ETREL

CHARGING SOLUTIONS

LAYING GROUNDS FOR A LASTING E-MOBILITY

ELECTRIC CARS ARE NOT ECO-FRIENDLY*

*by themselves. They could however contribute enormously to the grid efficiency. This is where we step in. Instead of seeing them as a problem, we see them as a solution for the energy grid.

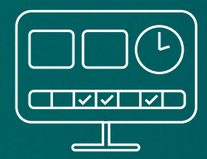
Interactive charging technology

Etrel charging equipment runs on an interactive charging platform. Interactive charging technology maintains a balance between vehicle, building and grid demands.

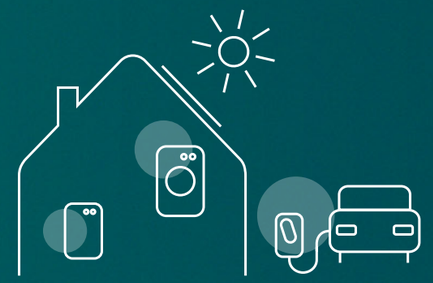
Within the platform, a set of guiding principles enabled by artificial intelligence and system communication capabilities offer the fastest eco-friendly charging in given circumstances without grid connection point overloads.

Interactive charging layers

1 **INTERACTION WITH THE USER**

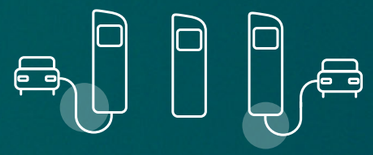


2 **INTERACTION WITH THE BUILDING**

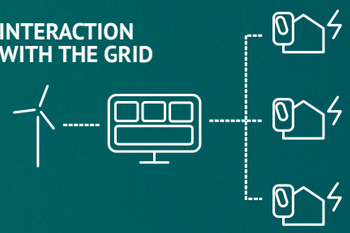


Learn more about interactive charging and our effort to make e-mobility great on www.etrel.com

3 **INTERACTION WITH OTHER CHARGING STATIONS**



4 **INTERACTION WITH THE GRID**



5 **INTERACTION ON A GLOBAL SCALE**

Join us on a mission to create a sustainable future where EV batteries become an essential part of smart grid infrastructure.

INCH HOME

Interactive charging - it is all about efficiency.

INCH Home charger is easily the smartest device in your home. It can remember and predict EV charging habits and help you charge your vehicle by the time you need it, at the lowest possible cost.

When coupled with the Load Guard sensor, the charger can adjust charging power to other consumers to prevent overloads. Easy integration with local power generation, such as rooftop solar panels offers eco-friendly fast charging.

With several connectivity options and open protocol support, the charger can seamlessly integrate with a smart home system.

- Load management algorithms allow safe integration on almost any location without costly upgrades and easy integration with existing PV infrastructure.
- Charging profiles based on use patterns and priority tariffs ensure smooth and cost efficient charging experience in daily interactions.
- Unique magnetic cable holder allows EV drivers to handle and store the charging cable faster and cleaner.

USE CASES

	Home	*Apartment buildings*	*Commercial buildings*	*Hospitality*	*Car Parks*	*Municipalities*
INCH Home	●	●	●			

Max charging power	*7,4 kW (1 x 32 A), 22 kW (3 x 32 A) adjustable*
	Type 2 socket (optional shutter) with a cable lock Type 2 tethered charging cable
Level of protection	***IP 56, IK 10***
Electrical protection	*DC fault current sensor 6 mA + RCD Type A or RCD Type A EV or RCD Type B or MCB char. C*
User identification	*PIN code, RFID, App*, SMS**
Communication	*Ethernet, Wi-Fi or 4G LTE*
EV communication	*IEC 61851 supported, IEC 15118 ready*
Connectivity	*OCPP 1.6 SOAP & JSON, Modbus TCP*
Load balancing	*Yes, Dynamic Load Balancing with Load Guard*
Clustering	*Small cluster of 2 chargers*
Energy meter	*Class 2 energy meter, MID optional*
Smart building integration	*Yes, Modbus TCP*
User interface	*App* or embedded web interface My INCH*
Material	*Aluminium housing, Polycarbonate Lexan cover plate*
Colour options	*White, Graphite Grey*

* when connected with a back-end system

INCH PRO

Communicates with the user and listens to the environment.

Etrel INCH PRO chargers are designed to work with two priorities in mind - to enable the best user experience and to reduce the cost of system operation.

When connected in a cluster, charging power can be distributed intelligently among all connected chargers based on EV characteristics, set priorities and required amounts of energy, with Load Guard, cluster power adjusts to other consumers in the local grid.

- Artificial Intelligence aided charging profiles simplify use and offer more autonomous operation for operator's peace of mind.
- Sturdy design, with shatterproof acrylic glass plate secured in a cast aluminium housing, grants durability and longer operation life.
- "Mix & Match" cluster option allows a combination of different INCH chargers in a single cluster enhancing flexibility on complex locations with a combination of use cases.

USE CASES

	Home	*Apartment buildings*	*Commercial buildings*	*Hospitality*	*Car Parks*	*Municipalities*
INCH Pro	●	●	●	●	●	

Max charging power	*7,4 kW (1 x 32 A), 22 kW (3 x 32 A) adjustable*
	"Type 2 socket (optional shutter) with cable lock Type 2 tethered charging cable"
Level of protection	***IP 56, IK 10***
Electrical protection	*DC fault current sensor 6 mA + RCD type A or RCD Type A EV or RCD Type B or MCB char. C*
User identification	*PIN code, RFID, App*, SMS**
Communication	*Ethernet, Wi-Fi, 4G LTE*
EV communication	*IEC 61851 supported, IEC 15118 ready*
Connectivity	*OCPP 1.6 SOAP & JSON, OCPP 2.0 JSON (upcoming), Modbus TCP*
Load balancing	*Yes, Dynamic Load Balancing with Load Guard*
Clustering	*Yes, with floating master*
Energy meter	*Class 2 energy meter, MID optional*
Smart building integration	*Yes, Modbus TCP supported*
User interface	*App* or embedded web interface*
Material	*Aluminium housing, Polycarbonate Lexan cover plate*
Colour options	*White, Graphite Grey*

* when connected with a back-end system

INCH PRO

INCH DUO

Distinctly different.

INCH Duo is a durable charger, ready for continuous operation in demanding public locations. Ergonomic design and a large display with straightforward charging instructions combined with ad-hoc payment option offer convenience for new users. Optional integration with external sensor devices like parking sensors help enhance infrastructure accessibility and optimise usage patterns.

Multi level load balancing capabilities with cluster connectivity, ensure fair distribution of charging power among plugged-in vehicles while respecting the grid connection point limitations.

- Contactless credit card payment and straightforward user interface deliver simplified charging experience.
- Dynamic power management in clusters contributes to the scalability of charging infrastructure, lowering the initial investment.
- Easy installation with a wide-angle door opening and modular components shorten the field time and simplify maintenance.

USE CASES

	Home	*Apartment buildings*	*Commercial buildings*	*Hospitality*	*Car Parks*	*Municipalities*
INCH Duo			●	●	●	●

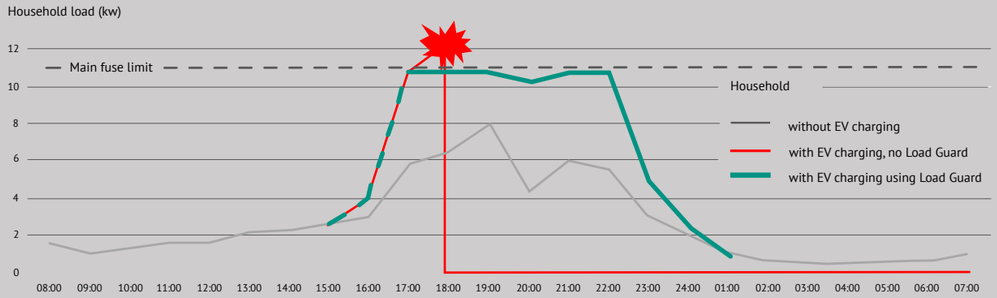
Max charging power	*2 x 22 kW (3 x 32 A per connector) adjustable*
	2 x Type 2 socket with cable lock
Level of protection	*IP 54, IK 10*
Electrical protection	*DC fault current sensor 6 mA + RCD type A or RCD Type A EV or RCD Type B, MCB char. C, 40 A*
User identification	*PIN code, RFID, App*, SMS**
Direct payment	*Yes, with NFC payment terminal*
Communication	*Ethernet, Wi-Fi, 4G LTE*
EV communication	*IEC 61851 supported, IEC 15118 ready*
Connectivity	*OCPP 1.6 SOAP & JSON, OCPP 2.0 JSON (upcoming), Modbus TCP*
Load balancing	*Yes, static and dynamic load balancing with Load Guard*
Clustering	*Yes, with floating master*
Energy meter	*Class 1 MID energy meter*
Smart building integration	*Yes, Modbus TCP supported*
User interface	*App* or embedded web interface*
Material	*Stainless steel with anti-corrosion protection and polycarbonate display cover*
Colour options	*White and black, or grey and black*

* when connected with a back-end system

LOAD GUARD

Load Guard sensor enables INCH chargers to perform dynamic load management based on the building consumption and EV charging demands. Use of Load Guard sensor is essential in situations where multiple charging stations share available power with other consumers in the local grid.

As it measures electric current in both directions, it is capable of sensing any surplus generated by local renewable energy sources, such as photovoltaics. Green energy can be used for faster and cheaper charging, thanks to algorithms in INCH charging stations. Interactive charging, it's all about efficiency.



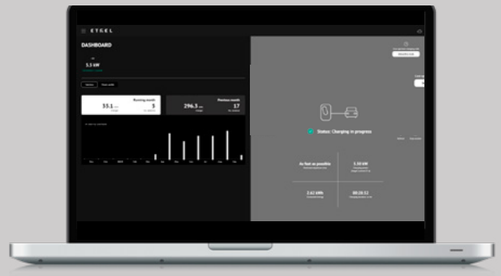
Load Guard monitors the local grid and sends real-time data to the charging station to retain a total load of the installation below the installation rated value.

My INCH DASHBOARD

My INCH Dashboard allows users and operators to monitor and manage charging sessions locally. The web app works on any device in the same network and gives an in-depth insight into charging energy consumption.

By setting parameters in the web app, users enable their INCH charger to additionally optimise charging sessions for lower cost and respect connection limitations.

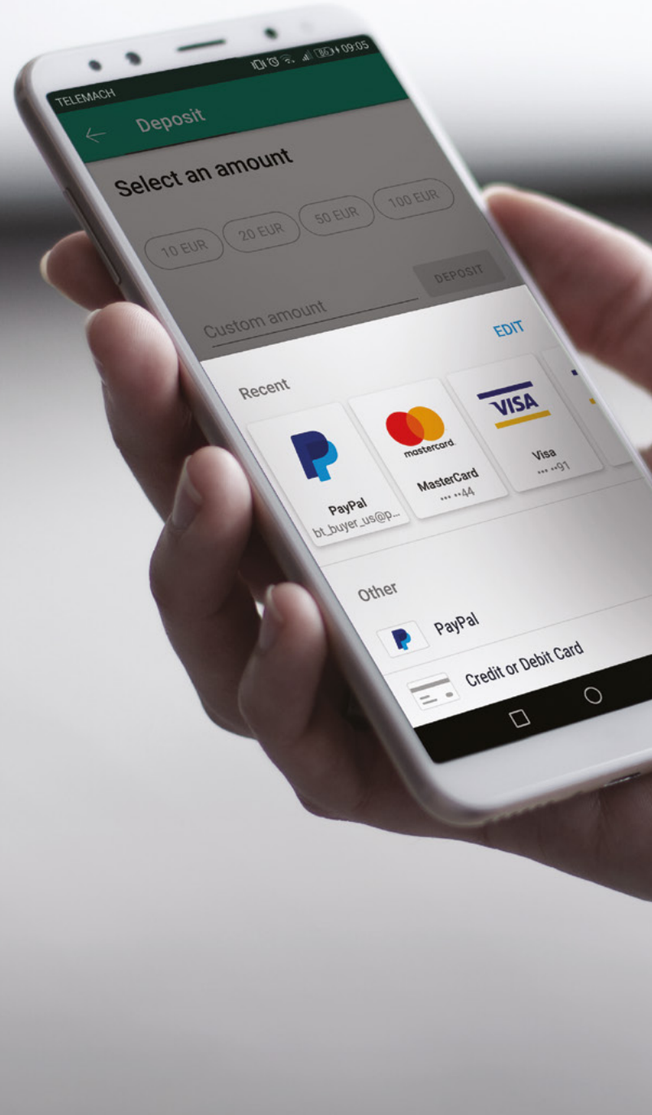
Independent small scale charging clusters can be managed locally through the web interface. My INCH provides a fast and straightforward way to control access, arrange display communication and set on-screen advertising.



INCH DUO

Podpora | Support
+ 386 41 501 1978

EVSE number
SI-5482394



ETREL provides building blocks for a diverse range of e-mobility ecosystems. INCH interactive charging stations combined with OCEAN charging management software, can serve as a backbone of any e-mobility business.

40+

Countries

Etrel solutions are in use in more than 40 countries all over the world.

Scan the code and visit www.etrel.com to learn more about our company.

ETREL
Grosuplje, Slovenia
00 386 1 601 00 75
info@etrel.com
www.etrel.com

ETREL SALES
00 386 1 601 01 75
sales@etrel.com

ETREL SUPPORT
00 386 1 601 01 27
support@etrel.com