MEASUREMENT AND CONTROL

CVM-D50

Power analyzer with integrated memory

The Future is Efficiency
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All your electrical consumption in one device.

The increasing variety of loads, such as electronic equipment, LED lighting, HVAC systems and variable-speed drives, has placed greater demands on our installations. These changes require devices capable of monitoring electrical consumption in real time, identifying where and how energy is being used, and enabling precise interventions to ensure the system's operational efficiency.

Installing power analyzers like the **CVM-D50** provides real-time information on electrical variables, such as voltage levels, current, harmonics, and power factor, to assess the quality of your system. It also provides consumption data to determine how much energy is being used, whether in different distribution panels or directly at the load point. Measuring energy consumption lets you quantify the energy demanded by the different systems or loads in your installation.

Having this information is essential to understanding how the system operates and evaluating future actions to improve energy efficiency. This helps optimize consumption, avoid penalties, and detect and correct any abnormal or inefficient consumption effectively through active filters, capacitor banks, and devices that improve power quality.

CVM-D50

Power analyzer with integrated memory

The new **CVM-D50** power analyzer monitors and records over 250 electrical variables in real time so you can analyze your energy consumption and detect any anomalies in your system early.

You can download the history of variables to your PC or mobile device, thanks to its integrated memory, without the need to connect it to a SCADA system.

Integrated memory

Configurable from a mobile or PC

Auto-wiring system

Quality events

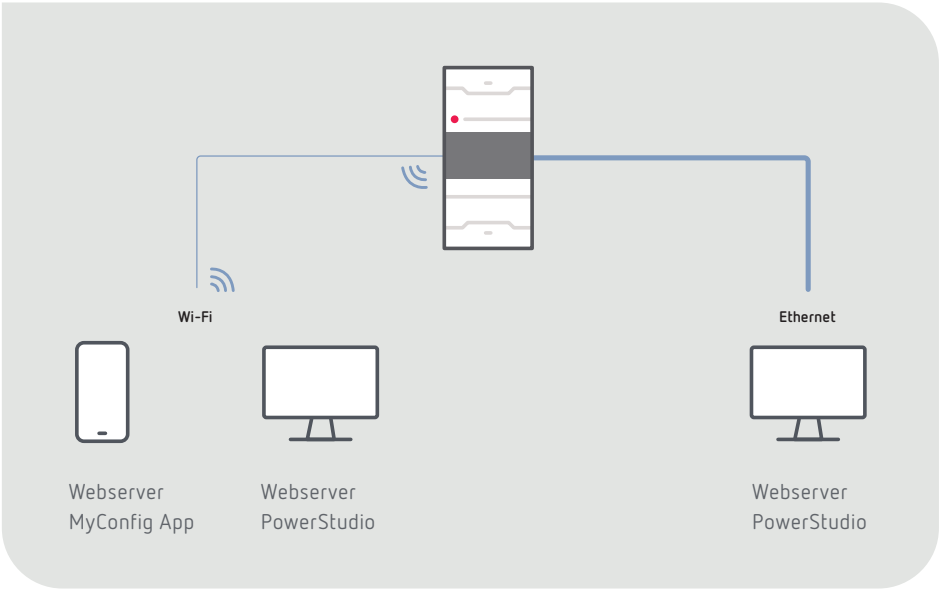
Ethernet and Wi-Fi connectivity

Principales prestaciones:

- Measurement of over 250 electrical parameters (RSM, maximums and minimums)
- THDI%, THDU%, and harmonic decomposition (up to the 31st harmonic)
- Versions available with transformers.../5 A, .../1 A, .../250 mA or using Rogowski flexible clamps.
- Measurement in 4 quadrants (consumption and generation)
- Customizable display menu
- Measurement of active, reactive inductive /capacitive and apparent energy
- Webserver (configuration, download and monitoring)
- Compatible with MyConfig App
- "One-click" connection to Scout platform
- Integration into PowerStudio SCADA
- Panel-mounting capability (72x72 mm accessory)

Maximum connectivity at your fingertips

The new **CVM-D50** power analyzer offers excellent interaction capabilities through Ethernet or Wi-Fi connection, making communication with your Energy Management System easier. Additionally, thanks to its Wi-Fi Access Point, you can configure the device parameters using the free **MyConfig** app on your mobile or tablet, without needing to physically access the device. It also features an integrated web server that allows you to configure, view, and download the device's variables.

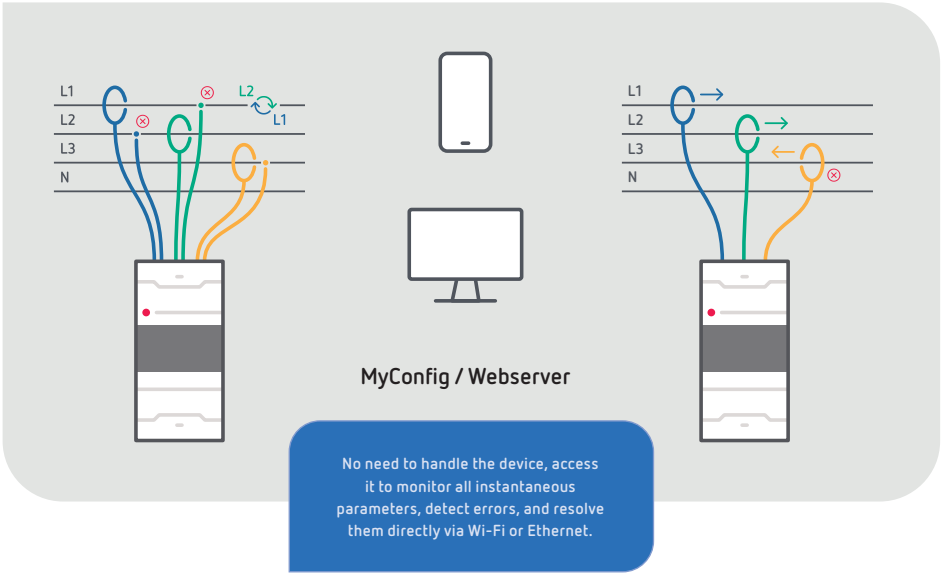


› Communicate via ModBus TCP with your energy management software, or integrate it immediately with our **PowerStudio SCADA** software.

Error-free start-up: Autowiring *System*

Avoid errors during start-up thanks to the *Autowiring* system. This system helps resolve common errors during the start-up process, such as adjusting the current transformer to the correct position or ensuring the correspondence of the voltage phases.

Access the device through the **MyConfig** app or its integrated web server, using Wi-Fi or Ethernet, and easily configure the wiring connection with a single click, without physically interacting with the device.



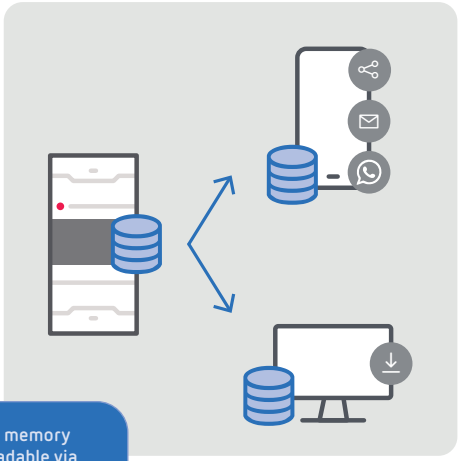
› Adjust the voltage and current positions to avoid reading errors in power, energy, power factor, and cos phi.

› Automatically rotate the current transformer to prevent errors in consumption readings.

Integrated memory

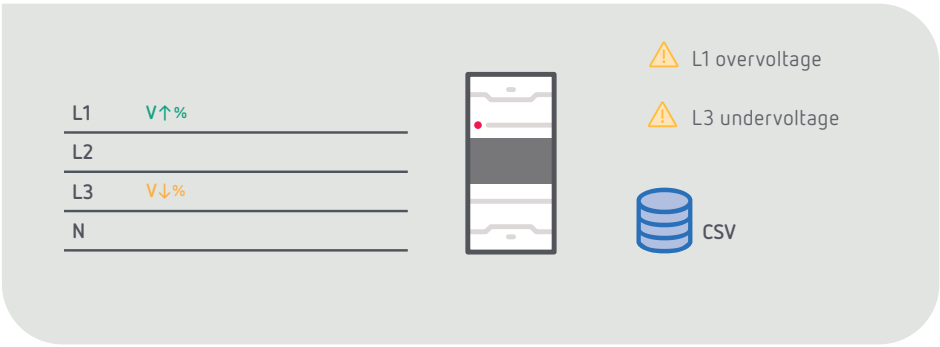
The **CVM-D50** allows you to log all variables locally, without needing to connect the device to energy management software.

Data is stored in the internal memory, with enough capacity for continuous logging for 40 days. You can also download these logs in ***.csv*** format from the device's webpage via a mobile or PC, making it easy to share the data with partners.



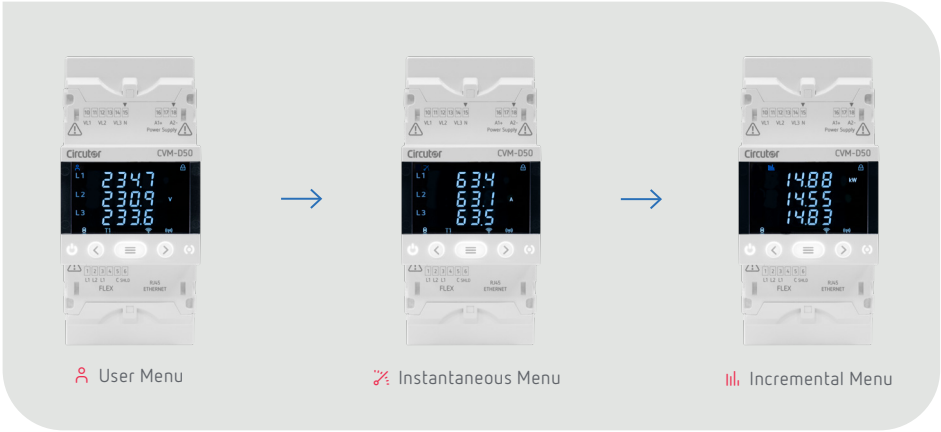
The first step to understanding the quality of your electrical consumption

Analyze the voltage quality of your installation by recording critical events like overvoltages and undervoltages. The device stores these events for each phase, including the date and time, and lets you view or download them in ***.csv*** format through its web server from a PC or mobile device, without having to integrate it into an energy management system.



View the parameters that matter most to you on-screen

Easily create your own display menu with its new *User* profile. This option lets you select and view the electrical variables that best suit your needs, so you can monitor the ones you truly need to control at a glance.



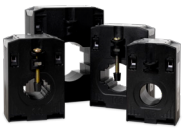
Make your installation more versatile

The **CVM-D50** comes in three versions to adapt to any type of installation and current transformer. Use classic transformers with .../5 A or .../1 A, or install efficient MC1/MC3 transformers with .../250 mA output, or FLEX clamps for installations where interrupting the power is not possible. For any type of transformer:

CVM-D50-ITF

CVM-D50-FLEX

CVM-D50-MC



Compatible with any closed-core transformer.

.../1 A | .../5 A

Compatible with any open-core transformer.

.../1 A | .../5 A

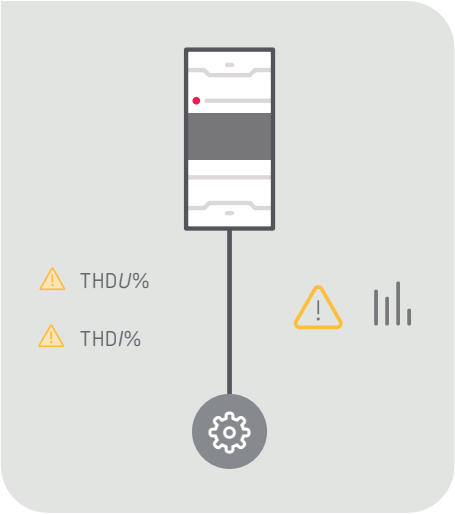
Compatible with Rogowsky flexible sensors.

.../100 mV/KA

Compatible with Circutor's efficient **MC** transformers.

.../250 mA

Detects problems caused by harmonics



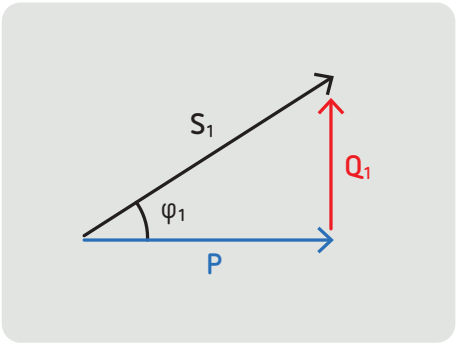
Record the harmonic levels generated by the loads in your installation. While new technologies in electrical installations improve process control, they also create significant harmonic distortion, which can affect the performance of your system.

To assess its impact and determine the best solutions to mitigate it, it is essential to record harmonic levels and identify the most detrimental ones.

The **CVM-D50** analyzer provides information on THD*U*% and THD*I*% levels, as well as the individual values of each harmonic up to the 31st.

Avoid penalties for excess reactive energy consumption

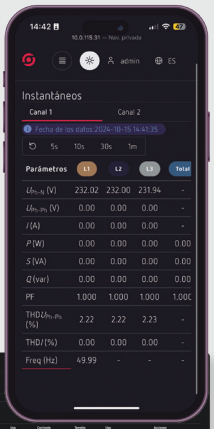
Record the inductive and capacitive reactive energy consumption of your installation to prevent potential penalties for excess reactive energy use.
Plus, view the Power Factor (PF) or the cosine of phi (cos φ) directly on the analyzer's screen.



P = Active Energy (kWh)
Q = Inductive/Capacitive Reactive Energy (kvarh)
S = Apparent Energy (kVAh)

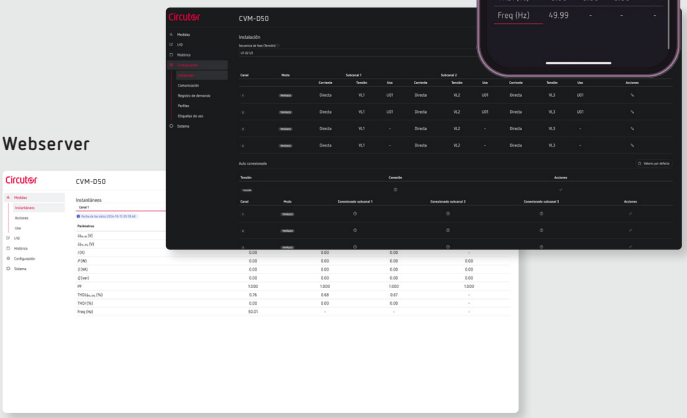
Easier to set up

The devices can be configured through an integrated web interface, accessible via Wi-Fi or Ethernet, or directly from the **MyConfig** app. Both options allow you to verify and modify connections using the *Autowiring* feature, avoiding wiring errors and saving time during start-up.



MyConfig

Webserver



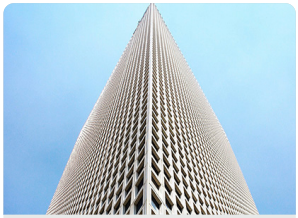
DISPONIBLE EN Google Play

Consíguelo en el App Store

Where to install the analyzers

The **CVM-D50** series network analyzers are specially designed for data acquisition in distribution panels, lines, or loads where both the recording of various energy consumptions and the monitoring of different electrical parameters that could affect the installation's performance are required.

Industry



Buildings

Hotels

Data Centers

Tertiary sector

Shopping centres

Technical specifications

Power circuit	Nominal voltage	100...240 ± 10% VAC/DC
	Frequency	50... 60 Hz
Voltage measurement circuit	Nominal voltage (U_n)	230 VAC Ph-N, 400 VAC Ph-Ph
	Voltage measurement range	5 ... 120% *U*n
	Frequency measurement range	45...65 Hz
Current measurement circuit	Nominal current (I_n)	.../5 A, .../1 A, .../250 mA and Flex clamps
	Current measurement margin	10% ≤ I ≤ 120% *I*n
Measurement accuracy	Voltage measurement	0.5% ± 1 digit (5... 120% *U*n)
	Current measurement	0.5% ± 1 digit (1 ... 120% *I*n)
	Active energy measurement	*I* <0.1 *I*n = Class 1, *I*>0.1 *I*n = Class 0.5 /1 A, Class 0.5S /5 A
	Reactive energy measurement	Class 2
Communications	Ethernet	Modbus/TCP
	Communications	2.4 GHz
Environmental characteristics	Operating temperature	-10... +50 °C
	Relative humidity (without condensation)	5 ... 95%
	Maximum altitude	2000 m
	Protection rating	IP 30, Front IP 40
Mechanical characteristics	Dimensions	52.5 x 118 x 74 mm
	Weight	235 g
	Enclosure	Self-extinguishing V0 plastic
	Attachment	DIN rail
Standards	**IEC/EN 61010-1, IEC/EN 61010-2-030, UNE-EN 55016-2-1, UNE-EN 61000-4-2, UNE-EN 61000-4-20, UNE-EN 61000-4-4, UNE-EN 61000-4-5, UNE-EN 61000-4-6, UNE-EN 61000-4-8, UNE-EN IEC 61000-4-11, UNE-EN 61000-4-3, ETSI-EN 301 489-1 Ver. 2.1.1, ETSI-EN 301 489-17 Ver. 3.1.1, UNE-EN 60068-2-1, UNE-EN 60068-2-2:2008, UNE-EN 60068-2-78, IEC 61557-12.**	

References

Model	Code	Current input	Memory	Harmonics
CVM-D50-ITF	M56570.	.../1 A, .../5 A	●	31
CVM-D50-MC	M56580.	.../250 mA	●	31
CVM-D50-FLEX	M56590.	Rogowsky Flexible Clamps	●	31

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