DKC ENERGY

POWER FOR INNOVATION

E.CHARGER

THE NEW **MADE IN ITALY** CAR CHARGING SOLUTION

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SUMMARY

A DEDICATED BUSINESS UNIT:

DKC ENERGY

DKC officially enters the field of e-mobility and energy charging, and does so with the **new DKC Energy Business Unit**, dedicated to studying and designing solutions geared towards the future of energy, combining **efficiency with sustainability**. In the aim of offering innovative products, and guided by a forward-looking vision, the Business Unit guarantees **high level quality and functionality**.

Through DKC Energy, DKC is participating in the **sustainable mobility challenge**, for a substantial decarbonisation of transport and more informed use.

In recent years, e-mobility has gained ever more ground, and the market for domestic, public and semi-public car charging stations has significantly increased, due to the need to charge electric vehicles easily and in the shortest time possible.

The electrification of transport is an essential component of this transformation; that's why DKC, a key player in the electrical engineering market, has decided to participate in the change, offering all its professionalism to meet the needs of an increasingly demanding public.

The new Business Unit is an important step, made possible by the work of a **team with specialised skills** and a **strong background in power electronics**. DKC has taken this step ensuring the customary excellence of a passion and **know-how entirely Made in Italy**.

The entire proposal of the new Business Unit is **designed, engineered and manufactured in Italy**, combining knowledge and professionalism so as to confirm DKC's competitiveness in this area too.

Design is handled by the**DKC** Research and Development Centre in **Turin**, the electronics are produced in **Genoa by RGM, a** DKC Group company, while production and assembly take place at the **DKC factory in Rome**.

A **COMPLETE, SAFE** and **EFFICIENT** offer

The E.Charger, available in **16 versions, single-phase up to 7.4KW and three-phase up to 22KW, both with cable and plug or socket**, stands out not only from a technological point of view, but also in terms of appearance, fitting into any environment.

Attractive, smart, functional and intuitive: a product destined to be the forerunner of an entire family of state-of-the-art electric charging products from DKC.

E.Charger also guarantees **total safety**, thanks to a robust construction with **IP54** dust and water **protection** and **IK10 impact resistance** for outdoor applications.

EFFICIENT AND SAFE CHARGING

High design standards guarantee continuous functionality, both indoors and outdoors, making **the car charging station extremely flexible, allowing for different configurations**: wall-mounted or with a metal pedestal on the ground, single or double sided.

EASE OF INSTALLATION

The dual built-in residual current devices make it **quick and easy to install**, with no need for additional devices to be connected.

It also provides for RFID card use,making **Multi-user management** easy. The E.Charger also has a **Hotspot function, accessible via Wi-Fi and IP address**, to quickly and easily carry out the configuration sequence, even in areas where there is no signal.

SOPHISTICATED AND FUNCTIONAL APPEARANCE

All the components fit into a compact design. Special attention is paid to the finish, with elegant details such as the bright red cable ducts and central segment, making the product even more unique. The treated sheet metal substrate, instead, guarantees **durability and resistance to weathering and corrosion**.

The moulded upper part maintains **a modern and attractive appearance**, while the side houses the **control button** for stopping car charging, resetting errors and connection. The terminal compartment for **power and communication cable connection**on the back,is easily accessible.

The **front cover**, designed to be fully customisable as regards colour and with the addition of the customer's company logo, acts as a control panel, with an RFID icon for authentication and **LED lights** indicating system status: charging operation, car connection status and possible fault signalling.

ENERGY PORTAL: a solution for all users at all times

DKC Energy has created the **Energy Portal** to improve system management: a web application that does not require installation on the charging points, where the user can conveniently customise information on the individual charging carried out, entering the energy costs and average vehicle consumption, to check the expenditure and kilometres of autonomy at a glance each time.

Access to the Energy Portal is simple and straightforward: it can be **accessed from any device** without any functional limitations and via a browser, thereby ensuring easy, one-click use.

The **Energy Portal** allows a **complete and 'tailor-made' management system** to be created for the various types of installation and for the varying needs of customers/ end users.

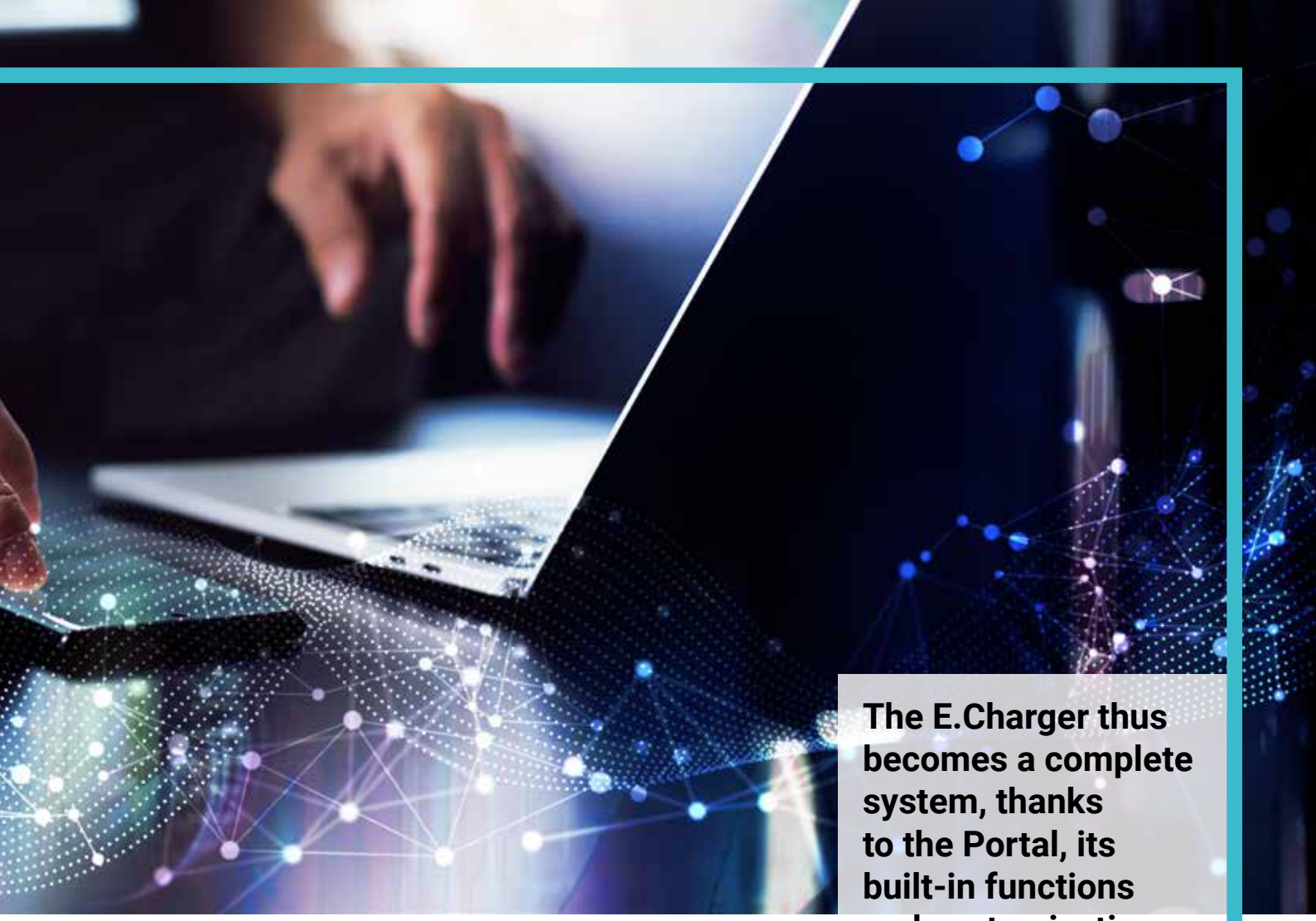
Specific information can be managed and displayed via **different access, configuration and intervention levels**:

DKC Service
Can remotely monitor and operate on **all systems at any level**

Installer
Can manage and access all the **systems he/she installed,** receiving alerts on any malfunctions

"Master" user
Can view the entire system and configure it as desired, expanding and customising the number of E.Chargers and users managed over time. In addition, this user can enable individual 'Driver'users to use certain E.Chargers, set the cost of the electricity supply for each system, and download reports of the charging sessions performed by each charging point, broken down by period and/or user

"Driver" user
By entering the vehicle data, this user can see the points where charging is enabled, view the total number of km charged and receive end-of-charge alerts



The E.Charger thus becomes a complete system, thanks to the Portal, its built-in functions and customisation options.

The Energy Portal is **intuitive and easy to manage,** allowing the user to receive real-time notifications on charging point status via email or on mobile phones via Telegram, and to customise system management in a number of ways.

The application also allows **a report of** of the charging sessions carried out to be **viewed** or **downloaded** by selecting the required data, broken down by individual user or individual E.Charger, limited to a specific period of time.

This function is particularly useful:

for companies providing the charging service to their employees and billing them for it monthly

for the hotel industry which needs to bill guests for charging

for apartment blocks sharing car charging points, so as to pay only for the energy used by their own vehicle

MAIN FEATURES of the E.CHARGER system

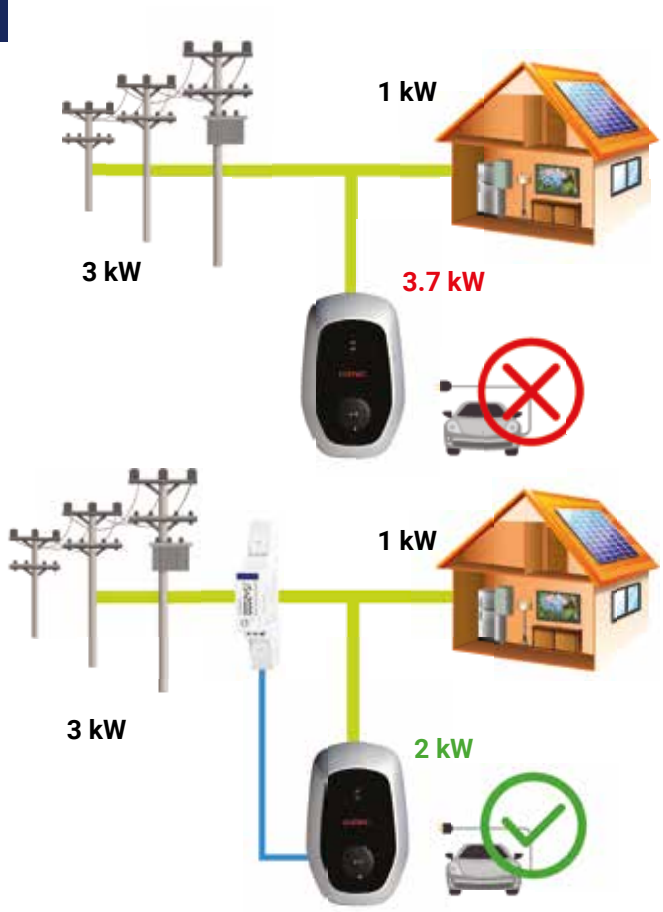
The E.Charger system can be configured via the Energy Portal to manage multiple functions and requirements in a simple and intuitive manner, in just a few steps.

These configurations allow the system to be set up for dynamic load management and balancing, multi-user management with differentiated access, and many other settings and customisation options.

DYNAMIC LOAD MANAGEMENT

In places where there is a contractual power limit (residential, apartment blocks, hotel industry or companies), **DYNAMIC LOAD MANAGEMENT** is achieved with the addition of an **Energy Meter** , which automatically limits the power used to charge the electric vehicle according to the user's contractual power and the instantaneous power used.

This **prevents billing surcharges**, the activation of protective devices and avoids the need to demand a higher electricity supply contract.

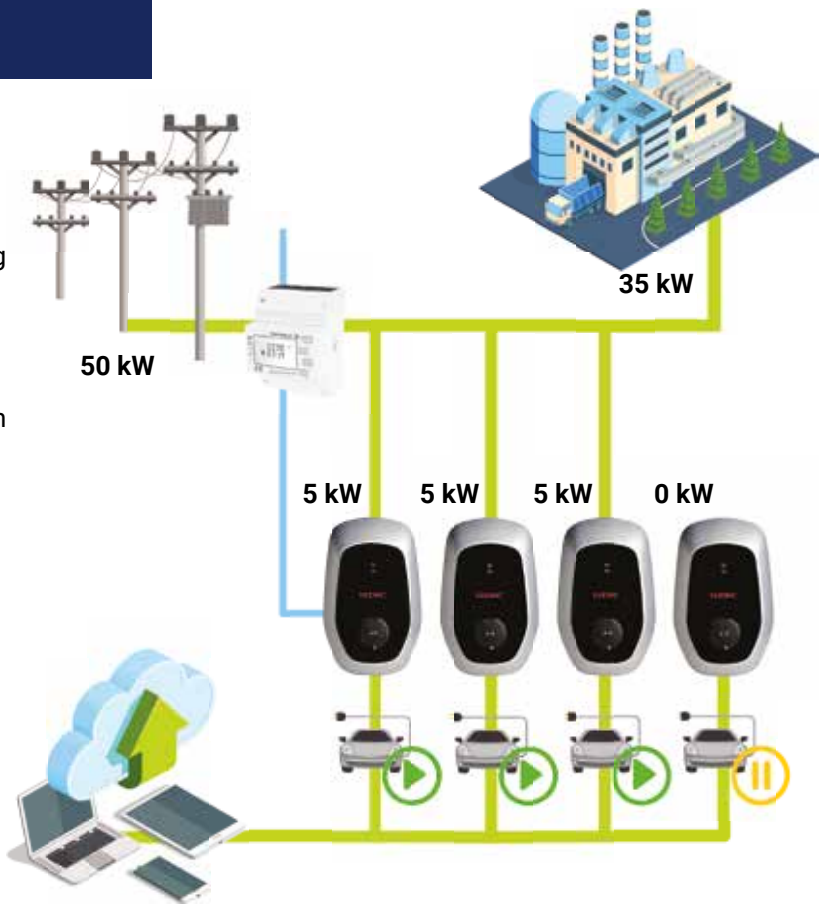


DYNAMIC LOAD BALANCING

For companies and the hotel industry, where multiple car charging points are installed, the System is set up to perform smart load balancing. It can also combine single-phase and three-phase charging points, to respond quickly to the charging needs of the specific organisation.

A single E.Charger (called 'Master') is connected to an energy meter to measure **the company's electricity consumption in real time**; this will send the cloud the available residual power value, which is divided among the various active charging points on the system.

Should the available power not be sufficient to charge all the vehicles present simultaneously, the cloud will perform charging according to arrival priority. This function ensures that cars connected to the E.chargers are always charged, **preventing over-demand for energy** in excess of the supply contract, but above all avoiding potential blackouts.

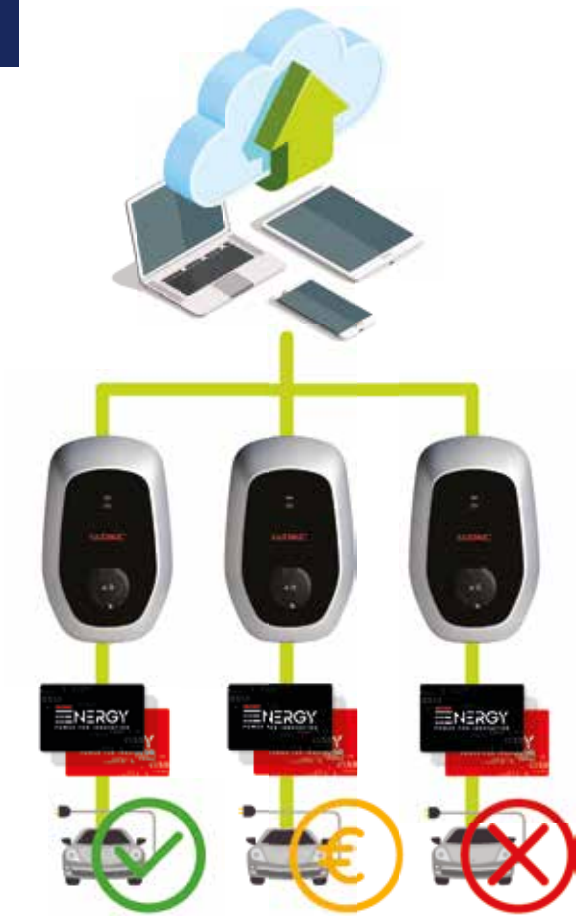


MULTI-USER MANAGEMENT

This function allows **each user** (driver) associated with an assigned RFID card to be **managed differently** .
In addition, it allows the system 'Master' to:

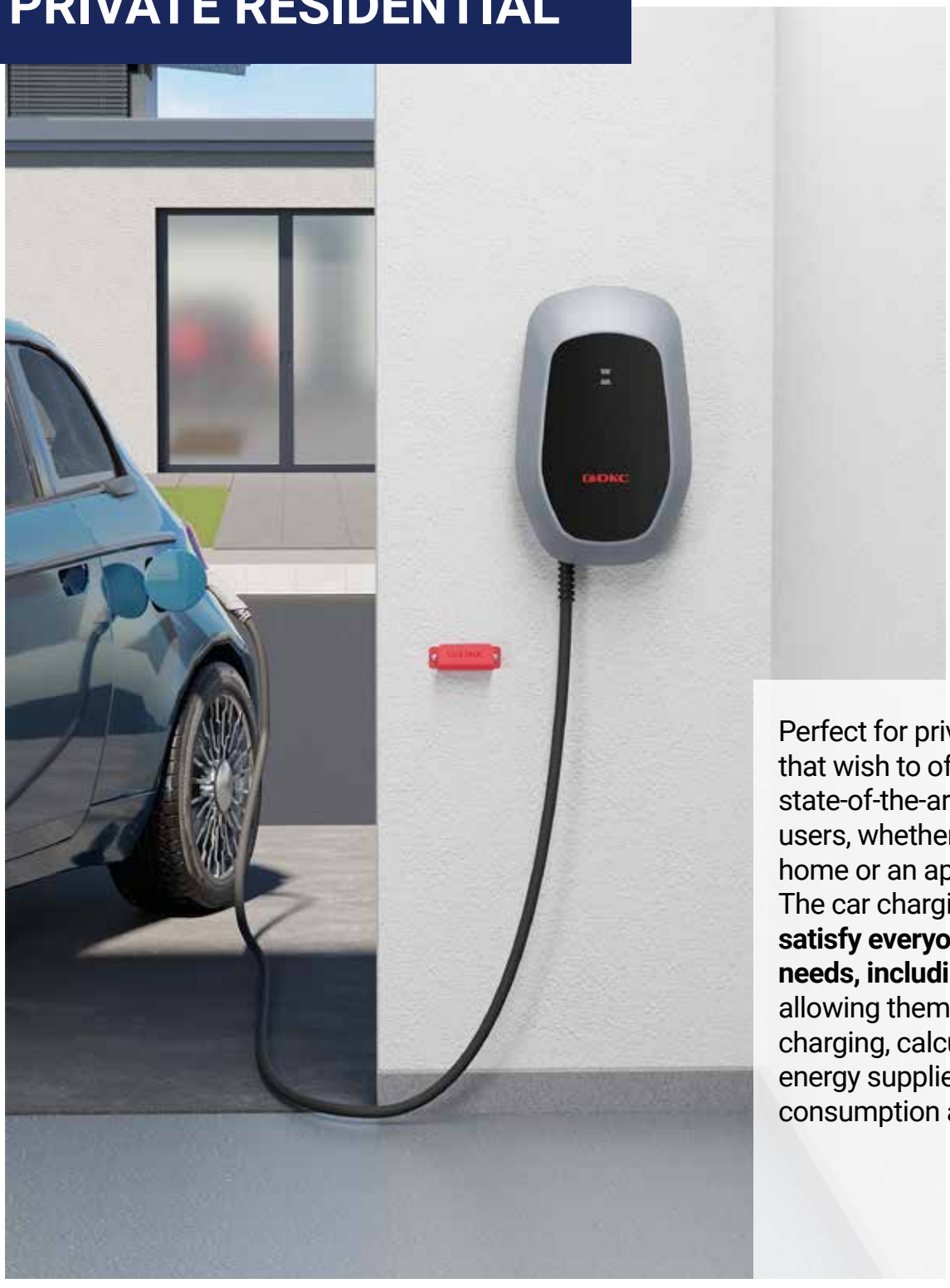
- Enable drivers to use the various E.Chargers
- Enable or disable a driver for use of a specific E.Charger
- Measure the energy supplied to each car/driver and enter it in the accounts

Billing of the charging performed, per user or per E.Charger for the requested period is possible via the Energy Portal. This function is very useful for companies that offer the **charging** service **to their employees and bill the costs on a monthly basis**, or for the hotel industry which needs to bill guests, and even for **apartment blocks with several, shared car charging points** needing to charge occupants specifically for the energy used for their electric vehicle.



ONE SOLUTION, MULTIPLE APPLICATIONS

PRIVATE RESIDENTIAL



Perfect for private facilities that wish to offer an exclusive, state-of-the-art service to users, whether an individual home or an apartment block. The car charging station can **satisfy everyone's charging needs, including multi-users**, allowing them to monitor charging, calculate the energy supplied and control consumption and costs.

SINGLE DOMESTIC

E.Charger is perfect for single dwellings.
The dedicated Cloud Portal, allows:

- **Management of the** charging **settings** and status display
- **Start or stop charging** and set the power
- Enter energy costs and vehicle consumption to **calculate expenditure and mileage autonomy**

The dual built-in residual current devices make **installation extremely simple and fast**.
Internally there is a 6mA residual current device, which allows a normal 30mA type A residual current device to be installed in the electrical system.

MULTI-USER APARTMENT BLOCK

The requirements of the multi-user residential sector are:

- **Management of the power** available at the meter
- **Ease of** configuration and use
- Provision of a prompt **customer service**
- **Safety** and reliability of the equipment
- **Access and billing** management for apartment block charging

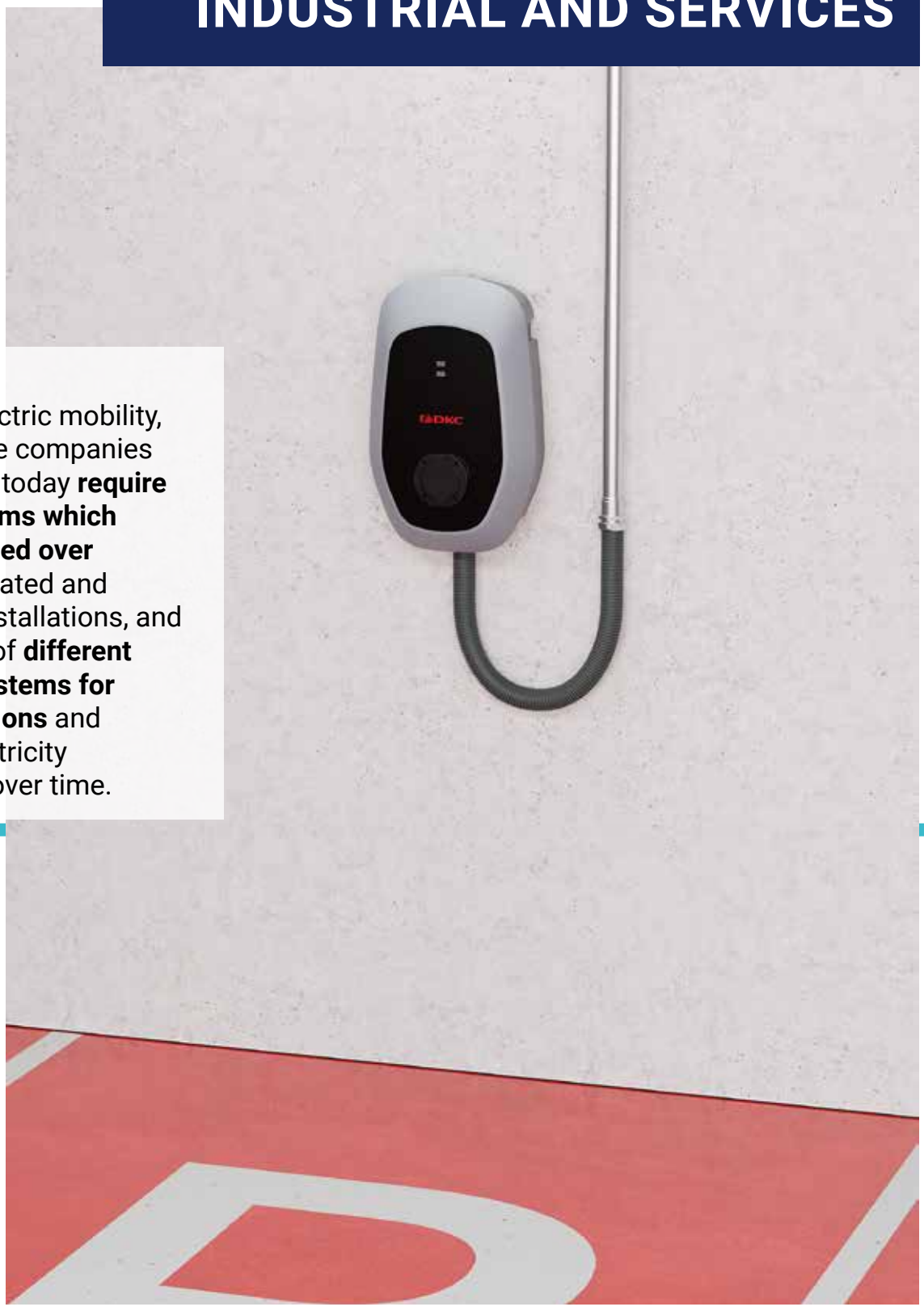
The car charging station has been designed and constructed to **meet the needs and charging requirements of individual apartment occupants**.
By using the RFID Cards nominally assigned, **each occupant can monitor and control charging** and keep track of their consumption.
The clever design and advanced digital systems allow E.Charger:

- To be installed **both indoors and outdoors, even on a special pedestal**
- Ensures **maximum flexibility**
- Can be fitted with an **internal MID** to account for and certify the energy delivered to each user

ONE SOLUTION, MULTIPLE APPLICATIONS

INDUSTRIAL AND SERVICES

In terms of electric mobility, more and more companies and industries today **require modular systems which can be expanded over time**, differentiated and customised installations, and management of **different accounting systems for charging sessions** and balancing electricity consumption over time.



HOTEL INDUSTRY

The E.Charger car charging system is designed for hotels that want to **offer an even more efficient service to their customers**.
The needs of the hotel industry are:

- Accurate and fast management of charging
- Remote customer service and intervention
- Wide differentiation of the charging service
- Balancing of power consumption over time
- Possibility of billing or not billing energy supplied
- Possible interfacing with management systems

The main advantages of E.Charger are ensured by:

- The built-in **MID** device
- **Power Meter**, which automates load balancing operations
- **Energy Portal**, which allows available and delivered power data to be viewed in real time

The OCPP 1.6 protocol also allows **integration of the E.Charger system with the various back-end software** already used by the hotel, facilitating billing of the energy supplied, management of the connected users and RFID Cards enabled.

INDUSTRY

With integrated functions, such as **multi-user management and energy metering**, E.Charger is the perfect solution for those industries that want to **effectively manage charging of their electric vehicle fleet**. On the Cloud Portal it is also possible to simultaneously view the stations installed at various sites and check their status: free, charging, busy or in error.
The RFID Cards and Energy Portal allow each individual user to be identified and the specific energy consumed to be accounted for. Moreover, with the Power Meter device, companies can **measure the amount of energy used by loads at any time** and automatically adjust the various stations, thus avoiding overload problems and ensuring optimal management of energy resources.
For business use, E.Charger can communicate with energy meters up to 5000A and, thanks to the Rogowski amperometric transformer, energy meters can be installed without production downtime.

A COMPLETE OFFER covering every need

VERSIONS

SINGLE-PHASE

Our single-phase E.Chargers are designed for easy, both indoor and outdoor, installation. They are the perfect solution for a wide range of applications, in particular for **private users or for small businesses.**

Available in versions with a Type 2 socket and safety shutter, and in versions with 5-metre cable and Type 2 plug, they can be regulated to **deliver energy from 2.3 kW to 7.4 kW.**

THREE-PHASE

Three-phase E.Charger stations are designed to safely handle higher charging powers, making them **suitable for use in both industrial and commercial environments**.

Available in versions with a Type 2 socket and safety shutter, and in versions with 5-metre cable and Type 2 plug, they can be regulated to **deliver energy from 6.9 kW to 22 kW.**

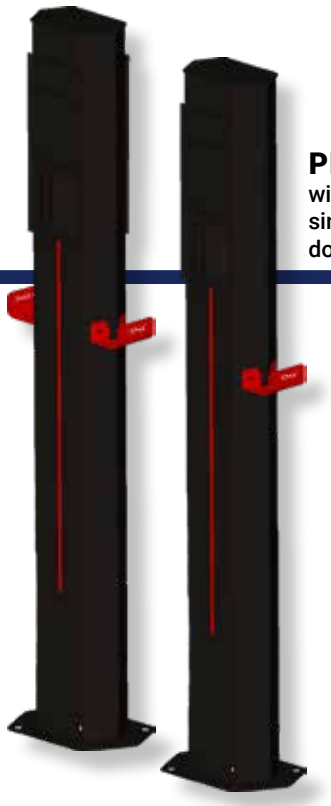
SINGLE-PHASE

CODE	DESCRIPTION	STANDARD	CONFIGURATION			
			CABLE	SOCKET	ENERGY METER	MID
EC7CCOM	From 2.3kW to 7.4kW with Type 2 cable and plug, length 5 meters	LED, RFID, WI-FI, ETHERNET, WebAPP/Dashboard	•			
EC7CMET			•		•	
EC7CMID			•			•
EC7CPLUS			•		•	•
EC7SCOM	From 2.3kW to 7.4kW with Type 2 socket with Shutter	LED, RFID, WI-FI, ETHERNET, WebAPP/Dashboard		•		
EC7SMET				•	•	
EC7SMID				•		•
EC7SPLUS				•	•	•

THREE-PHASE

CODE	DESCRIPTION	STANDARD	CONFIGURATION			
			CABLE	SOCKET	ENERGY METER	MID
EC22CCOM	From 6.9kW to 22kW with cable and Type 2 cable and plug, length 5 meters	LED, RFID, WI-FI, ETHERNET, WebAPP/Dashboard	•			
EC22CMET			•		•	
EC22CMID			•			•
EC22CPLUS			•		•	•
EC22SCOM	From 6.9kW to 22kW with Type 2 socket with Shutter	LED, RFID, WI-FI, ETHERNET, WebAPP/Dashboard		•		
EC22SMET				•	•	
EC22SMID				•		•
EC22SPLUS				•	•	•

ACCESSORIES



PEDESTAL
with cable bracket
single-sided COD. ECTOTEM1
double-sided COD. ECTOTEM2

CHARGING CABLE
5 metres Mode 3 32A
plug / connector
3P+N+PE IP54
COD. ECCAB5M

FIXING BRACKET
wall or pedestal
COD ECFIXWALL

WALL BRACKET
for charging cable
COD. ECCABHOLD

RFID CARD
9 pieces
COD. ECRFIDCARD

DIRECT ENERGY METER
Single-phase 45A COD. ECMET1
Three-phase 100A COD. ECMET3

THREE-PHASE ENERGY METER
with 3 CT 5kA Ø100 COD. ECMET3RC100
with 3 CT 5kA Ø200 COD. ECMET3RC200

A COORDINATED OFFER for a **SYSTEMIC SOLUTION**

The leading position of DKC with E.Charger is made up of quality and extreme versatility. The new devices add to the company's other offers for a full range of Made in Italy solutions for professionals in the electricity sector.

INDOOR SYSTEM
for multiple installations of E.Charger in the **Hercules and Cosmec** versions, with busbar conduit for electrical distribution, descent with rigid pipe, fittings and termination with metal cable glands

OUTDOOR SYSTEM
with installation of the E.Charger station on a special metal pedestal and shunt into a Grafi **Conchiglia** series fibreglass street enclosure

INDOOR SYSTEM
with Combitech and Cosmec versionsconsisting of metal duct, rigid pipe and fittings for descent, JBOX box for cable branching and protection, metal cable glands and final connection to E.Charger

Free-phone number

Technical Assistance
Installation assistance
Mon/Fri 9-13/14-17:30

800.19.40.40

support@dkcenergy.com

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