energy meter)	
Maximum operation current	63 Arms
Current measurement range	[0.2, 63] Arms
Maximum allowed voltage	300 Vrms
Measurement frequency	50 Hz, 60 Hz
Current measurement error	< 0.5 % RDG
Voltage measurement error	< 0.2 % RDG
Active energy measurement error	< 1 % RDG
Reactive energy measurement error	< 2 % RDG
Communication protocol	WiFi 802.11b/g/n
Operating temperature	-25 < Ta < +50 °C
Maximum consumption	1 W
Power supply	85 – 300 Vrms
Dimensions (width x length x height)	
Total dimensions	36 x 46.4 x 32.7 mm
Comb dimensions	5 x 12.6 x 3 mm

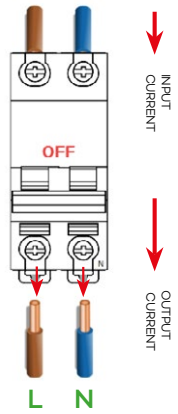
CONNECTIONS



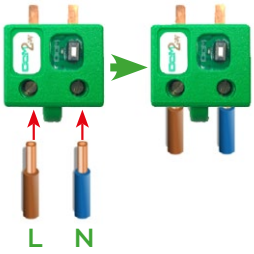
DIMENSIONS



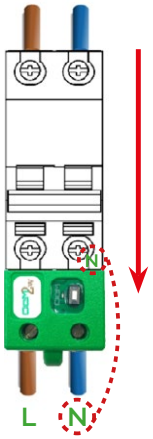
INSTALLATION 1



INSTALLATION 2



INSTALLATION 3



IMPORTANT! The device considers the positive charge to be flowing from the comb into the cable through-hole. If the device is connected in the opposite direction at the opposite end of the switch or at its top, power values will appear with a minus sign and CcM2-W will not be protected by the thermal-magnetic switch/residual-current circuit breakers. It is therefore recommended to install the device on the output current holes at all times

The main use of Monsol's CcM devices is to analyze WHERE, HOW and WHEN energy is consumed in a building, obtaining data on consumption at the level of electrical phases and monitoring in detail (sub-metering). Thanks to their versatile installation design, CcM devices meet all possible needs and configurations. Practical and easy to install, their design allows any user to successfully apply energy efficiency policies in buildings and homes. Our aim is to make this action popular, help reduce emissions and participate in the control of climate change.

This product family has been designed and developed to comply with 2012/27/EU energy efficiency directive which establishes a series of binding measures to help the EU meet its objective to increase energy efficiency in cities by 20% by 2020.

Existing distribution boards don't need to be modified for the installation. Devices adapt to the vast majority of electrical systems and designs, including the oldest distribution boards. Despite its versatility and easy installation, we strongly recommend that our devices should be installed by a professional to prevent safety hazards during manipulation.

Our products comply with all industry standards.

Thanks to its design, our CcM product family has been awarded a seal of excellence by the EU.

IEC
- 61010-1
- 61010-2-030
- 61326-1

CE
Made in Europe

UL
Pending

MOST COMMON USE of CcM2-W (Wifi integrated)

The CcM2-W device is an ideal complement for industrial installations to obtain energy consumption data in locations which are far or isolated from the main electrical switchboards. It also perfectly suitable for domestic installations.

DOMESTIC INSTALLATIONS:

Energy meter: Installed in the main thermal-magnetic switch of the house, it measures the energy consumed by the whole building, reflecting the same consumption as the main energy meter.

Self-supply: It measures the energy consumed by the house and the energy produced by the photovoltaic or wind installation as if it were a bidirectional energy meter. It allows the user to calculate energy savings.

INDUSTRIAL INSTALLATIONS

Shopping centres: Providing data on energy consumption of the separate stores in the shopping centre.

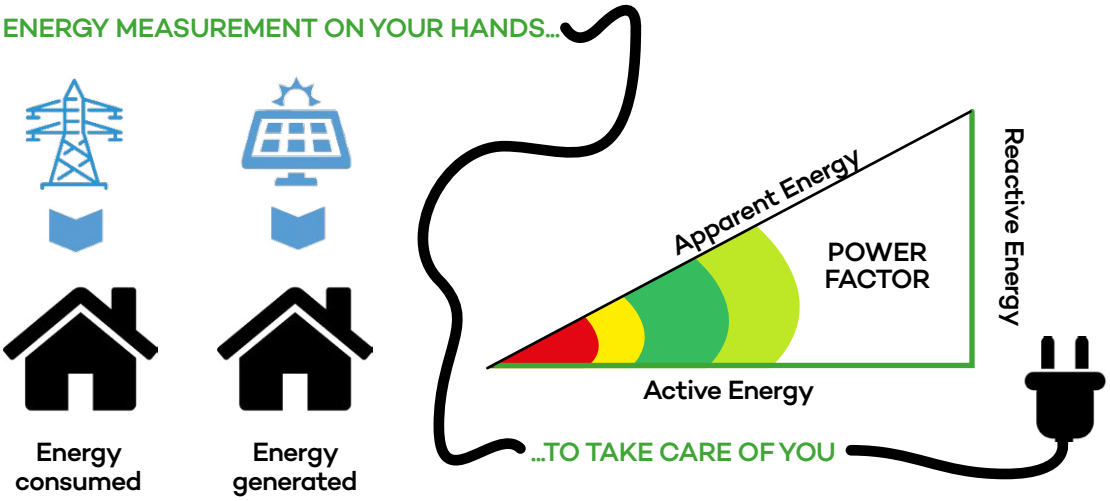
Hotels and hospitals: Providing data on energy consumption of the separate rooms.

Camping: Providing data on separate consumption of the power sockets for the re-charge of campervans and similar, allowing the control of parking and camping fees.

Ports: Providing data on separate consumption of the power sockets in the berths.

IMPORTANT! The device considers the positive charge to be flowing from the comb into the cable through-hole. If the device is connected in the opposite direction at the opposite end of the switch or at its top, power values will appear with a minus sign and CcM2-W will not be protected by the thermal-magnetic switch/residual-current circuit breakers. It is therefore recommended to install the device on the output current holes at all times

ENERGY MEASUREMENT ON YOUR HANDS...

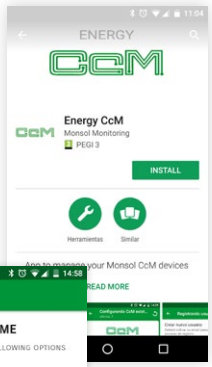


MEMORY MAP

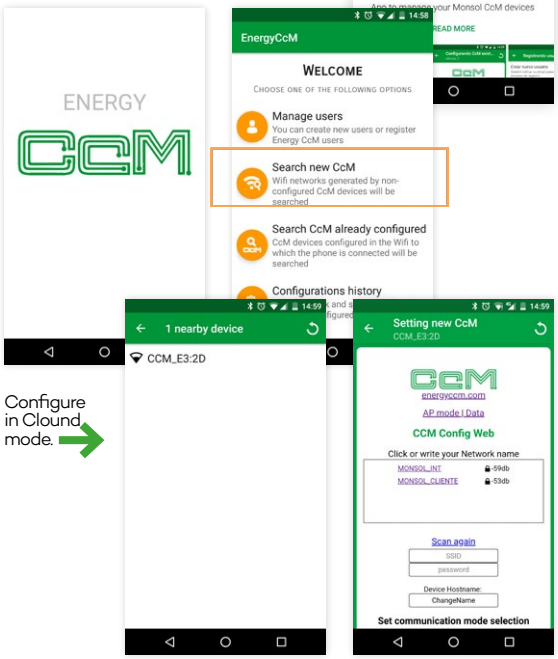
HOLDING AND INPUT REGISTER (R = FCODE 3 & 4 | W = FCODE 6)				
Description	Modbus register	Length	Type	Unit
Product Identification Code	0	1	R	-
Device Serial Number	1	2	R	-
Modbus address	3	1	R/W	-
Current RMS	20	2	R	Arms x 100
Voltage RMS	22	2	R	Vrms x 100
Power factor	36	1	R	PF x 100
Active energy - Quadrants 1 and 4	40	2	R	Wh
Active energy - Quadrants 2 and 3	46	2	R	Wh
Reactive energy - Quadrant 1	52	2	R	Wh
Reactive energy - Quadrant 2	54	2	R	Wh
Reactive energy - Quadrant 3	56	2	R	Wh
Reactive energy - Quadrant 4	58	2	R	Wh
Instantaneous active power	88	2	R	W
Instantaneous reactive power	94	2	R	Var
Instantaneous apparent power	100	2	R	VA
Signal frequency	140	1	R	Hz x 100
Apparent energy	160	2	R	Wh
Energy registers restart	500	1	W	-
Device restart	501	1	W	-
Unidirectional/bidirectional working mode	504	1	R/W	-

CCM2-W CONFIGURATION (SIMPLE MODE)

1. Download "Energy CcM" App in Google Play.



2. Open the App and search for new CcMs.

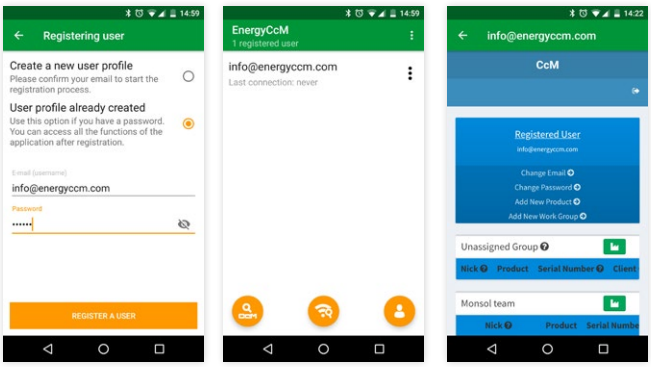


3. Configure in Clound mode.

VIEWING DATA FROM CCM2-W:

1. Web www.energyccm.com:

2. Energy CcM App



HEADQUARTERS

CcM

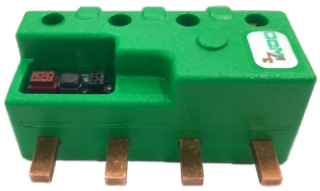
Edificio ProMálaga I+D,
Polígono Industrial Santa Cruz
C/ la Gitanilla, Nave 1
29004 (Málaga) SPAIN

OTHER FAMILY CcM DEVICES

CcM 1

CcM 3

CcM 4



info@energyccm.com
energyccm.com
t.: +34 952 02 05 80