

THE FUTURE IS EFFICIENCY

Solutions for Electrical energy efficiency

The future is efficiency

Technology development to offer products and comprehensive solutions to the market of electric power efficiency and electric mobility.



We create and develop new ways of managing electric power, tracing possible paths to a more efficient world.



We respond to energy needs, reducing their environmental impact. Committed to our own future.



We offer comprehensive solutions that allow for the optimisation of energy consumption.



Tailor-made and customised service. We treat your concerns as ours.

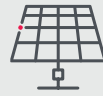
From 1973

- 2017. Technology for energy efficiency.
-
- 1992. Energy control technology.
-
- 1984. Technology for energy saving.
-
- 1982. Rational use of electric power



Present in all sectors

| Photovoltaic facilities



| Energy distribution



| Industrial sector



| Telecommunications, Data centres and critical facilities



| Tertiary sector, buildings and infrastructures

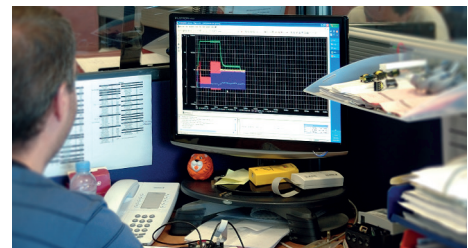


| Electric mobility



Innovation and development

We are committed to innovation, incorporating cutting-edge technology to continue proposing more efficient solutions in the electric sector.



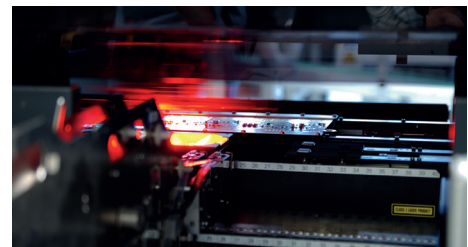
Production centres

We manufacture our own products in 6 centres located in Viladecavalls, Santa Perpètua, and Mexico.



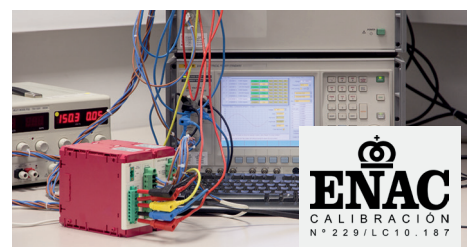
CIRCUTOR technology

Boasting an in-house R&D team made up of more than 100 engineers who work designing new products to meet market demand.



Testing laboratory

CIRCUTOR boasts in-house laboratories for compatibility testing (EMC/EMI), calibration and official metrological verification laboratory, which guarantee the highest quality.



Laboratory
ENAC accredited
N° 229/LC10-187
N° 1270 /LE2532

←
Head office of CIRCUTOR,
in Viladecavalls, Barcelona





CIRCUTOR

With all CIRCUTOR Services.

Technology development to offer products and comprehensive solutions to the market of electric power efficiency and electric mobility.



Pre-sale Services

Low voltage capacitor bank sizing

Harmonic filtering sizing

MV reactive power compensation projects

Energy efficiency systems installation (EMS)

Data analysis for energy audits

Assessment to collaborators

Support
Monday - Friday from
08 am to 6 pm.
(+34) 937 452 900



Technical Assistance Service (TAS)

Monday to Thursday
9 am to 2 pm and 3 pm to 5 pm.

Friday from 9 am to 2 pm.
(+34) 937 452 919
sat@circutor.com



After-sales services

Maintenance or repair of devices, is guaranteed through the comprehensive TAS service of CIRCUTOR.



Logistics

More than 3,000 references available in stock.



Technical support

Specialists at your disposal to answer any technical questions.



Equipment calibration

Equipment calibration service in in-house laboratory with ENAC certification.



Continuous training programmes for partners and customers

Online training sessions all year round

On-site technical training

Visits and specific sessions for training centres

Electrical energy efficiency

What is the Electrical energy efficiency?

Energy efficiency consists of optimising the energy resources of an electrical installation in order to reduce energy consumption and improve productivity without affecting its activity, whether in buildings, industry or distribution networks.

Why is it necessary?

Because a correct energy management allows the following benefits to be obtained:

- | To reduce the economic cost of operating the installations and processes by optimising and saving on consumption (kWh, kvarh).
- | Avoid penalties, whether for reactive energy consumption or maximum demand.
- | Ensure the sustainability of the economic system and the preservation of the environment by reducing CO2 emissions.
- | Optimise the performance of the installations, avoiding unnecessary consumption and improving technical management.
- | Avoiding indirect costs due to production process outages or breakdowns (residual current control and harmonic filtering).

How to do it?

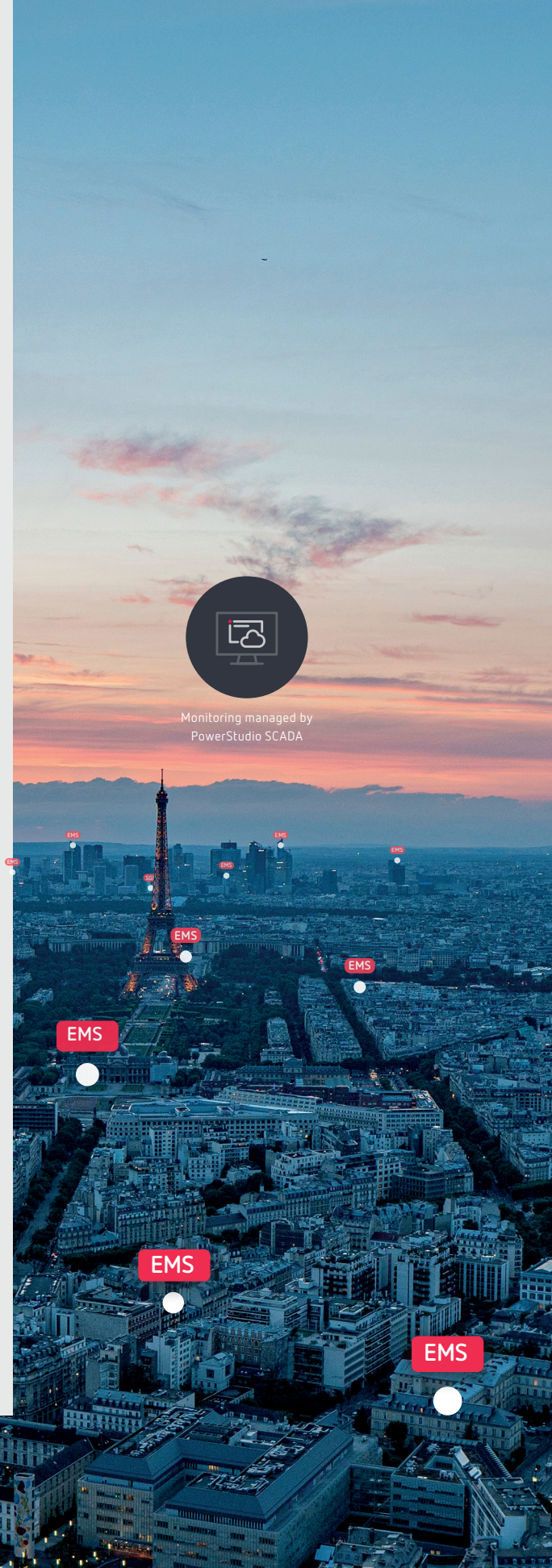
CIRCUTOR has the most appropriate equipment available within its 6 product families:

- | | |
|--|--|
|  Measurement & Control
Measurement and monitoring of the main electrical parameters of your installation. |  Protection & Control
Protection of facilities, equipment/loads and people. |
|  Metering
Consumption management and billing by means of energy metering devices. |  Power Factor correction & Harmonic filtering
Devices and monitoring systems to save on energy bills and eliminate problems due to harmonics. |
|  Electric mobility
Smart charging points for recharging electric electric vehicles. |  Renewable Energies
Self-consumption solutions for parking applications with EV recharge. |

EMS Energy Management System




Monitoring managed by PowerStudio SCADA




EMS The Energy Management System by CIRCUTOR

PowerStudio SCADA
Energy Management Software





Energy audits
| Energy and technical diagnosis of installations

Portable analyzers



Contracting management
| Official energy billing
| Supply and contract management

Billing Meters



Measure and Verification EMS


Mesuring of variables
| Control of energy consumption
| Integration of critical variables
| Ascertaining base line
| Energy Balance
| Consumption ratios
| Verification of savings

Remote management
| Remote control of distributed centres
| Energy control and management

Management and control software


Variables measuring

Power Analyzers
–
Energy meters
–
Power quality analyzers
–
Transformers




Remote management

Efficiency Data Server



Management and Control Software


Efficiency indicator



Demand management
| Acting on loads
| Power Factor correction
| Harmonic filtering


Acting on loads

Power Control



Power Factor correction

LV / MV Capacitor Banks




Improved productivity

Production costs
| Proper allocation of costs
| Energy and production ratios

Maintenance
| Continuity of the service
| Technical management and disturbances control


Production costs

MID Energy meters for billing



Control of residual currents

Residual current relays




Technical management and disturbance control

Active filter




Continuity of the service

Residual current relays with self-reclosing systems




Improvement of the environment

Photovoltaic self-consumption



Electric vehicle charge



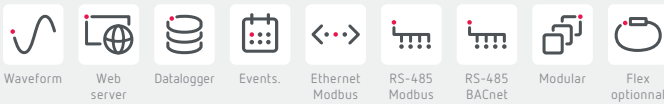
Energy Management Systems

Solutions to control, manage and reduce energy consumption.

CVM-A1500

Power quality analyser

- | IEC-61000-4-30 Class A certified
- | EN 50160 analysis
- | Events and transient capture
- | Data logger (1 year of data)
- | Integrated management software (EMS) and web server



CVM-C11

Power analyser for panel mounting

- | 400 variables
- | Energy class 0.5S
- | Neutral current
- | Modbus/BACnet
- | Harmonic 31



CVM-B100/150

High performance power analyser for panel mounting

- | 500 variables
- | Harmonic 50
- | Up to 4 expansion modules: digital, relay, analog, datalogger, Ethernet,....



CVM-C4

Power analyser for panel mounting

- | 230 variables
- | Energy class 0.5
- | 2 tariffs
- | Harmonic distortion (THD)



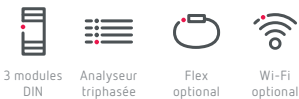
CVM-E3-MINI

Compact power analyser for DIN rail mounting

- | 400 variables
 - | Energy class 1
 - | Harmonic 31
- CVM-E3-MINI:**
- | RS-485, Modbus, BACnet
 - | Transistor Output



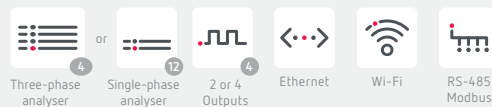
- CVM-E3-MINI-Wi-Eth**
- | Ethernet, Wi-Fi, Modbus



CVM-D400

Multi-channel power analyser

- | 4 Three-phase power analysers or 12 single-phase power analysers
- | RS-485, Ethernet, and Wi-Fi Communications
- | 4 or 2 programmable digital outputs



Line

Integral energy management system. Easy to install.



Line 3G

Coms. 3G

Line EDS

- 1 year of data
- PowerStudio or Cloud software
- RS-485, Ethernet and Wi-Fi
- Built-in web server

Line CVM-D32

- 500 variables
- Harmonic 40
- 2 transistor outputs
- I/O expandable

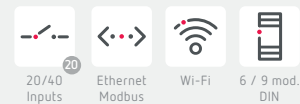
Line Input/Output

- 4 relay OUT + 4 digital IN
- 4 analog OUT + 4 analog IN
- 8 digital IN + 6 relay OUT

Kit Line- TCPRS1/2xM-20I

Pulse centralizer for water, gas or heat

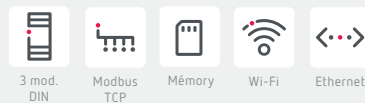
- 40 inputs
- 20 inputs (Kit Line-TCPRS1/M-20I)
- Ethernet
- Wi-Fi
- Modbus TCP



CVM-D50

Power analyzer with built-in memory

- Up to 400 variables
- Class 1 in active energy
- .../5A; .../1A, .../250mA and FLEX clamps
- Up to 31st harmonics
- Web server for configuring, displaying and downloading data

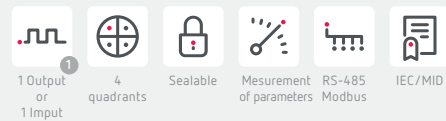


CEM-C12 / CEM-C21 / CEM-C31



Energy meter for partial consumption

- Single / Three phase measurement
- C12 / C-21: Direct 65A
- C-31: CT connection .../5A
- DS- Dual source model (1 input)
- T1- Transistor output (tariff/pulses)
- V,A,kW,kvar,kWh, kvarh
- RS-485 / Modbus

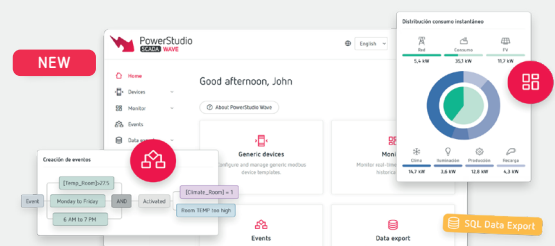


PowerStudio SCADA

Energy monitoring software

Control and data acquisition system with real-time monitoring, reporting, alarm management and SCADA interface for simple diagramming. The main functions are as follows::

- Creation of databases
- Event logging
- Energy cost management
- Energy balancing
- Energy consumption ratio
- Consumption reports
- Alarm tables
- Power quality management
- Compatible with other SCADA software on the market
- Analysis and management of variables
- Energy / production ratio
- Cost / production ratio
- Essential tool for EN 16001 / ISO 50001 certification.



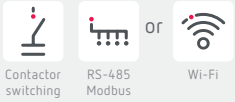
Power Factor correction

Reactive energy compensation, a key element for energy saving

OPTIM P&P

Automatic capacitor banks

- | From 2.5 to 1600 kvar
- | Reinforced at 440 V
- | Over 400 units for immediate delivery



OPTIM FR P&P

Automatic capacitor banks with filters

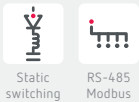
- | Resonance-free compensation
- | Epoxy resin reactance with high linearity and low losses
- | Independent design of ventilation elements
- | Possibility of integrating an EMS (energy management system)



OPTIM FRE P&P

Automatic capacitor banks with filters and static contactors

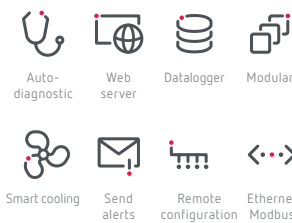
- | Instantaneous compensation (ms)
- | Reduced maintenance
- | Longer service life
- | Better network quality



SVGm

Static Var generator

- | Inductive reactive and capacitive compensation
- | From 0,7L to 0,7C
- | 30 to 400 kvar
- | Up to 480V
- | Immunity against harmonics
- | Wall mounted or cabinet
- | Expandable up to 100 units
- | Low maintenance



Computer C Wi-Fi

Power factor regulator

- | 6 or 12 steps
- | Wi-Fi connection
- | VAR system compatibility
- | Alarms
- | Plug&Play
- | Web server



Wi-Fi



Computer SMART III

Power factor regulator with power analyzer

- | 6 or 12 steps
- | RS-485 connection, Modbus RTU
- | Compensation in 1 or 3 phases
- | Power analyzer with more than 250 variables
- | Residual current monitoring
- | 10 alarms
- | Plug&Play



RS-485 Modbus



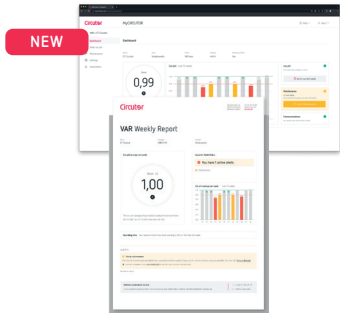
Power analyzer

VAR system compatibility with Smart Link VAR (Wi-Fi)

VAR

Power Factor Monitoring System

- | Online 24/7h cos phi monitoring
- | Weekly report free suscription
- | Warnings and maintenance notifications
- | All your capacitor banks, managed from the same screen



CLZ-HD & RH / RBH

Low voltage capacitors and reactors

- | Cylindrical capacitors up to 50 kvar
- | Polypropylene of European origin
- | Small loss reactors



CIRKAP

Capacitor banks for MV power factor correction

- | Automatic or fixed batteries
- | From IP00 to IP54
- | From 3 to 110 kV
- | Type test available

CHV

Complete range of medium voltage capacitors

- | Single and three phase MV capacitors
- | Up to 24 kV and 750 kvar
- | With and without internal fuses
- | Stainless steel housing



Fuse protection

CHV-M - 25...750 kvar
CHV-T - 35...750 kvar



Energy audits

Portable network analyzers, cloud platform and measurement services.

MYeBOX®

More than a portable network analyser

- | Real-time measurements
- | Local and remote viewing
- | Setting up, monitoring and stopping remote measurements
- | Wi-Fi and 3G connectivity

Waveform

Transient

USB

SD

MYeBOX® App

Wi-Fi

3G

MYeBOX® Cloud

5 current channels

5 voltage channels

Service measurement

- | Measures for optimising of active and reactive power and reactive power
- | Power quality supply analysis
- | Analysis and reports

Databox

Solution for energy management and control

- | Create your dashboards and widgets.
- | Automatically send reports and simulate of invoices.
- | Real-time alarms.
- | Geolocation of your installations and devices.
- | Monitoring and calendars.
- | Compare data from all your facilities.
- | Tariff schedule and energy cost calculation.
- | Design your own monitoring and control screens.

Installation

Sensors

Gateway Databox

| RS-485
 | Ethernet
 | LoRa

Ethernet
 3G

Cloud

Monitorización y
 control

Informes

Alertas
 tiempo real

Servicios

Almacenamiento y
 protección de datos

Edge Computing

Fog Computing

Cloud Computing

Continuity of Service

Solutions to anticipate and avoid unwanted tripping of protections.

SMART RESIDUAL CURRENT PROTECTION

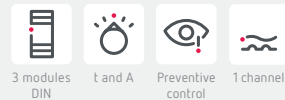
RGU-10A TYPE A

Ultra-immunised residual current relay and monitoring

- Real-time display of residual current.
- Display of the residual current when tripping
- Preventive maintenance
- More immunity to harmonics
- Sensitivity from 30mA ...30A
- Instantaneous/ selective up to 5s



RCD



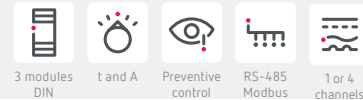
RGU-100B / CBS-400B TYPE B

Residual current relay and monitoring

- Real-time display of residual current.
- Display of the residual current when tripping
- 4 channels RCD (CBS-400B)
- Preventive maintenance
- Sensitivity from 30mA ...3A
- Instantaneous/ selective up to 10s



RCD



IDA-EV TYPE A + 6 mVdc

Residual Current Circuit Breaker

- 30 mA + 6 mAdc
- 40 or 63A
- 4 poles
- Built-in transformer



RCCB



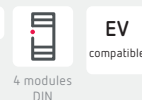
IDB-4 TYPE B

Residual Current Circuit Breaker

- 30 mA or 300 mA
- 40 or 63A
- 4 poles
- Built-in transformer



RCCB

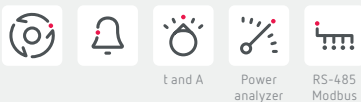


RESIDUAL CURRENT DEVICES WITH SELF-RECLOSING SYSTEM

RECmax CVM TYPE A

Circuit breaker & reclosing residual current protection with built-in power analyzer

- 2 or 4 poles
- Up to 63 A
- Sensitivity from 30mA ...1 A
- Instantaneous/ selective up to 1s
- Circuit breaker+ RCD + self-reclosing



REC 4 TYPE A

Self-reclosing residual current circuit breaker

- 30 mA or 300 mA
- 2 or 4 poles
- Built-in transformer




3 or 5 DIN modules

Quality Energy

Meeting standards and avoiding consumption and feeding problems are key factors.

CVM-A1500 Class A
 Power quality analyzer



- | IEC 61000-4-30 Class A certified
- | EN 50160 analysis
- | Events and transient capture
- | Data logger (1 year of data)
- | Integrated management software (EMS) and web server

MYeBOX® Class A
 More than a portable network analyser



- | Class A according to IEC 61000-4-30
- | Real-time measurements
- | Local and remote monitoring
- | Setting up, starting and stopping remote measurements
- | Wifi and 3G connectivity


AFQm
 Multifunctional active filter











- | 3 in 1: Harmonic filtering, Reactive energy compensation and Phase Balancing
- | 30 to 400 A
- | Up to 690V
- | Inductive reactive and capacitive compensation from 0,7L to 0,7C
- | Wall mounted or cabinet
- | Expandable up to 100 units
- | Low maintenance

 Auto-diagnostic	 web server	 Datalogger	 Modular
 Intelligent cooling	 Sending alerts	 Remote configuration	 Ethernet Modbus

SVGm
 Static Var generator



- | Inductive reactive and capacitive compensation
- | From 0,7L to 0,7C
- | 30 to 400 kvar
- | Up to 480V
- | Immunity against harmonics
- | Wall mounted or cabinet
- | Expandable up to 100 units
- | Low maintenance

 Auto-diagnostic	 Web server	 Datalogger	 Modular
 Smart cooling	 Send alerts	 Remote configuration	 Ethernet Modbus



Our stock at your fingertips
+3000 products

- | Service as a differentiator
- | 48 hour delivery of all our products in stock

TD
 Transformers narrow profile



NEW

From 40 A to 4000 A

TQ
 Transformers split core



NEW

From 100 A to 1000 A

MC1
 Efficient transformers from 150 A to 1500 A



Ø 20 / 30 / 55 / 80 mm

Photovoltaic solar canopies

- | No parking space limit.
- | Power depending on number of spaces
- | Integrated electric vehicle charging (PVS) and compatible with external charging posts (URBAN and Raption)
- | CTE and Eurocode compliant.
- | Easy mechanical assembly of FV modules
- | Pre-designed foundations
- | Channelling of all cabling
- | Waterproofing



| PVS

| PVM

PVS 2

PVS 4

PVM 2

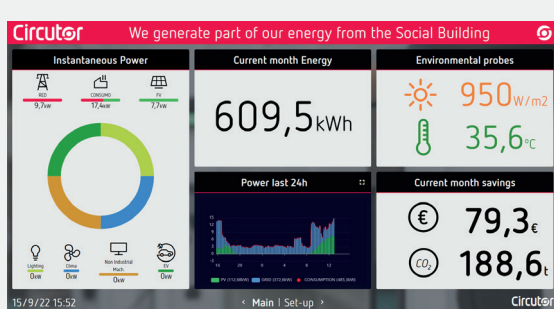
PVM 4



Energy balance monitoring

Line-EDS-iMONITOR

Integrated solution for monitoring consumption and photovoltaic generation for facilities and public administrations.



- | Instantaneous power demanded from the distribution network
- | Photovoltaic instantaneous power
- | Total power demanded by the installation
- | Power generated during the current month
- | Interactive graph of daily energies (Photovoltaic, network, installation and injected)
- | Instant solar radiation
- | Temperature
- | Interactive daily power graph (pv, consumption & network)
- | Monthly savings in euros
- | Monthly emission savings (Tons of CO2)
- | Installation Image
- | Visualization on the corporate website
- | Monitoring the state of charge of EV charging points

MC3
Efficient transformers from 63 A to 250



Ø 7.1 / 14.6 / 26 mm

DCB/DHB
Digital instrumentation



CVM-D41 DC
Power analyzer for DC networks



Instrumentation analogique



Line- TCPRS1+
Converter Ethernet → RS-485



Circutor

Viladecavalls (Barcelona)

Vial Sant Jordi, s/n
08232 - Viladecavalls
(Barcelona) Spain
T. +34 937 452 900
info@circutor.com

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