

EVONITY
ELEGANT POWER



THE **CF** SERIES
Plug into the Future

THE CF SERIES

Experience the revolution of smart charging with Evonity's cutting-edge solutions. Welcome to the next-gen charging network with endless possibilities.

Prepare for the future of energy with our ground-breaking DC ChargeFaction (CF) series. Engineered to adapt to a variety of environments - residential communities, commercial spaces, bustling shopping centers, and large fleet complexes - our smart charging stations deliver unmatched solutions for your needs.

Our flagship models within the DC CF series, exhibit not only impressive charging performance but also assure cost-effectiveness and scalability. These state-of-the-art designs answer the growing demand for electric vehicle compatibility and ensure the effortless expansion of your charging network as your demands evolve.

Choosing Evonity signifies your commitment to a forward-thinking approach to energy consumption. We don't merely offer a product; we extend a partnership, providing all-encompassing support and guidance as you transition towards a more sustainable future. Our objective is to assist you in transforming your spaces into dynamic hubs of renewable energy, positioning you at the forefront of the accelerating electric revolution.

With Evonity at your side, you're poised to meet the escalating demand for electric vehicle charging solutions effectively. Join us in shaping a cleaner, more sustainable, and energy-efficient tomorrow. Together, we can make the advantages of renewable energy accessible and inclusive for all. Allow us to navigate you towards a more luminous, eco-conscious, and electrified future.



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Multi-user access with RFID authentication

Seamlessly grant access through RFID authentication.



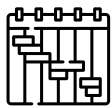
Plug-and-Charge Ready (PnC)

Seamlessly grant access through EVID authentication.



Turbocharged EV Charging

The CF is configurable in steps of 80KW up to 320KW DC Charging Power, but also an extended version is available which is configurable from 320KW up to 840KW of DC Charging Power.



Designed for seamless management and scalability

Our DC chargers are manageable using the cloud based Evonity Cloud backend system.



Extensive connectivity options

Enjoy WiFi, Ethernet, and 3G/4G connectivity, along with OCPP 1.6j and OCPP 2.0.1 compatibility.



EMS Integration with MODBUS TCP

Can be integrated into existing or new energy management systems using Modbus TCP



Future proof

Our DC Chargers are modular designed and built. Which gives you the possibility to upgrade with new functions, both with soft and hardware in the future.



Advanced Loadbalancing

Different loadbalancing techniques are available, ranging from static, energy meter but also advanced EMS loadbalancing.



Multi Slot Design















2 to 8 slot flexible design with future gradually upgrade possibilities



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Discover the ideal DC CF configuration, precisely crafted to align with your specific sustainability and electrification aspirations. Personalize your journey towards a more sustainable future by choosing the DC CF model that best complements your distinct needs. This paves the way for a future where energy-efficiency is realized according to your unique vision.

All our products can be configured with several options like: Ethernet/3G-4G/Wifi connectivity, OCPP compliance, MID Certified energy meters for legally accepted and accurate invoicing purposes, RFID, Load Balancing, Charge scheduling, Solar charging, Over the air Updates, Payment terminal integration,...

DC Charger Model	CF Series		
Mounting			
Material	Coated Aluminium Alloy and Steel combination		
Size (HxWxD) mm	2200 x 1120 x 1120		
Power	Standard: 80kW - 320kW Extended: 80kW - 840KW		
Connection			
Connection Details	1 - 8 x CCS2	1-8 x CHAdeMO	1-4x CCS2 1-4x CHAdeMO
RCCB ¹	AC 30mA (for internal components)		
Load Balancing ²			
Payment Terminal ³			
Sim / 4G / Ethernet			
MID metering ⁴			
OTA ⁵			
RFID			
OCPP			
Solar ⁶			
LED Indicator lights			
E-stop circuit			

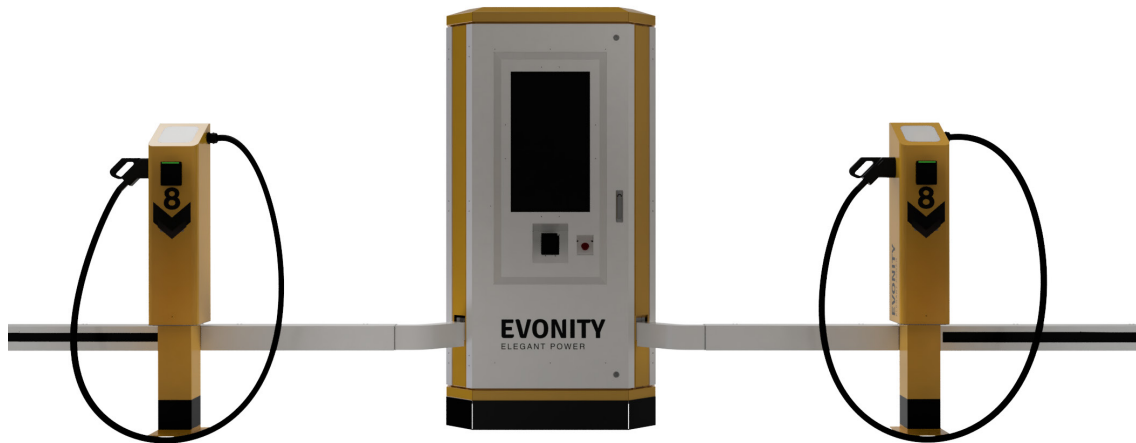
1 Optional Type B RCCB available
 2 External load balancing is possible by using external building energy metering, or external EMS over MODBUS TCP. Internal loadbalancing available in two options: Standard and Advanced.
 3 Optional worldline payment terminal
 4 Optional AC Metering, future upgradeable to DC MID Metering
 4 Including remote monitoring
 6 In combination with certain solar energy meters and/or EMS system integration

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Highlighted options

Payment Terminal

As an official partner of Worldline, Evonity has the capability to incorporate a payment terminal directly into the charger. This offers users the convenience of making instant payments using a credit or debit card, preserving the familiar experience reminiscent of traditional 'gas station' transactions. Our goal is to seamlessly blend the comfort of the past with the technological advancements of the present.



INTERNAL LOAD BALANCING

Just as our chargers are well-equipped to integrate with external energy meters, they also demonstrate impressive proficiency in handling internal load balancing. This powerful feature centers around the intelligent distribution of charging power across the available slots within a single charger.

We leverage advanced algorithmic mechanisms that factor in the charging needs of multiple electric vehicles connected to a single charger. The system effectively evaluates the amount of charging slots, ensuring that each electric vehicle receives an optimized level of charging power, all the while staying within the defined operational parameters.

The charger continuously adapts to varying EV charging demands, enabling an equitable allocation of available power among the slots. This prevents overloads and ensures the efficient utilization of the charger's total capacity. For instance, if one EV finishes charging, the charger redistributes the freed-up capacity amongst the remaining EVs. This ensures a seamless and continuous charging experience, maximizing charging efficiency without causing any strain on the charger.

The difference between the standard internal loadbalancing and the advanced internal loadbalancing is that with the standard loadbalancing charging slots can be 'locked-in' between adjacent used satellites and due to this the max power to 'locked-in' satellites can be limited in power (80-120KW). While with advanced loadbalancing, the unused power supplies can also be re-routed to 'locked-in' satellites which adds another level of flexibility of the overall system.

Depending on the specific use case standard might be the most cost efficient solution while the advanced loadbalancing option creates another degree of flexibility.

Contact us for more information, we will be happy to explain and determine together which solution would fit best for your use-case.

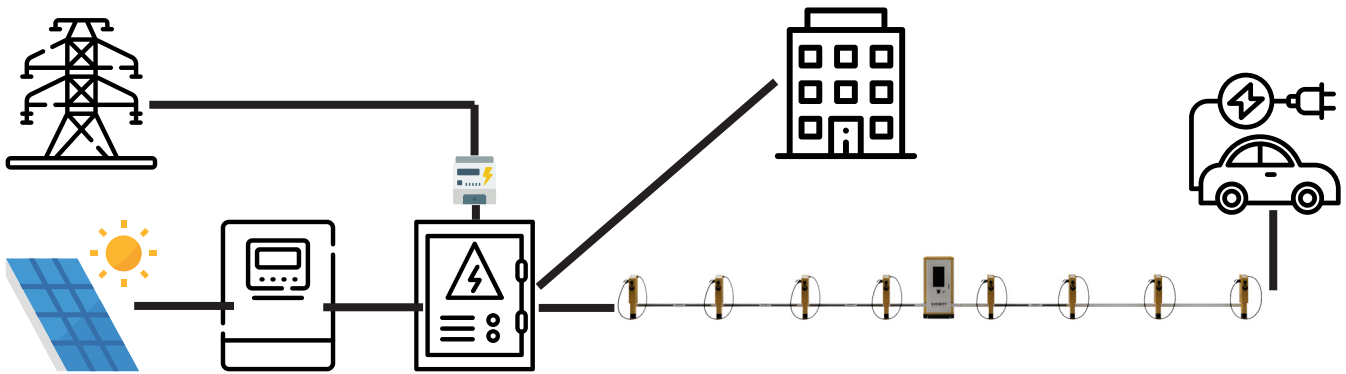
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SOLAR CHARGE

Capitalize on solar energy to power your electric vehicles by leveraging compatible bi-directional energy meters such as the Xemex SCC, or our recommended choice, the EASTRON SDM630. The utilization of a bi-directional energy meter allows the system to identify surplus energy, offering an environmentally friendly and cost-effective charging solution that maximizes your renewable energy resources. If you're contemplating using energy meters from alternate brands, we warmly invite you to get in touch with us to discuss the range of possibilities that we can support.

By evaluating the inputs from the energy meter, including the current - either positive or negative - in conjunction with pre-set parameters, the controller can accurately determine the availability of adequate solar power for charging the electric vehicle. This intelligent approach ensures optimal utilization of solar power, promoting a sustainable charging solution.

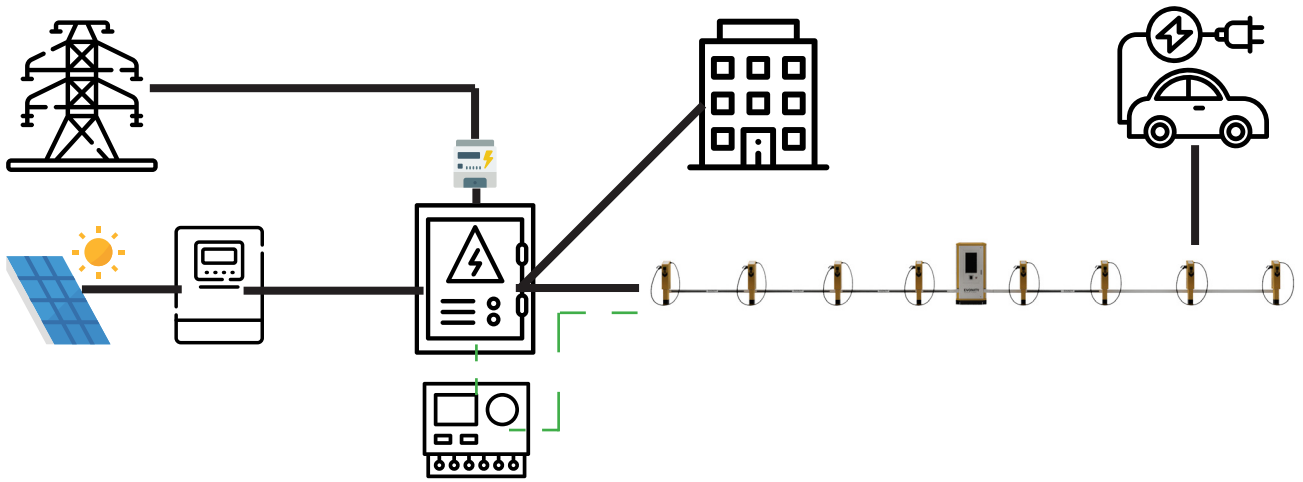


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MODBUS TCP - EMS INTEGRATION

Experience seamless Energy Management System (EMS) integration through the utilization of Modbus TCP, a proven industry-standard protocol. By employing this open architecture network protocol, you can effortlessly connect and communicate with a multitude of devices across your network, streamlining your EV charging infrastructure management. Modbus TCP allows for real-time monitoring and control, improving efficiency, and providing invaluable data for your operations. We encourage you to leverage this technology for advanced, holistic control over your energy consumption and distribution, enabling you to effectively meet your sustainability goals.



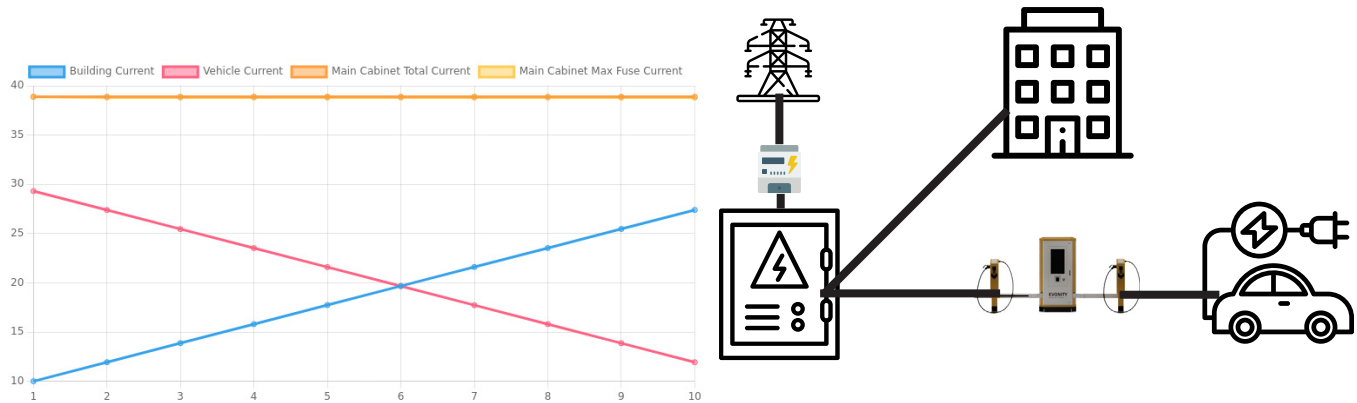
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LOAD BALANCING

Even without a solar panel setup, you can effectively utilize conventional energy meters with our systems. We highly recommend the Eastron SDM630, a reliable and trusted device recognized for its compatibility and performance. Should you contemplate alternative energy meters that match the same Modbus RTU registers as the Eastron SDM630, these are likely to be well-integrated within our infrastructure. We strongly encourage you to get in touch with us for any inquiries or clarifications regarding the use of different energy meters.

Smart implementation of energy meters in our system lays a solid foundation for dynamic load balancing. This crucial functionality ensures balanced power distribution among connected electric vehicles. By examining inputs from the energy meter, including the current, our chargers can efficiently cater to the charging needs of EVs, staying within the constraints of the main fuse and defined parameters. This intelligent power management optimizes energy use, paving the way for an efficient, economical, and robust charging solution.



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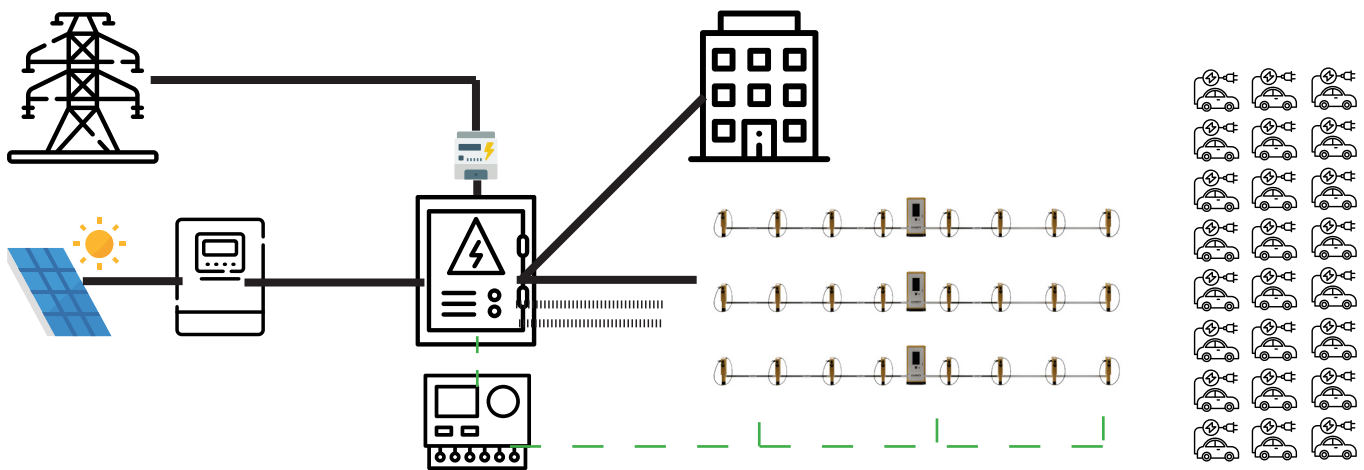
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MULTI CHARGER SETUP AND INSTALLATION

Each DC CF charger draws its power independently from the main electrical cabinet, maintaining a dedicated power supply for efficient performance.

The real novelty lies in the communication between the chargers, achieved via MODBUS TCP. This industry-standard protocol ensures smooth communication between the chargers and the EMS, minimizing complexity and making the setup straightforward.

In this innovative configuration, each charger interacts with the EMS, receiving instructions and sending feedback directly. This not only ensures effective load balancing but also offers an intuitive and efficient management solution, fostering smooth and coordinated operation across the charger network.



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CONTINUOUS DEVELOPMENT

At Evonity, we are firmly committed to continuous innovation, consistently enhancing our offerings with the development of new functionalities. Our valued customers are invited to stay abreast of these advancements by visiting our website at www.evonity.com. Join us as we relentlessly push boundaries in creating a more sustainable and efficient electric future.

CUSTOM BRANDING

We offer custom branding options including distinctive labeling and a range of RAL color choices, bringing a personal touch to our robust solutions. These personalized options are available based on the quantity of your order. For further information or to discuss your unique requirements, please do not hesitate to reach out to us at Evonity.

SPECIFIC PROJECT QUESTIONS?

We welcome our customers to reach out to us with specific requirements concerning their electric vehicle (EV) projects. Whether you need expert advice or assistance in optimally integrating our solutions into your initiatives, the Evonity team is at your disposal. Together, we can design a path that best suits your unique EV objectives.



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Product specifications







GENERAL

OPERATING TEMPERATURE:	-25°C / +55°C (output derating > 45°C)
RELATIVE HUMIDITY:	0% - 95% (non condensing)
ELECTRICAL SAFETY CLASS:	I
DEGREE OF PROTECTION:	IP54
MECHANICAL IMPACT:	IK10
INSTALLATION SITE:	Indoors and outdoors
INSTALLATION ALTITUDE:	No de-rating below 2000m a.s.l
COOLING:	Forced air cooling
STANDBY POWER CONSUMPTION:	± 150 W (depends on configuration and options)
NOISE EMISSION:	≤70 db

CERTIFICATIONS/STANDARDS

CE COMPLIANT:	
ISO 15118 COMPLIANT:	

ELECTRICAL

EFFICIENCY:	≥ 95 %
CHARGING CAPACITY:	80kW – 840kW (in steps of 40kW)
DC OUTPUT VOLTAGE:	350 – 1000VDC
DC MAX. OUTPUT CURRENT:	250ADC - optional 375ADC¹
NOMINAL VOLTAGE:	3PH+N 400VAC +/- 10%
NOMINAL CURRENT:	150A – 1.575A
NOMINAL FREQUENCY:	50Hz
CONNECTION TYPE:	CCS2 ²
CHARGING CABLE LENGTH:	Standard 3,5m ³
RESIDUAL CURRENT DETECTION:	AC 30mA for internal components ⁴
OVER VOLTAGE PROTECTION:	
UNDER VOLTAGE PROTECTION:	
OVER LOAD PROTECTION:	
SHORT CIRCUIT PROTECTION:	
EARTH LEAKAGE PROTECTION:	
OVER TEMPERATURE PROTECTION:	

¹ Standard 250ADC with boost up to 310ADC, optional 375ADC with boost up to 410ADC power.

² (CHAdeMO optional)

³ 5m and 7m optional

⁴ External type B RCCB required (can be offered optionally)

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COMMUNICATION

CONNECTIVITY:

WIFI, ETHERNET, 4G

COMMUNICATION PLATFORMS:

EVONITY / OCPP1.6J / OCPP2.0.1

OPTIONS

PAYMENT TERMINAL:



CAMERA SURVEILLANCE:



CONCRETE BASE FOR INSTALLATION:



COLOR CUSTOMIZABLE INCL. LOGO'S:



RCCB RESIDUAL CURRENT CIRCUIT BREAKER TYPE B:



CABLE GUIDING SYSTEM FOR THE CHARGING CABLES:



5M CHARGER CABLE INSTEAD OF STANDARD 3M:



7M CHARGER CABLE INSTEAD OF STANDARD 3M:



CHADEMO CONNECTOR (INSTEAD OF CCS2 CONNECTOR):

Flexible design and modularity

With the current logistics issues regarding the global chip problem and past pandemic, we are equipped to modify our used chipsets blazingly fast and act accordingly to the market need and demand. Both hardware and software is developed in-house in Belgium making us much more agile in development and future upgrades.

Need to know more?

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 www.evonity.com



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