FIMER

Charging solutions for electric vehicles

We are committed to providing our contribution in order to achieve the global community's world, as the creation of a sustainable future.

In a global scenario where the demand for renewable energy is constantly growing, we are among the leaders concerning the manufacturing of energy conversion solutions worldwide.
We are committed to make our customers able to provide greener and smarter energy.
The focus of our goal is based on our experience as the world's leading manufacturer of solar inverters. Therefore our wish is to foster the materialization of an era marked by clean and sustainable energy, through innovative new concepts in both energy production and consumption.
Our headquarters in Vimercate (Italy) are designed to be an example of sustainability, with a 1 MW photovoltaic system and the best technologies in the field of geothermal energy.
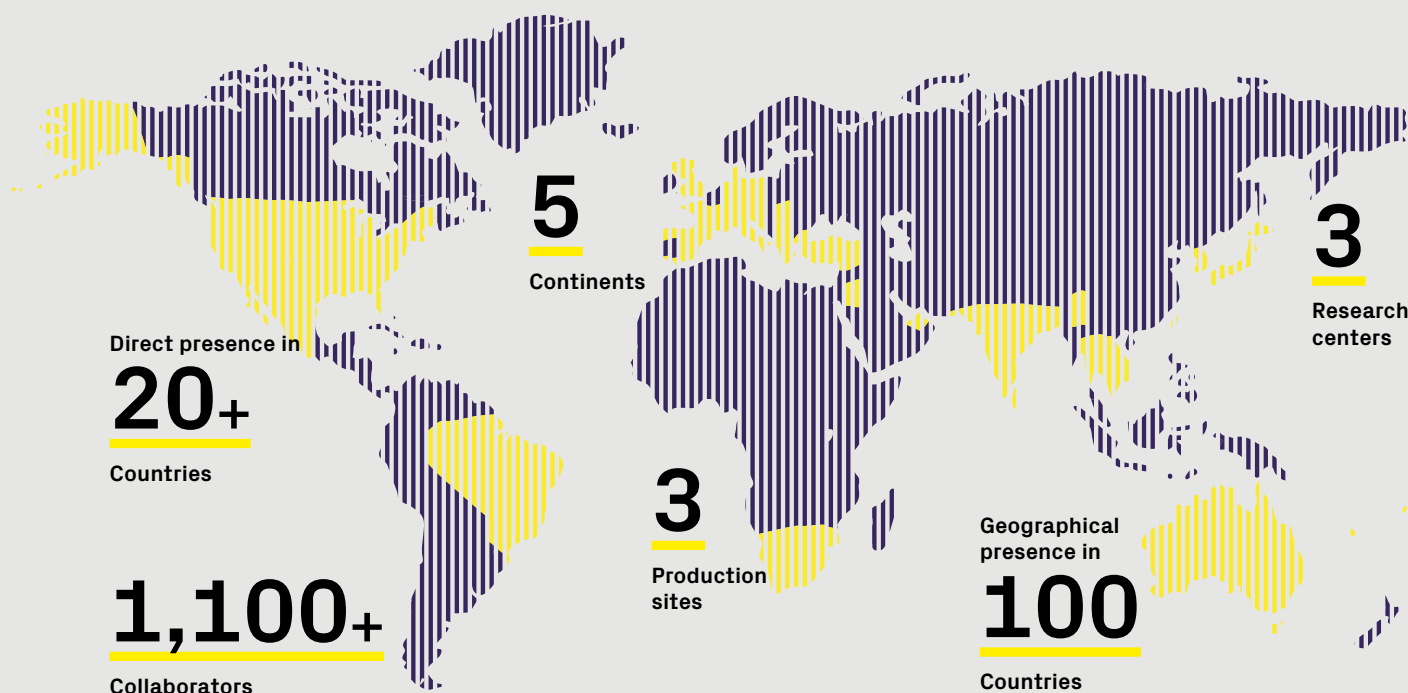Thanks to these characteristics, today we are one of the few Zero impact companies in the world.

Contents

A Global reality, Made in Italy

Operating in more than 20 countries, with over than 1,100 collaborators and one of the broadest solutions portfolio, we are now one of the leading manufacturers of energy conversion systems, ready to listen and face every challenge in every corner of the world.

Research & Development, the main production plants and all the main decision-making processes take place in Italy. We have a common goal that goes beyond all borders: to expand Italian technological excellence to the whole world.

5
Continents

3
Research centers

Direct presence in
20+
Countries

3
Production sites

Geographical presence in
100
Countries

1,100+
Collaborators

Our solutions are based on over 80 years of experience and continuous technological advances.
Standardized, certified and expandable: the production processes applied and the plants in which the inverters are manufactured play a key role in ensuring the high quality of our offer. Engineering excellence, rigorous quality and testing standards are confirmed by our global certifications; we strive to achieve the highest levels of quality in every aspect of our business.

Certified Partners to ensure high quality and a reliable service at a global level.
The excellence of the Made in Italy concept also extends to our Service Partner Network. We select the Partners according to their professionalism and reliability and we offer pre-and post-sales services, Customer support, webinars and constant education. We have a network of certified and trained partners, who know the market inside out and are available to propose our solar and e-mobility solutions, tailored to local regulations and specific needs.

Our charging solutions

We are shaking up the future of mobility as we lead the way in the electric era.

The electric mobility's global market continues its unstoppable growth, both in terms of registrations of "hybrid" (PHEV) and "full-electric" (BEV) vehicles and, at the same time, the need to offer charging infrastructures is increasing. Since 2017, we have been working with the main players in electric mobility, developing and manufacturing charging solutions for electrically powered vehicles, and we do so by listening to the needs of future generations of vehicles. We have developed devices, both in DC and in AC, designed to meet the diverse needs of users, who are seeking solutions for private, public and commercial use.
Our FIMER FLEXA AC Wallbox, FIMER FLEXA AC Station and FIMER ELECTRA DC Station, all easy to install, certified and customizable, cover today all market demands.

As yet, we have supplied more than 54,000 charging stations, both AC and DC, developed on specific needs of our Customers.

We are also working on innovative platforms that will provide the level of service, technology, and innovation expected in a rapidly evolving market.
We are ready to take on the demands of this dynamic sector as protagonists, to confirm our vision of a sustainable future that sees us at the forefront of a New Age of mobility.

+54,000
EV charging stations installed

A complete portfolio of EVI solutions for a super-charged e-mobility

We lead the creation of a sustainable future with flexible and innovative electric vehicle charging solutions: a complete range, both in AC and in DC, suitable for different types of applications and customer needs, in residential, commercial and public context.

Solutions for residential and private applications

The best EV charging solution to be installed in a private context is **FIMER FLEXA Wallbox**, the AC charging device, available in three models**: Stand Alone, Future Net** and **Inverter Net** with power up to 22 kW.

FLEXA AC Wallbox offers different configurations, and can be easily installed in any residential context, indoor or outdoor, by maintaining high safety standards. Installed on its **FIMER FLEXA Stand-Basic**, available in both single and double-charging-point mode, the AC Wallbox **is suitable for any positioning needs.**

Solutions for C&I and public applications

Designed for commercial and public installations, **FIMER FLEXA AC Station** is suitable to charge, in alternating current, one or two vehicles simultaneously, each with power up to 22 kW. Designed for severe environmental conditions.

FIMER FLEXA AC Station is available in three models**: Stand Alone, Local Controller** and **Future Net**.

Solution for <u>infrastructural</u> applications

FIMER ELECTRA DC Station is the next generation fast charger for electric vehicles, both in DC and AC **(up to 150 kW$_{DC}$ and 43 kW$_{AC}$).**
It is a real conversion station, whose power can be sized according to the Customer's needs and the availability of the grid.

FIMER ELECTRA DC Station is specifically designed with a modular architecture to ensure maximum flexibility and customizable solution.

Charging solutions for <u>residential</u> and <u>private</u> applications

FIMER FLEXA
AC Wallbox

FIMER FLEXA AC Wallbox is an EV charging device designed for residential applications and private parking, which can be installed on a wall or on a dedicated stand.

FIMER FLEXA AC Wallbox offers different configurations, depending on **connectivity** (Stand Alone, Inverter Net and Future Net models), **power** (from 3.7 kW to 22 kW) and **connection to the vehicle** (T2 cable and socket and T3A socket).

Main features:

Our Wallbox is ideal for private use: installed in the garage or in the common courtyard, it allows to charge your vehicle in a simple way, making it **faster** and **safer** than a traditional domestic socket.

Robust and safe
IP 55, IK 08, Antitamper.

Eco-friendly
Case and packaging made of 100 % recycled materials.

Flexible
Available in various configurations to meet different charging needs.

Reliable
Built-in backup power via SuperCap.

Customizable
Different levels of personalization to meet customer demands.

Dynamic
Adjusts charging power to avoid exceeding supply limits.
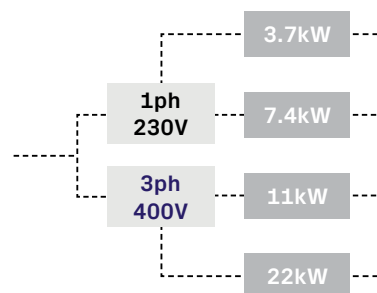
T3A socket

T2 socket

T2 cord

Options

3.7kW

7.4kW

11kW

22kW

1ph 230V

3ph 400V

Models

Stand Alone
Future Net
Inverter Net

Each model of FIMER FLEXA AC Wallbox has the following characteristics:

Charging mode: Mode 3

Backup via SuperCap

T2 plug, T2 or T3A socket

CT sensor included in monophase versions

**Power output**
3.7 kW, 7.4 kW, 11 kW, 22 kW

Status indication via LED

In applications where multiple charging points are required, FIMER FLEXA AC Wallbox provide a Master/Slave configuration allowing a competitive, smart and efficient operation thanks to its built-in load management system.

The Master/Slave configuration consists of connecting a Future Net model with multiple Stand Alone models up to a total of 32 devices through an RS-485 connection.

Master / Slave function.

Master	Slave	Slave	Slave
Future Net	Stand Alone	Stand Alone	Stand Alone

RS-485   RS-485   RS-485

Parking
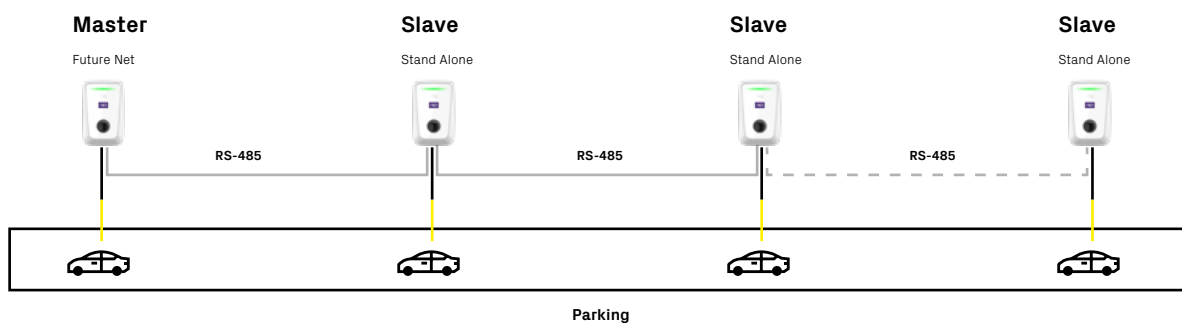
Simple and intuitive interface: the LED color identifies the status of the device:
- Green: ready to recharge
- Blue: charging

Different configuration possibilities: Cable version has integrated plug

Stand Alone

The Stand Alone FIMER FLEXA AC Wallbox is the competitive solution that integrates all the necessary functionalities to guarantee **easy and fast charge** of the EV.
Its main features are:

- Plug-in
- Load management
- BLE
- Master/Slave
- RFID (local)
- Local app (MyFIMERwallbox)

Future Net

The Future Net model **boosts connectivity**, allowing connection to any backend through OCPP protocol, enabling charging service management.
Its main features are:

- OCPP 1.6 Json
- Ethernet
- Modem 3G/4G
- Wi-Fi
- RFID (MSP)
- Master/Slave
- Load management

Inverter Net

The Inverter Net FIMER FLEXA AC Wallbox integrates with the Battery Energy Storage of our photovoltaic inverter REACT2 for a **fruitful usage of your own energy**.
Its main features are:

- Plug-in
- RFID (local)
- BLE
- Local app and platform (Aurora Vision®)
- Self-consumption optimization thanks to the integrated BES

Technical data

FIMER FLEXA AC Wallbox model	Stand Alone / Inverter Net / Future Net			
Maximum power	**3.7 kW**	**7.4 kW**	**11 kW**	**22 kW**
Standard	IEC 61851-1:2017, IEC 61851-21-2:2018			
Charging method	Mode 3			
Available outlets	5m Cord (T2) or Socket (T2 or T3A)			
Power system	1P + N + PE	1P + N + PE	3P + N + PE	3P + N + PE
Rated voltage [1]	230 V_{AC} ± 10% 110 V_{AC} L-G 220 V_{AC} L-L	230 V_{AC} ± 10% 110 V_{AC} L-G 220 V_{AC} L-L	400 V_{AC} ± 10% 480 V_{AC} ± 10%	400 V_{AC} ± 10% 480 V_{AC} ± 10%
Frequency	50/60 Hz			
Rated current	16 A	32 A	16 A	32 A
Rated impulse withstand voltage (Uimp)	4 kV			
Rated withstand short-circuit current (Isc)	10 kA			
Pollution degree	PD2			
EMC classification	Class B emissions			
Protective measures against electric shock	Class I			
Connection to the supply network	Permanently connected			
Grounding system type	TT or TN (both with PE)			
Installation	Indoor/Outdoor			
Fixed or removable installation	Fixed			
Overvoltage category	III			
IP protection rating	IP 55			
IK protection rating	IK 08			
Case material	100% recycled plastic			
Dimensions	300 x 480 x 145 mm (Socket), 300 x 480 x 220 mm (Cord)			
Weight	7 kg (Socket), 8.5 kg (Cord)			
Operating temperature	-25....+50°C			
Storage temperature	-25...+70°C			
Humidity	0...95% (non-condensing)			
Altitude	Up to 2000 m			
Product intended for use by	Unskilled persons			
Positioning in area with	Non-restricted access			
Magnetothermal protection	Not included			
Differential protection	Not included (equipped with 6 mA_{DC} RCM)			
Energy meter	Compatible with external MID meters or CT sensor			
Certification [2]	CE, RCM. UL, TR:2015, VDE AR-N 4100			

Specific Features

FIMER FLEXA AC Wallbox model	Stand Alone				Inverter Net				Future Net			
Maximum power	**3.7 kW**	**7.4 kW**	**11 kW**	**22 kW**	**3.7 kW**	**7.4 kW**	**11 kW**	**22 kW**	**3.7 kW**	**7.4 kW**	**11 kW**	**22 kW**
Bluetooth	•	•	•	•	•	•	•	•				
RFID reader	•	•	•	•	•	•	•	•	•	•	•	•
OCPP									1.6 Json	1.6 Json	1.6 Json	1.6 Json
3G/4G connection									•	•	•	•
Ethernet connection									•	•	•	•
Wi-Fi									•	•	•	•
Status LED	•	•	•	•	•	•	•	•	•	•	•	•
CT meter included	•	•			•	•			•	•		

1) Please contact FIMER to check the availability of different rated voltages
2) Please contact FIMER to check the certification status

Charging solutions for C&I and public applications

FIMER FLEXA
AC Station

The solution for commercial and public applications.

FIMER FLEXA AC Station is the perfect solution for every application field, from residential to C&I, from corporate to public parking. It offers different configurations depending on connectivity (Models: Stand Alone, Local Controller, Future Net) and power (2x22kW or 22+3.7 kW) with the possibility to charge up to two electric vehicles simultaneously.

Our station offers a combination of attractive design, flexibility and efficiency.
FIMER FLEXA AC Station is equipped with two T2 sockets, or T2 and T3A sockets on request, offering a quick charge.

The main characteristics are:

Robust
Stainless steel casing, IP 54, IK 10.

Versatile
You can choose between different models for Plug-in operation or with authentication via RFID or via backend (OCPP 1.5 and 1.6 Json).

Complete
Includes all protections, monitoring and diagnostic systems.

Customizable
You can customize the colors, display graphics and add stickers with your logo.

T2 shutter socket

Stand Alone

The Stand Alone model is the competitive solution that integrates Plug-in functionality to guarantee an **easy and quick charge** of the electric vehicle.

Key features:

🔌	Plug-in	💡	LED status

Local Controller

The Local Controller model integrates the possibility of programming RFID cards in full autonomy to provide **local control of access** to the charging service.

Key features:

📇	RFID (local)	💡	LED status
1023	OLED display 2x20		

Future Net

The Future Net model adds **connectivity** to the station by allowing connection to a backend, enabling charging service management.

Key features:

☁	OCPP 1.5 and 1.6 Json	📇	RFID (MSP)
👆	4.3" TFT display	💡	LED status

Technical data

FIMER FLEXA AC Station model	Stand Alone		Local Controller		Future Net	
Socket type	T2-T2	T2-T3A	T2-T2	T2-T3A	T2-T2	T2-T3A
Standard	IEC61851-1					
Charging method	Mode 3					
Maximum power per socket	22 kW	22 kW for T2 3.7 kW for T3A	22 kW	22 kW for T2 3.7 kW for T3A	22 kW	22 kW for T2 3.7 kW for T3A
Power system	3P + N + PE					
Rated voltage [1]	$400\ V_{AC} \pm 10\%$					
Frequency	50 Hz - 60 Hz					
Rated current	64 A	48 A	64 A	48 A	64 A	48 A
Rated impulse withstand voltage (Uimp)	4 kV					
Rated short-circuit current (Isc)	10 kA					
Pollution degree	PD2					
EMC classification	Class B emissions					
Protective measures against electric shock	Class I					
Connection to the supply network	Permanently connected					
Grounding system type	TT or TN (both with PE)					
Installation	Indoor/Outdoor					
Fixed or removable installation	Fixed					
Overvoltage category	III					
IP protection rating	IP 54					
IK protection rating	IK 10					
Enclosure material	Stainless steel AISI 304					
Dimensions	1315 x 437 x 293 mm					
Weight	48 kg					
Operating temperature	-25....+50°C					
Storage temperature	-25...+70°C					
Humidity	0...95% (non-condensing)					
Altitude	Up to 2000 m					
Product intended for use by	Unskilled persons					
Positioning in area with	Non-restricted access					
Magnetothermal protection	Included (2 x MCB 4P D40 10 kA)	Included (MCB 4P D40 10 kA + MCB 2P D20 10 kA)	Included (2 x MCB 4P D40 10 kA)	Included (MCB 4P D40 10 kA + MCB 2P D20 10 kA)	Included (2 x MCB 4P D40 10 kA)	Included (MCB 4P D40 10 kA + MCB 2P D20 10 kA)
Differential protection	Included (2 x RCD 4P Type A 40 A 30 mA & RCM 6 mA_{DC})	Included (RCD 4P Type A 40 A 30 mA & RCM 6 mA_{DC} + RCD 2P Type A 25 A 30 mA & RCM 6 mA_{DC})	Included (2 x RCD 4P Type A 40 A 30 mA & RCM 6 mA_{DC})	Included (RCD 4P Type A 40 A 30 mA & RCM 6 mA_{DC} + RCD 2P Type A 25 A 30 mA & RCM 6 mA_{DC})	Included (2 x RCD 4P Type A 40 A 30 mA & RCM 6 mA_{DC})	Included (RCD 4P Type A 40 A 30mA & RCM 6 mA_{DC} + RCD 2P Type A 25 A 30 mA & RCM 6 mA_{DC})
Energy meter	MID certificate					
OCPP	-	-	-	-	1.5 or 1.6 Json	1.5 or 1.6 Json
Internal load manager	•	•	•	•	•	•
Connectivity	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP	Modbus TCP/IP + OCPP	Modbus TCP/IP + OCPP
3G/4G connection	-	-	-	-	•	•
RFID	-	-	RFID (local)	RFID (local)	RFID (MSP)	RFID (MSP)
Status LED	•	•	•	•	•	•
OLED monitor	-	-	•	•	-	-
TFT 4.3" monitor	-	-	-	-	•	•
Certification [2]	CE, RCM					

1) Please contact FIMER to check the availability of different rated voltages
2) Please contact FIMER to check the certification status

Solution for infrastructural applications

FIMER ELECTRA DC Station, for a fast charging

FIMER ELECTRA DC Station is a next-generation device for fast charging of electric vehicles which allows to charge up to three vehicles simultaneously.

Our innovative station is the perfect solution to offer **fast charging service in a smart way.** Different configurations are available depending on power and DC plugs configuration, keeping the same footprint.
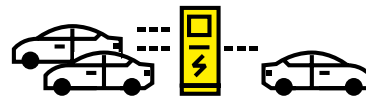
Up to 3 simultaneous charging sessions

Key features of ELECTRA DC Station:

Robust
Protection classes IP 54 and IK 10.

Fast
Up to 150 kW_{DC} and up to 43 kW_{AC}.

Customizable
You can customize the graphics of the display, the color and add stickers with your logo.

Flexible
4 power configurations (60 kW to 150 kW) 3 DC cable combinations (CCS2 and CHAdeMO).

Connected
OCPP 1.6 Json protocol, Ethernet, GSM/3G/4G, WLAN.

Available
Up to three simultaneous charges.

AC — Type 2 | DC — CCS | DC — CCS

AC — Type 2 | DC — CHAdeMO | DC — CHAdeMO

AC — Type 2 | DC — CHAdeMO | DC — CCS
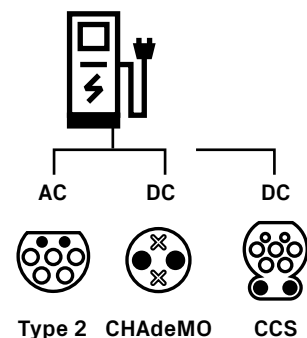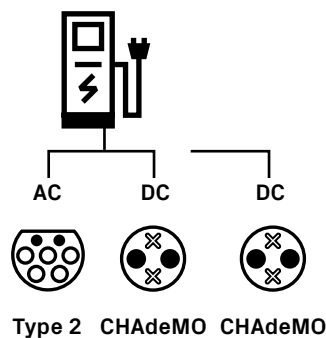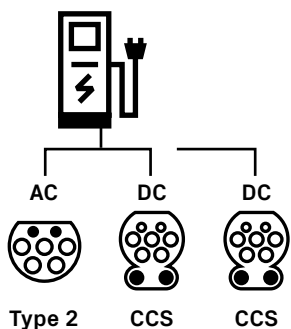
Graphical user interface for charging status: 7" display for excellent readability
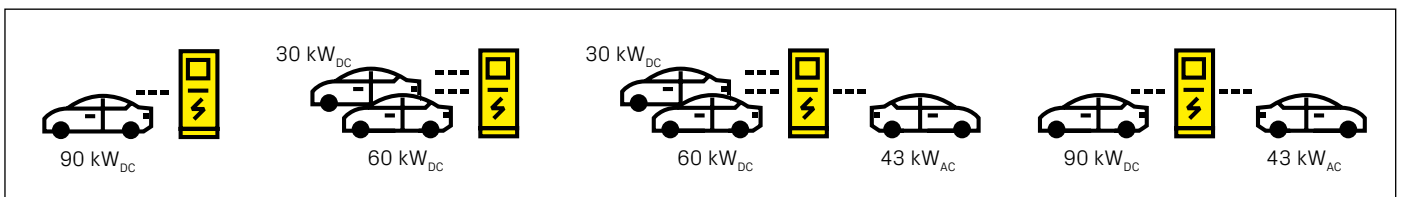
Depending on the number of vehicles connected to the DC outputs, the station distributes its maximum power dynamically.

This picture refers to a charging station with a maximum power of 90 kW$_{DC}$ + 43 kW$_{AC}$. When a second vehicle connects to the DC plug, power is dynamically shared between the two vehicles. In case two vehicles are charging and one of them concludes, the maximum power no more in use returns immediately available to the other vehicle, with an instant switching.

Technical data

| FIMER ELECTRA DC Station model	60	90	120	150
Input				
Rated supply voltage [1]	400 V_{AC} ± 10% (3P + N + PE)			
Grounding system type	TT or TN (both with PE)			
Maximum rated power	110 kVA	143 kVA	176 kVA	210 kVA
Maximum rated current	159 A	207 A	255 A	304 A
Power factor	0.99			
Maximum efficiency	>95%			
THD	<5%			
Frequency	50-60 Hz			
Output				
Charging method	Mode 3, Mode 4			
Available outlets	CHAdeMO, CCS2, T2			
Maximum AC output power T2	43 kW @ 400 V, 63 A			
Rated AC output voltage T2	400 V_{AC} ± 10% [1]			
Rated AC output current T2	63 A			
Maximum DC output power CCS	60 kW	90 kW	120 kW	150 kW
Rated DC output voltage CCS	150 – 900 V_{DC}			
Maximum DC output current CCS	200 A			
Maximum DC output power CHAdeMO	60 kW			
Rated DC output voltage CHAdeMO	150 – 500 V_{DC}			
Maximum DC output current CHAdeMO	125 A			
Mechanical data				
Dimensions	697 x 1853 x 644 mm			
Charging cable length	3 m			
Weight	333 kg	355 kg	378 kg	400 kg
IK protection rating	IK 10			
Enclosure material	Galvanised steel			
Pollution degree	PD3			
Environmental data				
IP protection rating	IP 54			
Operating temperature	-25....+50°C			
Storage temperature	-25...+70°C			
Humidity	0...95% (non-condensing)			
Altitude	Up to 2000 m [2]			
Connection to the mains	Permanently connected			
Installation	Indoor/Outdoor			
Additional Information				
Product intended for use by	Unskilled person			
Positioning in area with	Non-restricted access			
Fixed or removable installation	Fixed			
Protective measures against electric shock	Class I			
Overvoltage category	IV			
Electrical protection included	RCBO, MCB, SPD			
Energy meter	MID certificate			
Network interface	GSM/3G/4G, Ethernet, WLAN (optional)			
HMI	LCD display 7" (buttons for languages selection)			
Supported languages	Italian, English, Spanish, French others on request			
Status LED	Green, red, blue, yellow			
OCPP protocol	1.6 Json			
User authentication	ISO / IEC 14443 A/B MIFARE RFID reader			
Remote SW updates by OCPP	•	•	•	•
Simultaneous charging	•	•	•	•
Emergency button	•	•	•	•
Door opening signal	•	•	•	•
Standard	IEC61851-1, IEC61851-21-2, IEC61851-23, IEC61851-24			
Certification [3]	CE, RCM, UL			

1) Please contact FIMER to check the availability of different rated voltages
2) For installation above 2000 m please contact FIMER
3) Please contact FIMER to check the certification status

Control, monitoring and payment solutions
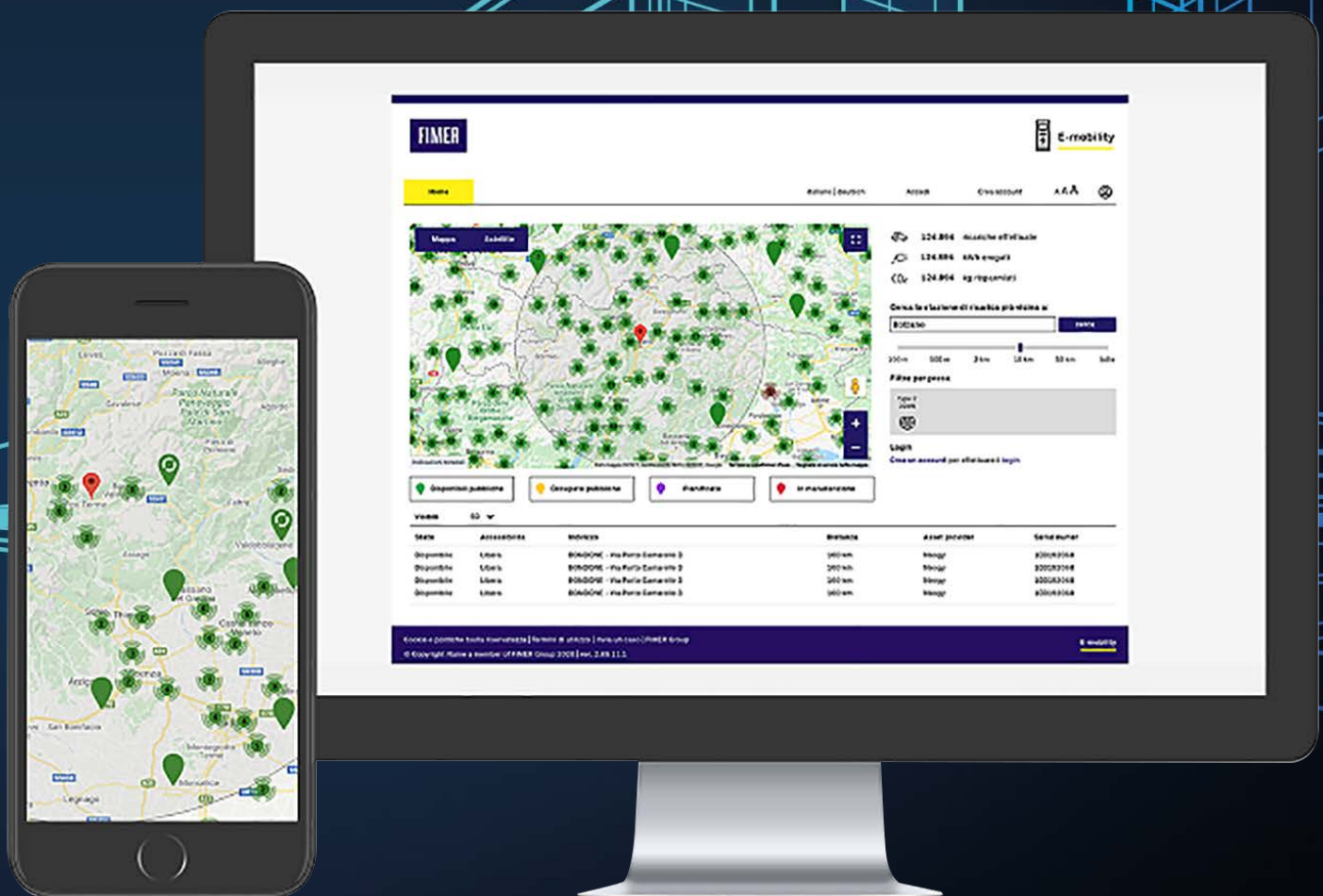
FIMER E-Mobility

A single platform to manage the connectivity and services of FIMER EV charging devices

Available in desktop and mobile version, FIMER E-Mobility offers the possibility to manage and monitor the charging stations, to configure the infrastructure, to geolocate the charging stations on maps updated in real time and to acquire and analyze stations' data.

Through the **FIMER E-Mobility platform** it is possible to:

• Easily configure, manage and monitor all charging stations
• Geolocate charging stations on maps updated in real time and check their status (free, busy, out of order)
• Link RFID cards with each device or contract
• Acquire and analyze EVSE diagnostic and consumption data

With the **FIMER E-Mobility app** the user can:
• Geolocate available charging stations
• Choose the nearest one and book it
• Get directions to the selected station (via Apple Maps, Google Maps)
• Start and stop the charging session
• Monitor the status of the charging session


FIMER MyFIMERwallbox

Designed for the Stand Alone model of the FLEXA AC Wallbox, the MyFIMERwallbox mobile app allows product control and monitoring.

Through the app it is possible to:

• Manage the charging process of the electric vehicle
• Monitor and control the charging status
• Set a power limit
• Update the firmware
• Manage RFID cards
• kWh consumption reports
• Admin and User authorization levels
Available for Android and iOS
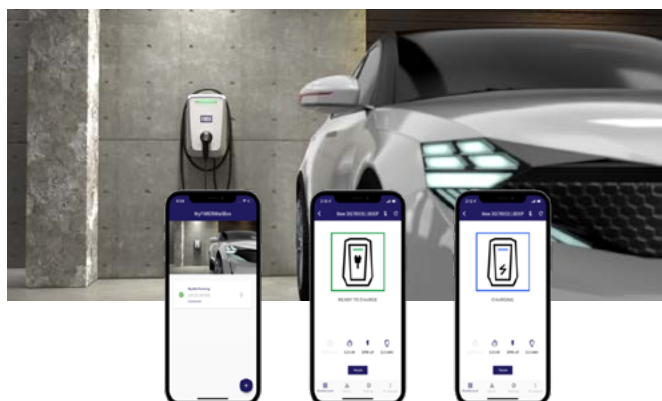
FIMERe4self

Today, more than ever, the charging experience must be smart in the management of payments.

To satisfy this need, FIMER collaborates with Fortech by proposing the e-smartOPT terminal in combination with all our charging solutions, FLEXA and ELECTRA, so **payment becomes easy, fast and without the necessity of App, RFID cards or registration to Web portals**.

The payment of charging sessions can be made through QRcode, vouchers and Mobile Payment that go alongside the more typical forms of payment, such as cards, debit cards and fidelity cards.

Its 12" flat touchscreen monitor with vandal-proof glass, the possibility to choose the voice guidance in 5 languages and the presence of the microphone that allows assistance to be given directly through the e-smartOPT, make the Customer's experience clear, unique and intuitive.

Key features:
- User-friendly interface
- Use without registration
- Customized management of charging programs
- Management of several 12 charging devices with a single e-smartOPT terminal
- Dedicated app for booking, managing and paying for the charging sessions
- Payment by cards, debit cards, private cards, QRcode and vouchers
- Integrated OCPI for roaming to Mobility Service Providers.
- Electronic receipt
- 12" touchscreen monitor with anti-vandal glass
- Voice guidance in 5 languages
- Microphone for remote assistance

FIMER FLEXA
AC Wallbox

FIMER FLEXA
AC Station

FIMER ELECTRA
DC Station

e-smartOPT
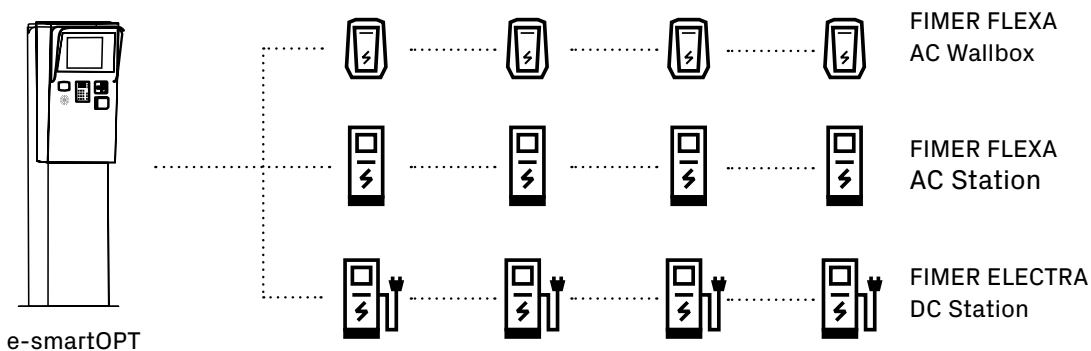
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