



CHARGING SOLUTIONS FOR ELECTRIC VEHICLES

Ingeteam

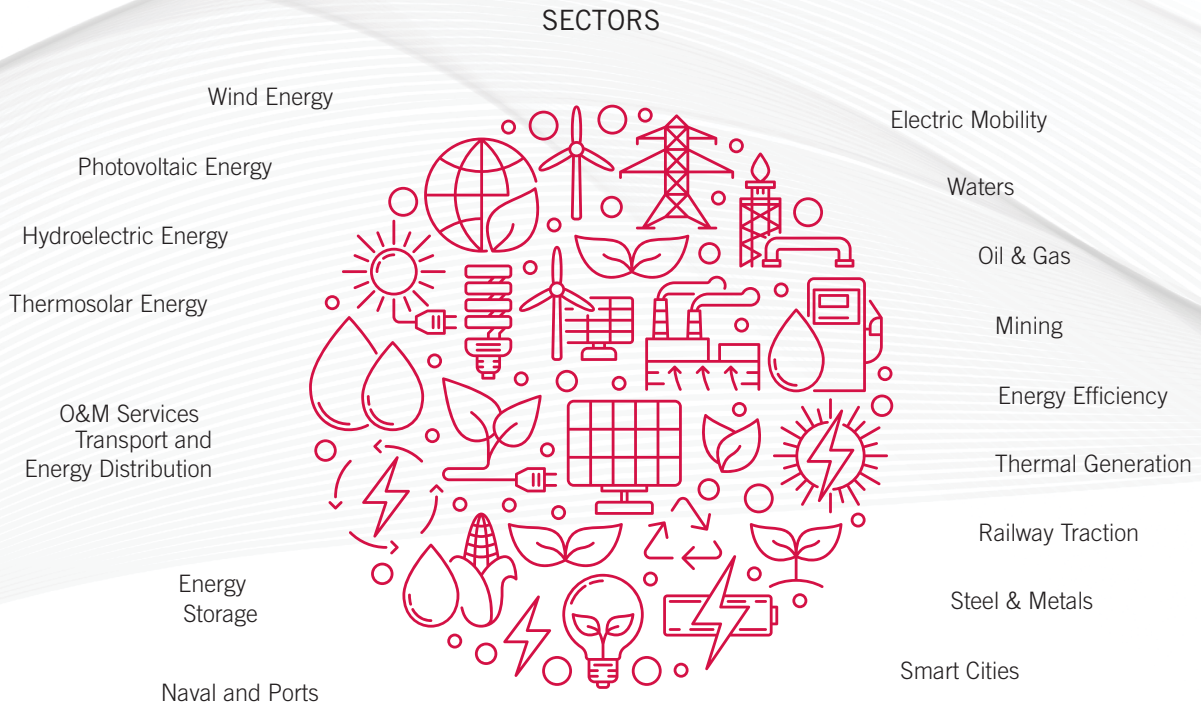
ELECTRIFYING
A SUSTAINABLE FUTURE

INNOVATION FOR OUR CUSTOMERS

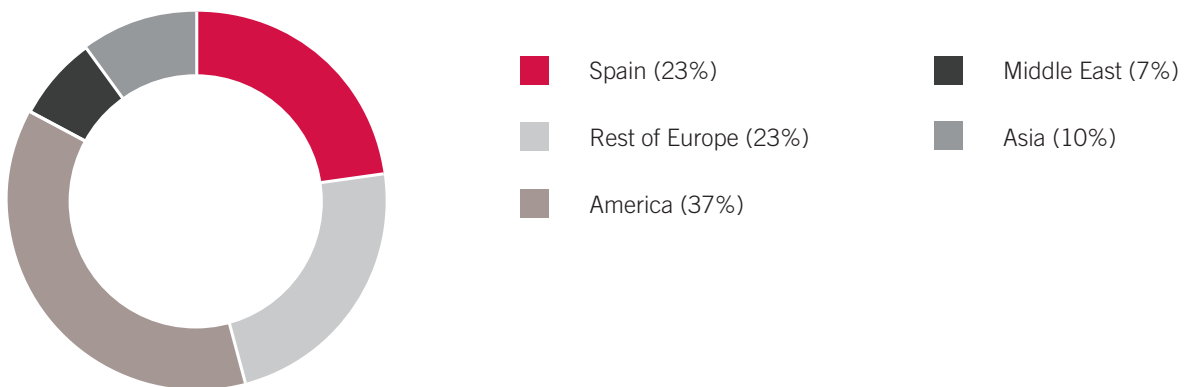
INGETEAM is an international technology group specializing in **electrical energy conversion**.

Its technological developments in **power and control electronics** (inverters, frequency converters, controllers and protections), Indar **rotating electrical machines** (motors, generators and motor-pump sets), **systems** (integration of electro-mechanical and automation engineering) and operation and maintenance **services**, allows it to offer solutions for the following sectors:

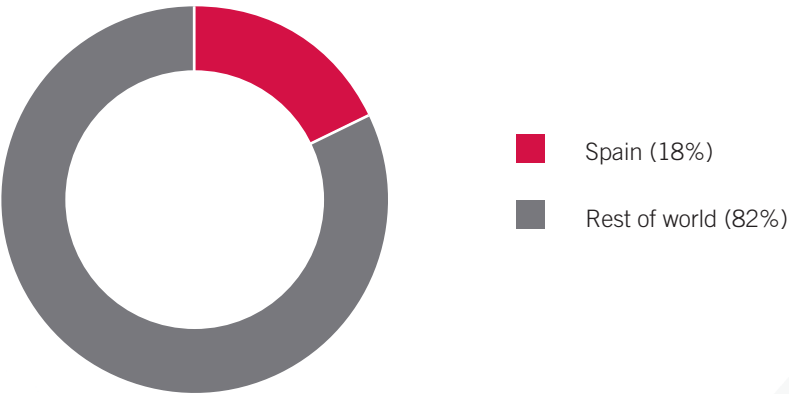
wind, photovoltaic, hydroelectric and fossil generation, metal transformation industry, naval, railway traction, waters, electric vehicle charging, green hydrogen and electric power grids, including substations covering transport and distribution, always seeking more efficient energy generation and consumption.



Global billing



Final destination of products/services



Charging point models

FUSION



RAPID 60



RAPID 120/180



RAPID ST



SEE OUR
COMPLETE RANGE
OF INGETEA
RECHARGING
POINTS





The charging point in public and private settings

The **FUSION range** is available in two versions, **FUSION Street** for installation on the ground, and **FUSION Wall** for installation on the wall.

It is the range of dual units designed to meet all the requirements of electric vehicle charging in public and private settings.

It incorporates Ethernet and Wi-Fi communications as standard, as well as advanced latest generation functions such as Dynamic Load Management 2.0 (DLM 2.0) and OCPP protocols.

| | FUSION Street/Wall | |
|--|--------------------|---------------|
| | FS1MW / FW1MW | FS3MW / FW3MW |
| Grid | Single phase | Three phase |
| MID wattmeter | ✓ | ✓ |
| Manual Type A differential protection ⁽¹⁾ | ✓ | ✓ |
| Overcurrent protection (Curve C) | ✓ | ✓ |

Notes

⁽¹⁾ Optionally, the differentials can be Type A resettable or Type B.



FUSION FEATURES

Functions

- Ground and wall versions, suitable for outdoor use.
- Front door for easy operation and maintenance.
- Single-phase and three-phase versions with up to 32 amps per socket.
- Multiple sockets available, mode 1&2 sockets, mode 3 cables and sockets.
- MID wattmeters.
- Warning message in case of power outage.
- Possible customization using vinyls on the four sides⁽¹⁾.

HMI

- RGB status LEDs.
- RFID reader.
- 4.3" color screen, multi-language.

Communications and software

- Dual Ethernet port with Switch mode.

Notes:

⁽¹⁾ Large surface where vinyl can be applied.

⁽²⁾ 5 m optional.

- Wi-Fi.
- OCPP.
- DLM, static and dynamic power management with other Ingeteam DC and AC units.
- Web Manager.
- Modbus TCP, MQTT.
- Automatic software updates.
- Update via USB.

Safety

- Differential protections and circuit breakers.
- Main switch for quick disconnection of the charger.
- Security lock with key.
- Door-opening sensor.

Options

- GPRS - 2G/3G/4G communication.
- Contactless bank card reader.
- DC leak detector.
- Type A self-resetting differentials or Type B differentials.
- Smart DLM.
- Cloud Manager.

CONNECTORS



N2
Socket Type 2



S2
Type 2 socket with shutters



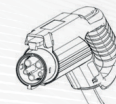
N4
CEE 7/3 Type F socket (Schuko)



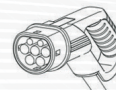
N7
CEE 7/5 Type E socket (Schuko)



S5
N7 and S2



C1
Type 1 cable (4 m)⁽²⁾



C2
Type 2 cable (4 m)⁽²⁾



NACS



| | FUSION Street | | FUSION Wall | |
|---------------------------------|--|---|--|---|
| INPUTS AND OUTPUTS | Single-phase (FS1) | Three-phase (FS3) | Single-phase (FW1) | Three-phase (FW3) |
| Voltage | 1 phase + N + PE 230 Vac $\pm 15\%$ | 3 phases + N + PE 400 Vac $\pm 15\%$ | 1 phase + N + PE 230 Vac $\pm 15\%$ | 3 phases + N + PE 400 Vac $\pm 15\%$ |
| Frequency | 50/60 Hz | | | |
| Rated current | 64 A (32 A + 32 A) | | | |
| Rated power | 14.8 kW (7.4 kW + 7.4 kW) | 44 kW (22 kW + 22 kW) | 14.8 kW (7.4 kW + 7.4 kW) | 44 kW (22 kW + 22 kW) |
| Charging connectors | Configurable (Type 1 and 2 cables; Type 2 sockets, CEE 7/3 Type F, CEE 7/5 Type E) | | | |
| Charging mode | Modes 1, 2 and 3 according to installed sockets | | | |
| REGULATIONS AND SAFETY | | | | |
| Standards | IEC-61851-1, IEC-61851-21-2, IEC-62196-2, IEC-61000 | | | |
| Overcurrent | 40 A Curve C circuit breaker protections (10 kA) | | | |
| Indirect contacts | 30mA type A differential protections ⁽¹⁾ DC leak detector (optional) | | | |
| Overvoltages | Overvoltage protection Type III | | | |
| FUNCTIONALITIES AND ACCESSORIES | | | | |
| Communication interfaces | Ethernet (Switch mode) and Wi-Fi GPRS - 2G/3G/4G (optional) | | | |
| Communication protocols | OCPP 1.6, 2.0.1, Modbus RTU, Modbus TCP, MQTT | | | |
| HMI | 4.3" color screen, multi-language RFID reader (Mifare Classic 1K&4K, MifareDesFire EV1, NFC) Contactless bank card reader (optional) | | | |
| GENERAL INFORMATION | | | | |
| Stand-by consumption | < 10 W | | | |
| Energy measurement | 2 x MID wattmeters | | | |
| Operating temperature | -25 °C to 50 °C | | | |
| Humidity | < 95% | | | |
| Maximum altitude | 2,000 m (for heights above this, consult Ingeteam) | | | |
| Weight | 33 kg (2 x Type 2) | 33 kg (2 x Type 2) | 24 kg (2 x Type 2) | 24 kg (2 x Type 2) |
| Dimensions (h x w x d) | 1400 x 320 x 215 mm | 1400 x 320 x 215 mm | 800 x 320 x 215 mm | 800 x 320 x 215 mm |
| Enclosure | Galvanized steel I RAL 9003 | | | |
| Protection class | IP54 / IK10 / C5H | | | |
| Markings | CE | | | |
| Directives | Low Voltage Directive: 2014/35/EU EMC Directive: 2014/30/EU RED Directive 2014/53/EU | | | |

Notes

⁽¹⁾ Optionally, the differentials can be Type A resettable or Type B.



RAPID 60



Fast charging solutions for all types of urban and inter-urban environments. Ideal for reduced spaces.

With increasingly efficient vehicles, and with the emergence of new mobility scenarios, at Ingeteam, we have reimagined fast charging. Ingeteam presents the new range of RAPID 60 kW chargers, capable of charging a single vehicle at 60 kW or two vehicles simultaneously at 30 kW. El **new RAPID 60** is a solid and robust charger, designed to resist the most demanding conditions thanks to its construction in galvanized steel and stainless steel. The result is a compact, silent, light and elegant unit, featuring a modern design with clean lines.

The lack of rear ventilation slots means it can be installed against the wall, or with back to back with another RAPID 60. The main design premise was to achieve a silent unit, so that it could be installed in enclosed or urban spaces. It also has a retractable cable management system to make it easier to use. This unit is technologically ahead of its time, featuring credit card readers, parking sensors and Plug & Charge technology, not forgetting the dynamic load management between the unit's outputs, between multiple DC and AC units, as well as dynamic balancing with the installation's remaining loads.

| | RAPID 60 | | | |
|-----------------------|----------|--------------|----------------------------|--|
| | One | One+ | Duo | Trio |
| Connectors | 1 | 2 | 2 | 3 |
| Simultaneous charging | ✓ | ✓ | ✓ | ✓ |
| Connector type | CCS | CCS + AC T2S | CCS + CCS CCS + CHAdeMO | CCS + CCS + AC T2S CCS + CHAdeMO + AC T2S |

RAPID 60 IN DATA

Functions

- Highly resistant enclosure, either galvanized steel or stainless steel.
- No ventilation slots on the back, can be installed against the wall or two units back to back.
- Can be positioned with a crane and pallet truck.
- Retractable hose management system.
- Simultaneous AC and DC charging:
 - DC: DC charging at 60 kW. Dual charging at 30 kW.
 - AC: 22 kW.
- Integrated DC wattmeters.
- AC MID wattmeter.

HMI

- RGB status LEDs on supports and 360° ring.
- RFID reader.
- 10.1" color touchscreen, multi-language.

Communications and software

- Dual Ethernet port with Switch mode.

- RS485.
- OCPP, Autocharge, Plug & Charge.
- DLM, static and dynamic power management with other Ingeteam DC and AC units.
- Web Manager.
- Modbus TCP, MQTT.
- Automatic software updates.
- Update via USB.

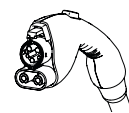
Safety

- Built-in electrical protections.
- Security lock with key.
- Door-opening sensor.

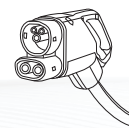
Options

- GPRS - 2G/3G/4G communication.
- Ethernet switch kit for 8 ports.
- Contactless bank card reader.
- Emergency button.
- Connector locking system.
- Parked vehicle detector.
- Self-resetting differentials.
- Smart DLM.
- Cloud Manager.

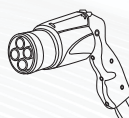
CONNECTORS



CCS1 150
CCS Type 1 150 A



CCS2 150
CCS Type 2 150 A



Cha125
ChadeMO 125 A



NACS



AC 22 kW
Type 2 socket with shutters



| | RAPID 60 One | RAPID 60 One+ | RAPID 60 Duo | RAPID 60 Trio |
|----------------------------------|---|-----------------------------|----------------------------|---|
| AC INPUT | | | | |
| 3 phases + N + PE | | | | |
| Voltage | 380/400 Vac ±15% | | | |
| Frequency | 50/60 Hz ±5% | | | |
| Rated current | 96 A | 128 A (96 A + 32 A) | 96 A | 128 A (96 A + 32 A) |
| Rated power | 60 kW | 82 kW (60 kW + 22 kW) | 60 kW | 82 kW (60 kW + 22 kW) |
| DC OUTPUT | | | | |
| Voltage range | 150 - 1000 V | | | |
| Maximum current | 150 A | 150 A | 200 A (100 A + 100 A) | |
| Maximum power | 60 kW | 60 kW | 60 kW (30 kW + 30 kW) | |
| Charging connectors | CCS | CCS | CCS + CCS CCS + CHAdeMO | CCS + CCS CCS + CHAdeMO |
| AC OUTPUT (OPTIONAL) | | | | |
| Voltage | - | 230/400 Vac ±15% | - | 230/400 Vac ±15% |
| Maximum current | - | 32 A | - | 32 A |
| Maximum power | - | 22 kW | - | 22 kW |
| Charging connectors | - | Type 2 socket with shutters | - | Type 2 socket with shutters |
| REGULATIONS AND SAFETY | | | | |
| Standards | IEC 61851-1, IEC 61851-21-2, IEC 61851-23, IEC 61851-24 IEC 62196-2, IEC 62196-3, IEC 61000: DIN70121, ISO15118 | | | |
| Overcurrent | Curve C circuit breaker protections (20 kA) | | | |
| Indirect contacts ⁽¹⁾ | 30 mA differential protections ⁽²⁾ | | | 30 mA (DC) differential protections ⁽²⁾ 30 mA type B (AC) differential protection |
| Overvoltages | Type 2 protection against permanent and transient overvoltages, both on DC inputs and outputs | | | |
| FUNCTIONALITIES AND ACCESSORIES | | | | |
| Communication interfaces | Ethernet (Switch mode), RS485, GPRS - 2G/3G/4G (optional), dual SIM (optional) | | | |
| Communication protocols | OCPP 1.6, 2.0.1, Modbus RTU, Modbus TCP, MQTT | | | |
| HMI | 10.1" color touchscreen, multi-language RFID reader (Mifare Classic 1K&4K, Mifare DesFire EV1, NFC) 360° status RGB LEDs Contactless bank card reader (optional) | | | |
| Plug & Charge (ISO15118) | Yes | | | |
| GENERAL INFORMATION | | | | |
| Stand-by consumption | < 70 W | | | |
| Efficiency and power factor | > 95% at rated power; > 0.98 | | | |
| Energy measurement | DC meter | | | AC (MID) and DC meter ⁽³⁾ |
| Hose length | 5 m (4.4 m usable length) with retractable system included | | | |
| Operating temperature | -25 °C to 55 °C (derating from 40 °C) Low temperature kit at -35 °C (optional) | | | |
| Humidity | < 95% | | | |
| Maximum altitude | 2,000 m (for higher altitudes, consult Ingeteam) | | | |
| Weight | 140 kg | 145 kg | 160 kg | 165 kg |
| Dimensions (h x w x d) | 1950 x 760 x 335 mm | | | |
| Enclosure | Galvanized steel (stainless steel optional) RAL 9003 | | | |
| Protection class | IP54 / IK10 / C5H | | | |
| Ventilation system | Side air ventilation | | | |
| Sound level | < 55 dB | | | |
| Markings | CE | | | |
| Directives | Low Voltage Directive: 2014/35/EU EMC Directive: 2014/30/EU RED Directive 2014/53/EU | | | |

Notes
⁽¹⁾ Manual or resettable protection depending on the model.

⁽²⁾ Protection type A or type B depending on the model.

⁽³⁾ MID and French certification (optional) and Eichrecht certification in process.

RAPID 120/180

Ultra-fast charging points that allow up to three vehicles to be charged simultaneously

Being able to respond to current market needs is always a challenge, which requires constant transformation. In order to develop the new RAPID range, at Ingeteam, we asked ourselves countless new questions, as these new units had to cover not only current but also future needs in a constantly evolving sector.

Ingeteam presents the new range of **RAPID 120 kW and 180 kW chargers for ultra-fast charging**, to match the potential of the most demanding vehicles. They have been designed to meet the highest quality and performance standards in terms of power management, communications, reliability and efficiency.

They are compatible with the CCS and CHAdeMO standards. The Trio models also incorporate a 22 kW Type 2 socket for alternating current charging, allowing up to three vehicles to be charged simultaneously. Moreover, they feature power management between the different outputs on the unit, or between various units in one installation.

| | RAPID 120 / 180 | | | |
|-----------------------|-----------------|--------------|----------------------------|--------------------------------------|
| | One | One+ | Duo | Trio |
| Connectors | 1 | 2 | 2 | 3 |
| Simultaneous charging | ✓ | ✓ | ✓ | ✓ |
| Connector type | CCS | CCS + AC T2S | CCS + CCS CCS + CHAdeMO | CCS + CCS + AC CCS + CHAdeMO + AC |



RAPID 120/180 FEATURES

Functions

- Highly resistant enclosure made of stainless steel.
- Modular electronics. The 120 kW units can be expanded to 180 kW.
- Retractable hose management system.
- Ambient light.
- Simultaneous AC and DC charging:
 - DC: DC charging at 180 kW. Dual charging at 90 kW. CHAdeMO up to 80 kW.
 - AC: 22 kW.
- Integrated DC wattmeters.
- AC MID wattmeters.

HMI

- RGB status LEDs.
- RFID reader.
- 7" color touchscreen, multi-language.

Communications and software

- Ethernet, RS485.
- OCPP, Autocharge, Plug & Charge.

- DLM, static and dynamic power management with other Ingeteam DC and AC units.
- Web Manager.
- Modbus TCP, MQTT.
- Automatic software updates.
- Update via USB.

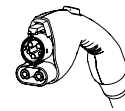
Safety

- Built-in electrical protections.
- Security lock with key.
- Door-opening sensor.

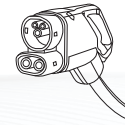
Options

- GPRS - 2G/3G/4G communication.
- Ethernet switch kit for 8 ports.
- Contactless bank card reader.
- Emergency button.
- 21" Full HD advertising screen.
- Connector locking system.
- Parked vehicle detector.
- Smart DLM.
- Cloud Manager.

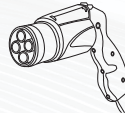
CONNECTORS



CCS1 200
CCS Type 1 200 A



CCS2 250
CCS Type 2 250 A



CHA200
CHAdeMO 200 A



NACS



AC 22 kW
Type 2 socket with shutters



2,300 mm

730 mm

774 mm


RAPID 120
RAPID 180
AC INPUT

| | | |
|---------------|--|------------------------|
| Voltage | 3 phases + N + PE; 380/400 Vac \pm 15% | |
| Frequency | 50/60 Hz \pm 5% | |
| Rated current | 222 A (190 A + 32 A) | 312 A (280 A + 32 A) |
| Rated power | 142 A (120 kW + 22 kW) | 202 A (180 kW + 22 kW) |

DC OUTPUT

| | | |
|---------------------|--|--|
| Voltage range | 150 - 1,000 V | |
| Maximum current | 400 A (200 + 200 A) 1 x 500 A @boost | 500 A (250 + 250 A) 1 x 500 A @boost |
| Maximum power | 120 kW (60 + 60 kW) | 180 kW (90 + 90 kW) |
| Charging connectors | CCS CCS + CCS CCS + CHAdeMO | |

AC OUTPUT (OPTIONAL)

| | |
|---------------------|-----------------------------|
| Voltage | 400 Vac \pm 15% |
| Maximum current | 32 A |
| Maximum power | 22 kW |
| Charging connectors | Type 2 socket with shutters |

REGULATIONS AND SAFETY

| | |
|-------------------|--|
| Standards | IEC 61851-1, IEC 61851-21-2, IEC 61851-23, IEC 61851-24, IEC 62196-2, IEC 62196-3, IEC 61000, DIN 70121, ISO 15118 |
| Overcurrent | Curve C programmable circuit breaker protections (25 kA) |
| Indirect contacts | 30 mA Type A (DC) differential protections 30 mA Type B (AC) differential protections |
| Overvoltages | Type 2 protection against permanent and transient overvoltages, both on DC inputs and outputs |

FUNCTIONALITIES AND ACCESSORIES

| | |
|--------------------------|--|
| Communication interfaces | Ethernet, RS485, GPRS - 2G/3G/4G (optional), dual SIM (optional) |
| Communication protocols | OCPP 1.6, 2.0.1, Modbus RTU, Modbus TCP, MQTT |
| HMI | 7" color touchscreen, multi-language RFID reader (Mifare Classic 1K&4K, Mifare DesFire EV1, NFC) RGB status LEDs Contactless bank card reader (optional) ⁽¹⁾ |
| Advertising screen | 21" Full HD (optional) |
| Plug & Charge | Yes |

GENERAL INFORMATION

| | | |
|-----------------------------|--|--------|
| Stand-by consumption | < 60 W | < 85 W |
| Efficiency and power factor | > 95% at rated power; > 0.98 | |
| Energy measurement | AC (MID) and DC meter ⁽²⁾ | |
| Hose length | 6.5 m (5 m usable length) with retractable system included ⁽³⁾ | |
| Operating temperature | -25 °C to 55 °C (derating from 40 °C) Low temperature kit at -35 °C (optional) | |
| Humidity | < 95% | |
| Maximum altitude | 2,000 m (for higher altitudes, consult Ingeteam) | |
| Weight | 380 kg | 420 kg |
| Dimensions (h x w x d) | 2300 x 774 x 730 mm | |
| Enclosure | Stainless steel and aluminum | |
| Protection class | IP54 / IK10 (IK08 display) / C5H | |
| Markings | CE | |
| Directives | Low Voltage Directive: 2014/35/EU EMC Directive: 2014/30/EU RED Directive 2014/53/EU | |

Notes
⁽¹⁾ Worldline SELF2000 or Payter Apollo.

⁽³⁾ Optional 10 m hose without retractable system.

⁽²⁾ MID certification (optional) and Eichrecht certification in process.

RAPID ST



The ultra-fast charging station

Ultra-fast charging stations are a key element for electric mobility to take off fully.

Ingeteam's solution for ultra-fast charging stations is based on a new DC distribution architecture, which allows maximum simplification of the installation and easy integration of storage and photovoltaic energy.

It brings together all the advantages of latest generation SiC electronics with a very compact size, as well as excellent efficiency and reliability.

RAPID ST200 and ST400 are the ideal ultra-fast charging points for service stations with a high turnover. Compatible with the CHAdeMO and CCS standards, they are the perfect solution for charging all types of electric vehicle.



| | RAPID ST 200 | | RAPID ST 400 | |
|-----------------------|--------------|----------------------------|--------------|----------------------------|
| | ONE | DUO | ONE | DUO |
| Connectors | 1 | 2 | 1 | 2 |
| Simultaneous charging | | ✓ | | ✓ |
| Connector type | CCS | CCS + CCS CCS + CHAdeMO | CCS | CCS + CCS CCS + CHAdeMO |

RAPID ST FEATURES

Functions

- Ultra-fast charging in CCS, up to 400 kW.
- Ultra-fast charging in CHAdeMO up to 100 kW.
- Retractable hose management system.
- Ambient light.
- Integrated DC wattmeter.
- Simplicity and efficiency in the integration of storage systems.

HMI

- RFID reader.
- 7" color touchscreen, multi-language.

Communications and software

- Ethernet, RS485.
- OCPP, Autocharge, Plug & Charge.
- DLM, static and dynamic power management with other Ingeteam DC and AC units.
- Web Manager.
- Modbus TCP, MQTT.
- Automatic software updates.
- Update via USB.

Safety

- Built-in electrical protections.
- Emergency button.
- Security lock with key.
- Door-opening sensor.

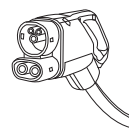
Maintenance

- Ventilation filter accessible from the outside without internal manipulation.
- IP2x accessible control area.

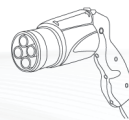
Options

- GPRS - 2G/3G/4G communication.
- Ethernet switch kit for 8 ports.
- Contactless bank card reader.
- 21" Full HD advertising screen.
- Complete supply of the transformation center.
- Smart DLM.
- Cloud Manager.

CONNECTORS



CCS2 300/500
CCS Type 2
300 or 500 A

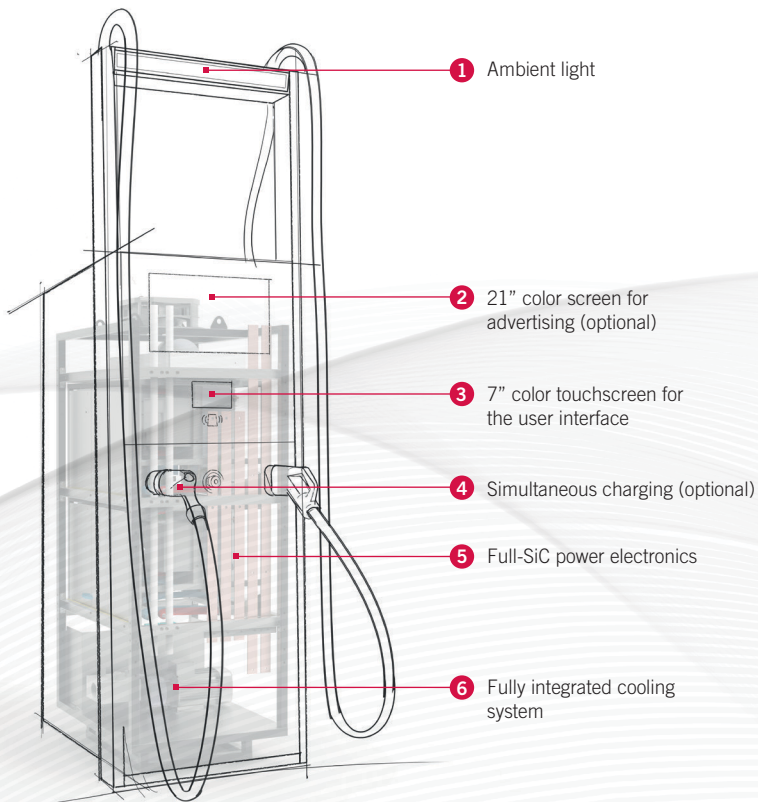


CHA200
CHAdeMO 200 A



| | CHARGING SATELLITES | |
|---------------------------------|--|---|
| | RAPID ST200 | RAPID ST400 |
| DC INPUT | | |
| Rated current | 301 A | 602 A |
| Rated voltage | 700 V | 700 V |
| DC OUTPUT | | |
| Voltage range | 50 - 1,000 Vdc | |
| Maximum current | 200 A to 1,000 Vdc | 500 A to 500 Vdc, 400 A to 1,000 Vdc |
| Maximum power | 200 kW | 400 kW |
| Charging connectors | CCS CCS + CCS CCS + CHAdeMO | |
| REGULATIONS AND SAFETY | | |
| Standards | IEC 61851-1, IEC 61851-21-2, IEC 61851-23, IEC 61851-24 IEC 62196-2, IEC 62196-3, IEC 61000, DIN70121, ISO15118 | |
| Indirect contacts | DC: continuous insulation monitoring AC: differential protection | |
| Overvoltages | Overvoltage category: III (according to IEC 60664-1) | |
| FUNCTIONALITIES AND ACCESSORIES | | |
| Communication interfaces | Ethernet, RS485 GPRS - 2G/3G/4G (optional), dual SIM (optional) | |
| Communication protocols | OCPP 1.6, 2.0.1, Modbus RTU, Modbus TCP, MQTT | |
| HMI | 7" color touchscreen, multi-language RFID reader (Mifare Classic 1K&4K, Mifare DesFire EV1, NFC) Contactless bank card reader (optional) | |
| Advertising screen | 21" Full HD (optional) | |
| Plug & Charge | Yes | |
| GENERAL INFORMATION | | |
| Auxiliary supply | 3 phases + N; 400 Vac ±10% | |
| Stand-by consumption | - | - |
| Efficiency and power factor | > 95% at rated power; > 0.98 | |
| Energy measurement | DC meter | |
| Hose length | 4.8 m with retractable system included | |
| Operating temperature | -25 °C to 55 °C (derating from 40 °C) Low temperature kit at -35 °C (optional) | |
| Humidity | < 95% | |
| Maximum altitude | 2,000 m (for higher altitudes, consult Ingeteam) | |
| Weight | 530 kg | 630 kg |
| Dimensions (h x w x d) | 2365 x 791 x 1,130 mm | |
| Enclosure | Galvanized steel | |
| Protection class | IP55 / IK10 (IK08 display) / C5H | |
| Cooling system | Liquid cooling delivered | |
| Markings | CE | |
| Directives | Low Voltage Directive: 2014/35/EU EMC Directive: 2014/30/EU RED Directive 2014/53/EU | |

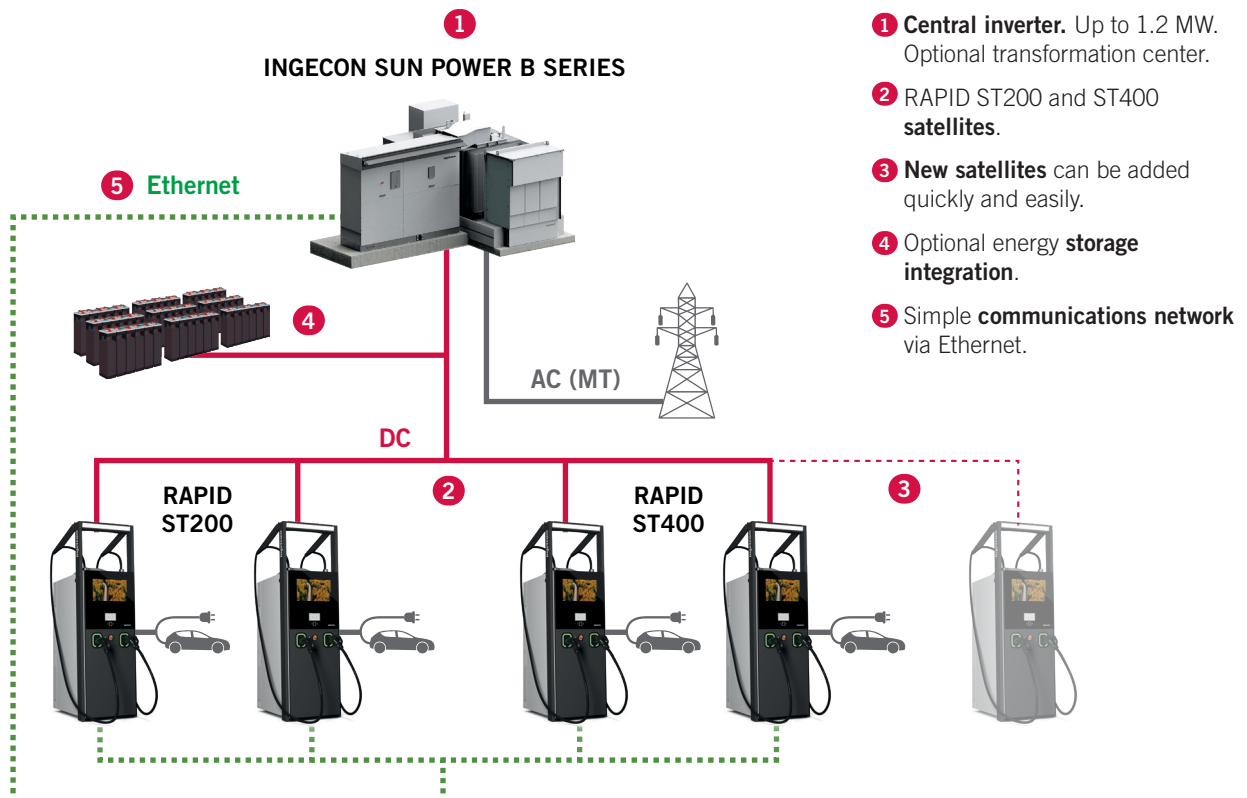




Advantages of the DC bus architecture

- Up to 120 meters of distance between the central inverter and the satellites, free and clear charging area.
- Half of the installation footprint of other architectures.
- Cooling integrated in all elements, allowing maximum simplification of the installation.
- Scalability, allowing easy implementation of expansions by connecting new satellites to the DC bus.
- Flexible power balancing (DLM) between all satellites.
- All satellites can always be charged simultaneously without having to sacrifice power modules in order to divert that energy to another satellite with greater demand.
- ST200 satellites can be updated to ST400 just by adding a new power module.

INSTALLATION DIAGRAM



- 1 Central inverter.** Up to 1.2 MW. Optional transformation center.
- 2 RAPID ST200 and ST400 satellites.**
- 3 New satellites** can be added quickly and easily.
- 4 Optional energy storage integration.**
- 5 Simple communications network** via Ethernet.

CENTRAL INVERTER
AC INPUT
1110TL B400

| | |
|---------------------------------|--|
| Power @35 °C / @50 °C | 1,020 kVA |
| Current @35 °C / @50 °C | 1600 A / 1472 A |
| Rated voltage | 3P 400 V IT System |
| Frequency | 50 / 60 Hz |
| Adjustable power factor | Yes, 0-1 (leading /lagging) |
| THD (Total Harmonic Distortion) | < 3% |
| Oversvoltage protection | Type II surge arresters |
| AC switch | AC thermomagnetic switch with door control, remote or motorized trip |

STORAGE

| | |
|-----------------------|-----------|
| Battery voltage range | 580-820 V |
|-----------------------|-----------|

DIMENSIONS AND WEIGHT

| | |
|------------------------|-----------------------|
| Dimensions (W x D x H) | 2820 x 825 x 2,270 mm |
| Weight | 1560 kg |

GENERAL DATA
INSTALLATION

| | |
|--|--|
| Operating temperature | -20 °C to +60 °C |
| Relative humidity (without condensation) | 0 - 100% |
| Protection class | IP54 / IK10 (IK08 display and ventilation grilles) |
| Protection against corrosion | C5H |
| Maximum altitude | 4,500 m (for installations above 1,000 m, please contact the sales department) |
| Product marking | CE |



DLM 2.0



Maximum use of the available power

Dynamic Load Management 2.0 (DLM 2.0) is the latest generation of the dynamic load management system incorporated as standard in all FUSION and RAPID models.

DLM 2.0 allows all sockets on each charging point to share the total power defined on the equipment in the most balanced and dynamic way possible, also allowing a set of units to be interconnected, defining a maximum power for them all so that they never exceed the assigned threshold, regardless of the number of vehicles charging simultaneously.

This means we can **optimize the use of the existing installation**, either due to contracted power or any other limitation of the installation.

GENERAL OPERATION

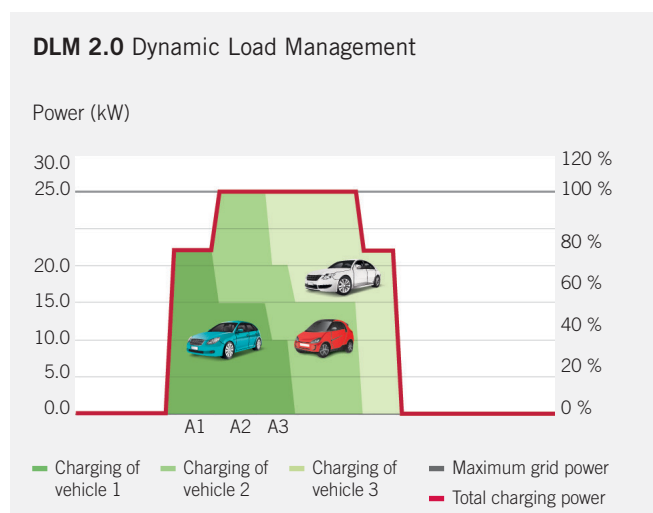
DLM 2.0 dynamically manages the load of each socket in the installation, depending on the number of vehicles that are charging, the types of socket or connector used and the actual current required by each vehicle, evaluating all of this in real time.

It is dynamic and versatile, as if one of the vehicles does not use all of the assigned current, that unconsumed current is redistributed to the other vehicles that are connected for better use of the available power.

It is possible to combine alternating and direct current points in the same group of charging points.

DLM 2.0 FEATURES

- Multiple units interconnected, in series or in a hub.
- Maximum power of the fixed charging installation.
- Instantaneous charging powers adjusted according to the number of vehicles charging and their consumption.



SMART DLM 2.0

Smart power

Smart DLM is the latest evolution of the DLM 2.0 system for smart and dynamic management of the power in an installation that, in addition to chargers, is made up of other loads, such as those of an office or industry.

It consists of a grid analyzer, installed at the point to be managed and connected to a unit. All FUSION and RAPID models are compatible with Smart DLM and they can even be combined.

Smart DLM **allows the overall power of the chargers to be modified in real time and dynamically**, which will regulate their power as a whole, adapting to the other consumers in the installation.

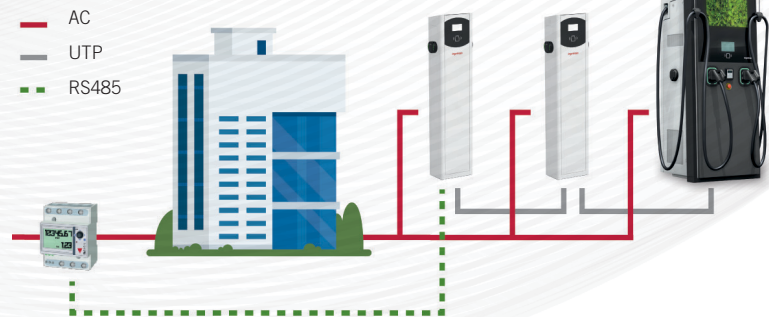
This means that we can manage the power demand and avoid or minimize the need to increase the contracted power.

The Smart DLM system analyzes the power consumed by the entire installation at all times, including charging points.

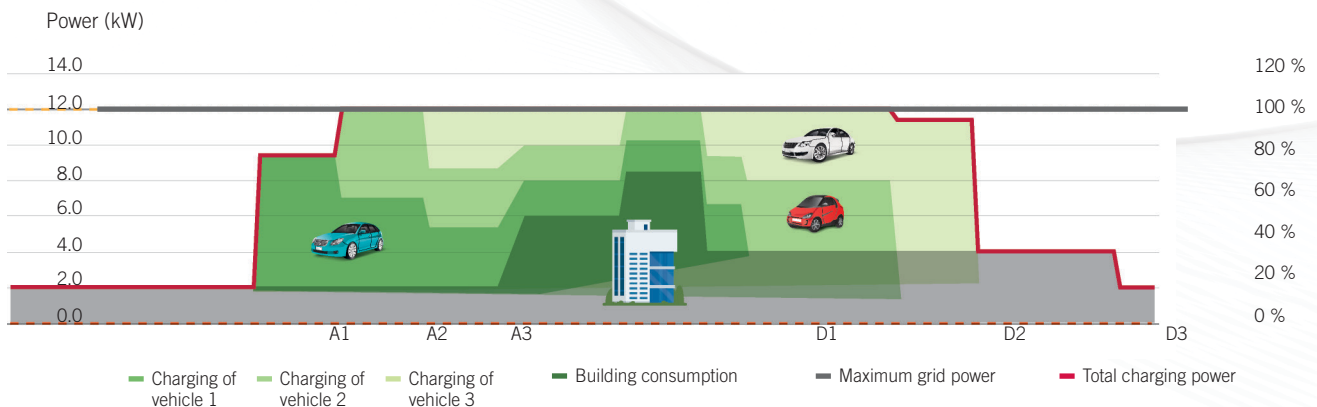
SMART DLM 2.0 FEATURES

- Multiple units interconnected, in series or in a hub.
- Maximum power to be absorbed by the fixed grid.
- Instantaneous powers adjusted according to the vehicles charging and the total consumption of the installation.

*There are two versions according to the maximum power, Smart DLM and Smart DLM Pro (>45 kW).



Smart Dynamic Load Management



Ingeteam Power Technology, S.A.
Avda. Ciudad de la Innovación, 13
31621 Sarriena (Navarra) - Spain
Tel.: +34 948 288 000
Fax: +34 948 288 001
e-mail: evc.energy@ingetteam.com

Ingeteam S.r.l.
Via Emilia Ponente, 232
48014 Castel Bolognese (RA) - Italy
Tel.: +39 0546 651 490
Fax: +39 054 665 5391
e-mail: emobility.italia@ingetteam.com

Ingeteam SAS
140 Rue Carmin - Le Naurouze B
31670 Labège - France
Tel.: +33 (0)5 61 25 00 00
Fax: +33 (0)5 61 25 00 11
e-mail: france@ingetteam.com

Ingeteam INC.
3550 W. Canal St.
Milwaukee, WI 53208 - USA
Tel.: +1 (414) 934 4100 / +1 (855) 821 7190
Fax: +1 (414) 342 0736
e-mail: usa@ingetteam.com

Ingeteam, a.s.
Technologická 371/1
70800 Ostrava - Pustkovec
Czech Republic
Tel.: +420 59 747 6800
Fax: +420 59 732 6899
e-mail: czech@ingetteam.com

**Ingeteam Power Technology
Shanghai, Co. Ltd.**
Room 2606-F, No.360 South Pudong Road
China (Shanghai) pilot free trade zone
C.P 200120
Tel.: +86 139 1622 4886
e-mail: liu.yimin@ingetteam.com

Ingeteam México S.A. de CV
Calle Andrés Bello 45, Piso 26
Colonia Polanco V Sección
Miguel Hidalgo
CP: 11560
Ciudad de México, CDMX
Tel.: (+52) 55 6586 9930
e-mail: northamerica@ingetteam.com

Ingeteam Ltda.
Rua Estácio de Sá, 560
Santa Genebra
Campinas - SP
CEP: 13080-010; São Paulo
Tel.: (+55) 19 30 37 37 73
e-mail: brazil@ingetteam.com

Ingeteam Chile SPA
Balmoral número 309, Piso 10º, Oficina 1008,
Las Condes
7561282, Santiago, Chile

Ingeteam India Pvt. Ltd.
Survey No. 111/1-111/3 & 111/5-111/7,
Village No.155, Mambakkam Village,
Chennai - Bangalore Main Road,
Sriperumbudur Taluk,
Kancheepuram District - 602106,
Tamilnadu, India

Ingeteam Poland SPZOO
Ul. Koszykowa 60/62 m 39
00-673, Warsaw, Poland

Ingeteam Australia Pty Ltd.
Iaccelerate Centre, Building 239
Innovation Campus, Squires Way
North Wollongong, NSW 2500 - Australia
Tel.: +61 429 111 190
e-mail: australia@ingetteam.com

Ingeteam Power Technology S.A.
UAE Branch
Al Bateen tower c6 Bainunah 1st floor
Street 34
Abu Dhabi - UAE
Tel.: +971 2 207 6666

Ingeteam LTD.
Unit 10 Gordano 19, Garonor Way, Portbury,
Bristol, BS20 7XE - United Kingdom
Tel.: +44 (0)7548093830
e-mail: admin.department@ingetteam.com

Ingeteam GmbH
Grand Bateau – Zollhof 6
D-40221 – Düsseldorf
Tel.: +49 (0) 211 78177950
e-mail: deutschland@ingetteam.com

Ingeteam

www.ingetteam.com