LEAFLET

C-Kit

EV charging controller

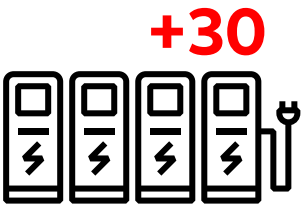
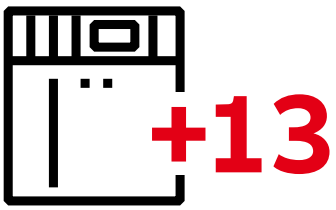


ABB C-Kit is a dynamic load management solution enabling the flexible management of up to 30 Electric Vehicle charging points*, ensuring the most efficient use of your available power.

Up to 13 Smart Breakers and Meters** present in an electric vehicle charging system can be integrated into C-kit for enhancing the monitoring, control and dynamic load management functionalities



Key Benefits

ABB C-kit connects to Electric Vehicle chargers to dynamically manage their power profiles, ensuring service continuity and most efficient use of the available power, while providing flexibility in operation. C-kit is a pre-configured, off the shelf solution for the load management of EV Chargers. Speed up EV charging infrastructure projects avoiding the investment and time required to install new electrical equipment or complex energy management systems

- Ensure 24/7 continuous operations with 4 power management logics for up-to 30 EV chargers
- Increase your energy efficiency by intelligently enabling EV charging at the optimum capacity utilizing the available power
- Reduce electricity costs by ensuring your utility contract's limits are not exceeded
- Maximize the number of chargers installed by using dynamic load management to prioritize or balance the available power to all charging Electric Vehicles

* Current release features ABB Terra AC chargers
** using the communication protocol Modbus TCP/RTU

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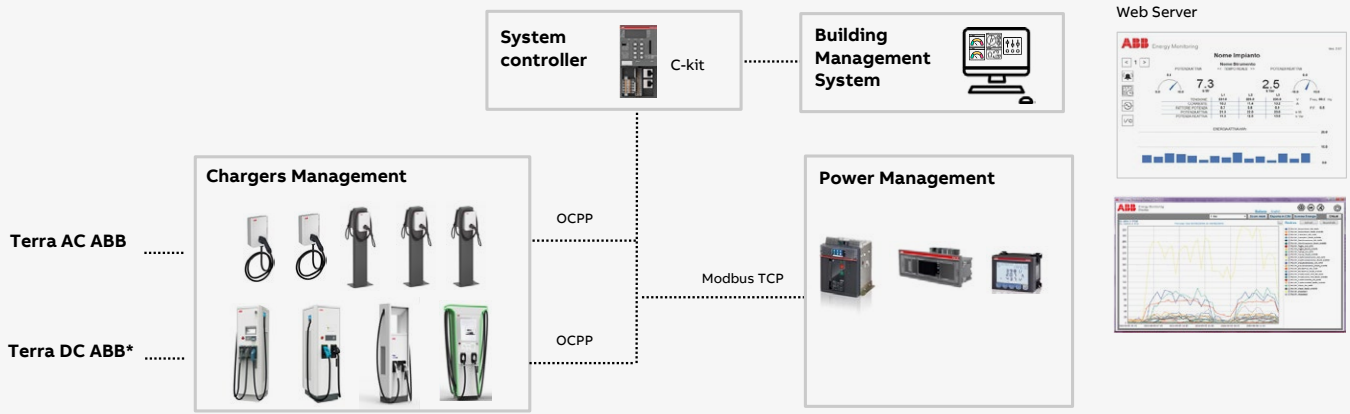
Overall system architecture



* In future releases, support for ABB DC chargers and third-party AC/DC chargers will be added

C-Kit acquires and manages up to a maximum of 30 charging stations in OCPP and 13 meters Modbus TCP or Modbus RTU.

Load Management
Static/dynamic load management of charging stations with load metering algorithm-based:

- Equal sharing
- Priority based on arrival time
- Token based priority
- Fixed station priority

Reporting information
Reporting information via the webserver:

- Charging power set point
- Acquisition of delivered power
- Status of the chargers
- Detection of field equipment communication alarms
- Detection of field equipment status alarms
- Display of the total delivered power

Technical data

Capability
Manages up to 30 EV outlets and 13 meters/ breakers. ABB AC chargers and third-party meters are supported.

Connectivity and Monitoring
Protocols managed:
- Modbus TCP-IP and RTU as client for breakers/ meters – maximum 13 devices managed
- OCPP v1.6 as server for interfacing with EV chargers

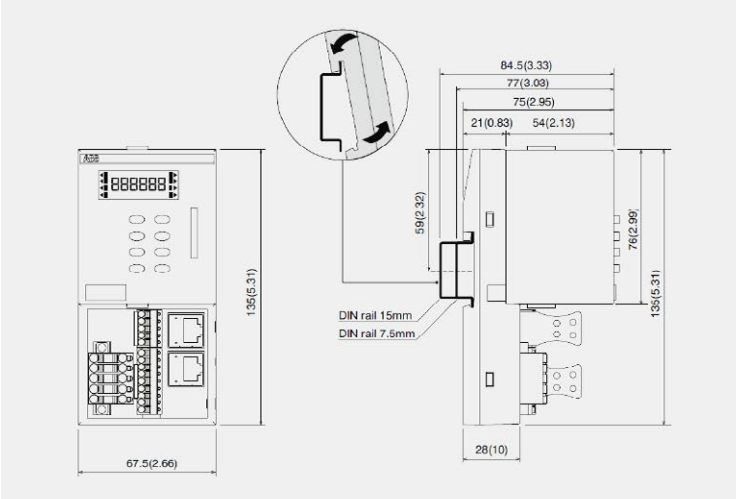
Integrated secure Web-server
- Providing configuration and monitoring capabilities from any computer on the same network via a web-browser

Protocol translator function
- Integration with 3rd party BMS/EMS systems is ensured via Modbus TCP-IP as server, as C-kit is presenting the connected meter datapoints in its own Modbus map
- ABB chargers accept only one OCPP server thus it is not intended for integration into CPOs' systems via OCPP

Alert management using webserver
- Alerts and warnings coming from connected field devices will be displayed on the webserver

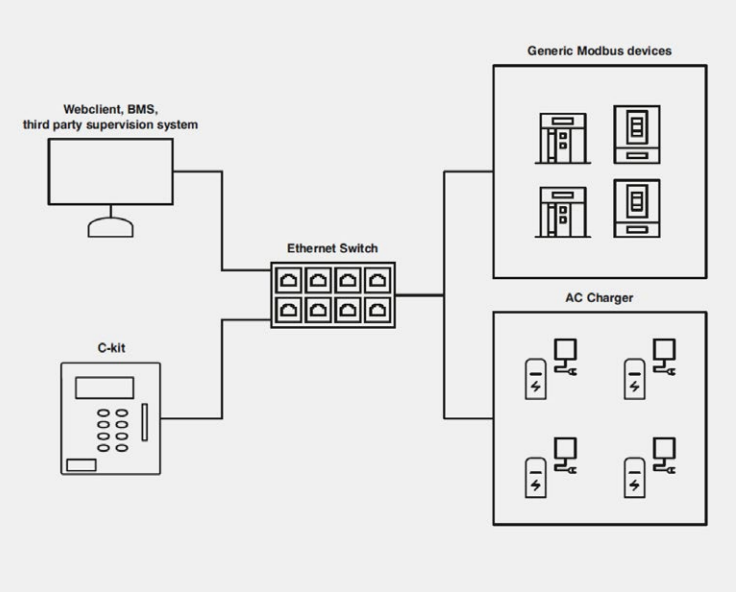
Report management
- Csv reports can be generated and exported via the provided SD card

Dimensions



Installation and further information can be found in the Kit Sheet provided with the product

Communication



OCPP protocol (over Ethernet) is used for communicating with EV chargers

Modbus protocol (RTU or TCP) is used for communicating with energy meters, breakers or supervision software

Commissioning

Installation
Please refer to the installation instructions C-kit.

24V DC power supply is required
- In case the auxiliary power supply is not protected by a UPS, please consider installing the RTC battery accessory to ensure that C-kit always maintains the correct time*: 1SDA128384R1 - Battery for ABB C-kit
- In case of power interruption and when no RTC battery is present, the date/time will be reset on C-kit

Connect C-kit with an Ethernet cable to the same local network (switch) where the target EV chargers and Modbus meters are connected, as well as the computer used for configuration and monitoring of the system
- Either physical port ETH1 or ETH2 can be used, as both ports are bridged and sharing the same IP
- A static IP address is required for C-kit, to be configured using the device keypad (as per provided instructions)

Installation instructions

Configuring new OCPP server for ABB AC EV chargers
- Terra Config app is required for modifying ABB chargers' settings
- Insert required PIN
- Modify OCPP server, inputting the C-kit IP address with port 9000

Commissioning
- In the C-kit webserver, Charger Page, Settings: add the EV charger identity ("TAC123456"), retrieved from the EV charger label
- Reboot C-kit
- Now the EV charger can be managed by C-kit

* Time synchronization is required for the correct functioning of the webserver and for keeping the correct timestamp for event tracking

Accessories

SD card included in the box
- Storage for data-logger
- Required for firmware update

RTC battery for C-kit Commercial
Code 1SDA128384R1
Required when C-kit power supply is not guaranteed (e.g. by using an UPS) for keeping date/time

Documentation and Website
- Installation Instructions
- White paper EVCI
- Manual 1SDH002344A1002
- External Website

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