EVlink

Electric vehicle charging solutions

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Life Is On | Schneider Electric

EVlink Smart Wallbox

Characteristics

Cloud-connectable

GPRS Wi Fi Ethernet

E.V.READY

Z.E. READY

CE

PEP eco PASS PORT®

Green Premium™ Product

> ROHS compliant
> Reach compliant
> EoLi: End Of Life Process
> Product Environmental Profile compliant

Certification

EVlink Smart Wallbox has obtained the CB test certificate issued by the LCIE test laboratory, establishing compliance with the IEC 61851-1 and IEC 61851-22 standards.

Power supply
• Smart Wallbox can be supplied either in single-phase or in three-phase
• 220-240 V single-phase - 50/60 Hz
• 380-415 V three-phase - 50/60 Hz

Rated charging current
• T2: 8 A to 32 A (factory setting 32 A)

Power consumption
• Power consumption of each conditional input (limitation and deferred start): 5 mA 24 V DC

Diagram of the earthing system
• TT, TN-S, TN-C-S
• IT (may require the addition of an isolating transformer for charging of certain vehicles)

Mechanical and environmental characteristics
• Ingress protection code: IP54
• Impact protection code: IK10
• Operating temperature: -30°C to +50°C
• Storage temperature: -40°C to +80°C
• Attached cable length: 4.5 m

Charging access
• Key locking
• User authentication through a RFID badge. Remote authentication by supervision or local setting of authorized badges
    - 13.56 MHz RFID reader for badges with chips Mifare Ultralight, Mifare Classic 1K / 4K, I Code SLI, Tag-it HFI, EM4135 ... (under ISO/IEC 14443 A&B, ISO/IEC 15693 protocols)
      Notes: RFID badges available on the market and standard are modified very often, so we advice to carry out prior test on our charging station to check compatibility
    - 5 RFID badges provided with every RFID-type charging station

Warranty
• 24 months for the entire EVlink range

Standards
• IEC/EN 61851-1 ed 2.0
• IEC/EN 61851-22 ed 1.0
• IEC/EN 62196-1 ed 2.0
• IEC/EN 62196-2 ed 1.0

Connectivity
• Wired Ethernet: 3 ports
    - Port 1: LAN
    - Port 2: 3G/4G
    - Port 3: connection to PC for commissioning
• 3G/4G modem as an accessory
• OCPP 1.5 or OCPP 1.6 interface

Energy metering
• Integrated measuring of the apparent power
• Interface with an external MID energy meter

Commissioning
• Parameters setting through a web server embedded in the charging station.

Charging station references

EVlink Smart Wallbox
TR25:2016 Compliance

Description	Socket outlet or connector type	Charging access	Power (kW)[1] Phases	References
With attached cable 4.5 m, on right side - Silver plated contacts				
T2		Key	7.4 (1P)	**EVB1A7PCKI**
		RFID [2]	7.4 (1P)	**EVB1A7PCRI**
T2		Key	22 (3P)	**EVB1A22PCKI**
		RFID [2]	22 (3P)	**EVB1A22PCRI**

[1] Factory setting: 32 A - and all RFID badges validated.
Can be replaced by customer setting (16 A, list of RFID badges…) using a PC via embedded webserver (see commissioning guide DOCA0060).

[2] Includes 5 RFID badges.

Protective devices and optional equipment

New installation: supply line and protection devices must be defined for the highest power setting.

| Description			
Charging		Single-phase	Three-phase
Rated Power - Current		7.4 kW - 32 A [4]	22 kW - 32 A [4]
Protection			
Circuit breaker (overcurrent)[1]		40 A Curve C: **A9F74240**	40 A Curve C: **A9F74440**
RCD (residual current)[1]		30 mA B Type for EV [2]: **A9Z51240**	30 mA B Type for EV: **A9Z51440**
		30 mA A Type: **A9R51240**	30 mA A Type: **A9R51440**
Under voltage tripping auxilary	with iC60	**A9A26969** [3]	**A9A26969** [3]
	with DT40	**A9N26969** [3]	**A9N26969** [3]
Deferred start			
Relay		With normally open contact [5]	
Load-shedding			
Relay		With normally open contact [5]	

[1] References to be defined and local availability to be checked by Schneider Electric front offices.
[2] In accordance with the electrical installation standard HD 60364-7-722:2016. Refer to local regulation.
[3] Necessary to meet EV Ready requirements.
[4] Without or with domestic socket.
[5] Smart Wallbox setting can be changed to "normally closed" if necessary, with commissioning tool.

Protective devices
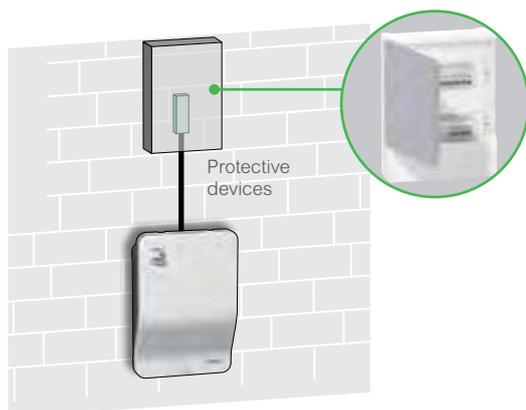
The charging station operates autonomously.
It has a dedicated protective device.

> Installation: by an electrician

> Location: residential, private usage

EVlink Parking

Characteristics

Schneider Electric
Silver plated Socket-outlet

The appearance may be customized on request.

Please do not hesitate to contact your Schneider Electric representative to assist you in this project.

EVlink

Power supply network
• Earthing system: TT, TN-S, TN-C-S
  - IT (may require the addition of an isolating transformer for charging of certain vehicles)
• Frequency: 50 Hz or 60 Hz
• Socket outlet supply circuit (1 circuit per socket outlet):
  - 220/240 V 1P+N *or*
  - 380/415 V 3P+N
• Control circuit voltage (for charging station):
  - 220/240 V 1P+N

Charging modes
• Mode 3 with T2 socket outlet
• Communication between charging station and vehicle via charging cable as per IEC 61851

Charging access
User authentication through a RFID badge. Remote authentication by supervision or local setting of authorized badges
  - 13.56 MHz RFID reader for badges with chips Mifare Ultralight, Mifare Classic 1K / 4K, I Code SLI, Tag-it HFI, EM4135 ... (under ISO/IEC 14443 A&B, ISO/IEC 15693 protocols)

  Notes: RFID badges available on the market and standard are modified very often, so we advice to carry out prior test on our charging station to check compatibility
  - **5** RFID badges provided with every RFID-type charging station

Mechanical and environmental
• Painted steel body, anti-corrosion treatment
• Protection: IP54 (IEC 60529), IK10 (IEC 62262)
• Operating temperature: -25°C to +40°C for Mode 2 / Mode 3 charging station
• Operating temperature: -25°C to +50°C for Mode 3 only charging station

IT Network connection
• TCP/IP
• FTP, SMTP or HTTP data retrieval
• Operations:
  - remote user authentication
  - retreive data for Charging Data Record
  - charging station status monitoring
  - get remote commands

Certification
• CE and CB scheme (IEC 61851-1 and IEC 61851-22 standards)
• EV and ZE ready

Warranty
• 24 months for the entire EVlink range.

Product QR code 'FLASH ME'

Cloud-connectable

GPRS

Ethernet

CE

E.V.READY

Z.E. READY

e

Gre n Premium™
> RoHS compliant
> Reach compliant
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Charging station references

❯ EVlink Parking
TR25:2016 Compliance

With
RFID reader

Mode 3

Charging station type	No. of chargepoints	Socket outlet type Silver-plated contacts	Power per socket outlet / Phases	
With RFID reader [2]			7.4 kW (1P - 32 A)	22 kW (3P - 32 A)
	2	T2 with shutters	**EVF2S22P44R**	

[1] On the right side of the charging station.
[2] Includes 5 RFID badges.

EVlink AC charging station testing tool

NEW

In short

Reference: EVA1SADS

$C \epsilon$

Tool for trained electricians

This tool permits to check **correct operation** of an AC charging station:
- EVlink Wallbox
- EVlink Smart Wallbox
- EVlink Parking
- EVlink City
- Any charging station complying with IEC 61851-1, by simulation of a vehicle during charging

Easy to carry
- **Weight Approx. 795 g**

Compatibility
- Accepts any cable fitted with a T2 connector
- Single-phase or three-phase alternating current charging
- Cable to be ordered separately; please refer to page 46.

Power On indicator lights on the L1, L2, L3 phases

Measurement sockets for the protection conductor PE, the neutral N and the L1, L2, L3 phases

Vehicle status selector

Charging cable rating selector

CP pilot wire measurement socket

Type F socket-outlet

Type 2 socket

Perfectly simple…

Once the testing tool is connected to the charging station, charging is started thanks to a button. **A few minutes** is all that's needed to check correct charging station operation

… and standalone

Power supply via the charging cable. No internal battery, **so unlimited time for servicing operations and for you peace of mind**

Possible Checks and measurements

a. Check voltage presence on each phase
b. Measure the voltage between phases, between phase and neutral, between neutral and ground
c. Check the ground continuity
d. Test the ground fault circuit interruption capacity of the charging station
e. Measure the voltage between the CP pilot wire and the ground
f. Observe the signals transmitted on the CP pilot wire.

Characteristics

Characteristics of the power supply network
- The testing tool is powered via the charging current
- Network frequency: 50 Hz
- Earthing system: TT or TN (do not use in IT)
- Voltage: 400 V∿ on type 2 connector
- Power: test consumer Max. 2.9 kVA (no continuous operation!)

Mechanical and environmental characteristics
- Degree of protection (as per IEC 60529): IP20
- Dimensions (H x L x D): complete with connector plug: 105 x 750 x 62 mm
- Weight: approx. 795 g
- Connector: Type 2 inlet • IEC 62196 type 2-II • U: 400V3~ • F: 50 Hz
- Storage temperature: -25°C / +60°C
- Operating temperature: -10°C / +45°C
- Risk of mechanical damage to the testing tool if dropped at
  a temperature < -2°C
- Relative humidity rate (RH): < Max. 80%, condensation ruled out

Accessories and documents included
- Instruction guide
- Detailed user manual (to be downloaded from the Web)

Certification
The AC charging station testing tool complies with standards IEC 61010-1
and IEC 61851-1

Recommended measuring instruments for additional tests
- Operations b, c, d, e, f, require the use of measuring instruments
  (multimeter, ground fault circuit interrupter tester, oscilloscope)
  not supplied with the EVlink testing tool
- For observation of signals during the electric vehicle status simulation test
  (signals in accordance with the IEC 61851 standard).

EVlink cables

Characteristics

EVlink cable for charging stations:

Mobility within arm's reach

Type 1 (T1)　　　Type 2 (T2)

+

- Tested and certified product: Third-part laboratory CB certification (LCIE) complies with applicable standard IEC 62196
- High protection, fast charging (Mode 3)
- High-strength cable

Characteristics
- Length: available in 5, 7 and 10 m
- Max. current: 32 A
- Operating temperature: -30°C to +50°C
- Degree of protection: IP44.

Two good reasons to have a second EVlink cable in your electric vehicle

1

To take advantage of the charging capacity of public charging stations: by having an appropriate EVlink cable for the charging stations used, you obtain fast charging with high protection.
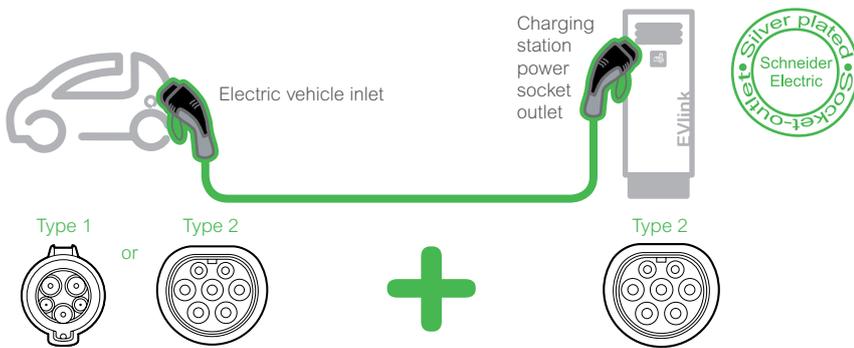
2

To have a fallback solution.

E.g.: charging cable damaged or misplaced, help out another electric vehicle user.

Which EVlink cable

for which electric vehicle?

Charging station power socket outlet

Electric vehicle inlet

EVlink

Silver plated Socket-outlet
Schneider Electric

Type 1　　or　　Type 2　　　　　　　　Type 2

+

	References	No. of phases		Charging power accepted (kW)				Cable length
		1	3	3.7	7.4	11	22	(m)
T1 + T2	EVP1CNS32121	●		●	●			5
	EVP1CNL32121	●		●	●			7
	EVP1CNX32121	●		●	●			10
T2 + T2	EVP1CNS32122	●		●	●			5
	EVP1CNL32122	●		●	●			7
	EVP1CNX32122	●		●	●			10
	EVP1CNS32322		●	●	●	●	●	5
	EVP1CNL32322		●	●	●	●	●	7
	EVP1CNX32322		●	●	●	●	●	10

EVlink Load Management System

EVlink LMS Load Management System
for EVlink Smart Wallbox, EVlink Parking and EVlink DC Fast Charge

EVlink Load Management System has been awarded with the prestigious "Solar impulse Efficient Solution" label.

Find out more here

EVlink Load Management System (EVlink LMS) allows to monitor, control and maximize EV charging based on the real-time available power in the building.

It ensures the respect of cost and energy efficiency constraints of a set of charging stations by controlling their operation. The controller runs its management program according to the selected parameters and data received from the charging stations.

Characteristics
- PLC type: Magelis iPC IIoT Edge Box Core
- Operating system: Linux Yocto
- Supply voltage: 12...24 V DC
- Inrush current: 0.43 A
- Consumption: 16 W
- Dimensions: 150 x 46 x 157 mm
- Protection class: IP40
- Compliance with directives:
    - 2014/30/EU (electromagnetic compatibility)
    - 2014/35/EU (Low Voltage Directive)
    - Class A EN 55022 (electromagnetic compatibility, conducted and radiated emissions)
- Connections: 2 x USB 2.0, 1 x HDMI, 2 x Ethernet (10/100/1000 Mb/s), 1 x COM RS-232 (default), RS-232/422/485 (non-isolated), 1 ground connection, 1 x GPIO, 1 power supply connector 24 V DC

Current charging sessions

Functions
- Calculates the power allocated to the charging stations
- Ensures the centralization and availability of data for each station

Connection to the charging stations
- Directly to the Ethernet LAN via a switch

External network connection
- Directly to the Ethernet LAN or remotely via a 3G or 4G modem
- Communication under OCPP 1.6 JSON (possible upgrade to OCPP 2.0)

User interface
EVlink LMS provides access to an ergonomic and intuitive user interface (web server) allowing to:
- remote start / stop of a charging session
- reset or reboot a charging station
- visualize a dashboard indicating in real time the status of each charging station
- manage badges (local addition, import or export badges list) and user rights
- access and download the history of charging data by station, by badge or aggregated for the infrastructure
- consult and download maintenance data.

Charging history of electric vehicles

To download the latest release of the EVlink Load Management System software, please scan or click on the following QR code:

EVlink LMS references

References [2]		EVlink LMS with Static mode (dynamic load management with STATIC current setpoint)		EVlink LMS with Dynamic & Static modes (dynamic load management with DYNAMIC current setpoint, or STATIC current setpoint)				NEW
		HMIBSCEA53D1ESS	HMIBSCEA53D1ESM	HMIBSCEA53D1EDB	HMIBSCEA53D1EDS	HMIBSCEA53D1EDM	HMIBSCEA53D1EDL	HMIBSCEA53D1EML
Features								
Capacity	Number of EVlink charging stations	15	50	5	15	50	100	1000 [1]
Power management	Dynamic, with a STATIC current setpoint	●	●	●	●	●	●	●
	Dynamic, with a DYNAMIC current setpoint			●	●	●	●	●
	Time of use		●		●	●	●	●
Multi zone	Maximun number of zones	1	10	2	2	10	20	200
	Maximun number of zones levels	1	3	2	2	3	3	4
Other loads	Power consumption reporting on other feeders		●			●	●	●
Badge management	VIP privilege user badge		●			●	●	●
Stations management	VIP privilege charging station		●			●	●	●

[1] Via the management of up to 9 slave EVlink Load Management System
[2] To upgrade from a current commercial reference to a higher-level one, please consult us.

## Functions performed by all commercial references of EVlink LMS

Access Management	Commissioning	Operation	Connectivity
Add, modify, delete, supervise badges	Commissioning all charging stations directly from EVlink LMS	Supervision through real time dashboard and remote actions on charging stations	Connection with CPO supervision (OCPP 1.6 Json)
	Save & restore commissioned configuration	Charge data report export	Connection with EcoStruxure supervision (web services) [1]
		Maintenance report export	Optional: 3G/4G modem
			Commissioning by Ethernet cable

[1] May require specific development

Dimensions
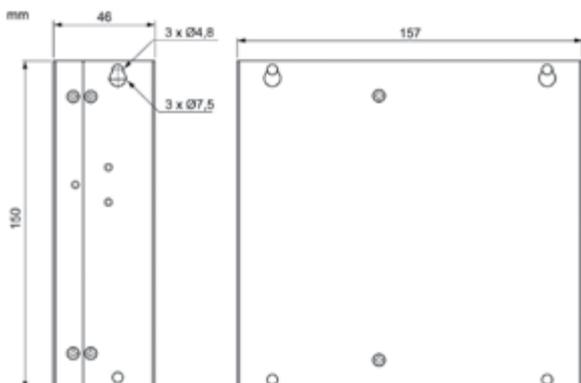
Rear view
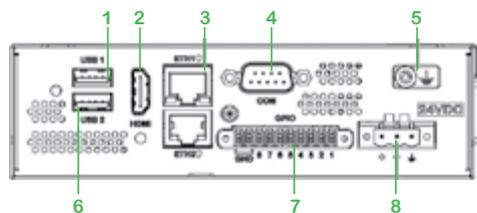
1- USB1 (USB 2.0)
2- HDMI port
3- ETH1 (10/100/1000 Mbits/s)
4- COM port RS-232/422/485
5- Ground connection pin
6- USB2 (USB 2.0)
7- GPIO
8- DC power connector

Metering solutions

❯ Standalone meters with external current transformers

METSEPM5320

PowerLogic Power meter

Commercial reference	METSEPM5320
Communication	1 Ethernet port
Accuracy class	0.5 S
Dimensions	96 x 96 x 72 mm (H x W x D)
Consumption	130 mA / 24 V DC - 65 mA / PoE 48 V DC

To be completed with (not provided)
• a closed Current Transformer
• a cut-off device
• a short-circuiting block

A9MEM3255   A9MEM3555

iEM Energy meters

Commercial reference	A9MEM3255	A9MEM3555
Allocation of costs	MID class C	-
Communication	Modbus	Modbus
Class of accuracy	0.5 S with TI 5 A, 1 with TI 1 A	0.5 S
Width	5 x 18 mm modules	5 x 18 mm modules
To be completed with (not provided)	Closed current transformers	Rogowski current transformers
	a cut-off device	
	a short-circuiting block	
	a Link 150 gateway	

EGX150

Modbus – Ethernet Link 150 gateway

Commercial reference	EGX150
Ethernet communication	2 Ethernet ports type 10/100 Base TX protocol: HTTP, Modbus TCP/IP, FTP, SNMP
Serial communication	2 serial ports (RS232 or RS485, 2 or 4 wires)
	Modbus serial protocol
	Max. no. of devices: 32 directly (or 247 indirectly)
Power supply	24 V DC or PoE (15 W class 3)
Consumption	130 mA / 24 V DC - 65 mA / PoE 48 V DC
Width	8 x 9 mm modules
Operating temperature	-25°C to +70°C

Circuit breakers with embedded metering

Enerlin'X IFE
LV434002

ComPact NSX

Enerlin'X IFE switchboard server, ComPact NSX circuit breaker

Commercial reference	LV434002
Enerlin'X IFE provides an Ethernet interface to a ComPact NSX circuit breaker when it embeds a metering module	
Electrical distribution	3-P, 4-P
Communication	Modbus TCP with circuit breaker
Metering	charging stations energy consumption

MasterPact MTZ with Micrologic Control unit and Enerlin'X EIFE
LV851001

Enerlin'X EIFE Embedded Ethernet interface for draw out Masterpact MTZ

| Commercial reference	LV851001
Enerlin'X EIFE provides an embedded Ethernet interface to a MasterPact circuit breaker whose Micrologic Control unit can perform the charging stations metering	
Electrical distribution	3-P, 4-P
Communication	Modbus TCP with circuit breaker
Metering	charging stations energy consumption

Electrical distribution

❯ Canalis busbar trunking system

**Experience the decentralized electricity distribution with Canalis busbar trunking system.**

Save space and cost in your LV Switchboard, benefit from installation in half the time in comparison with cables, better reliability and personal safety. Canalis is scalable, flexible and future-proof solution for your EV installation, well adapted to indoor car parks / garages.
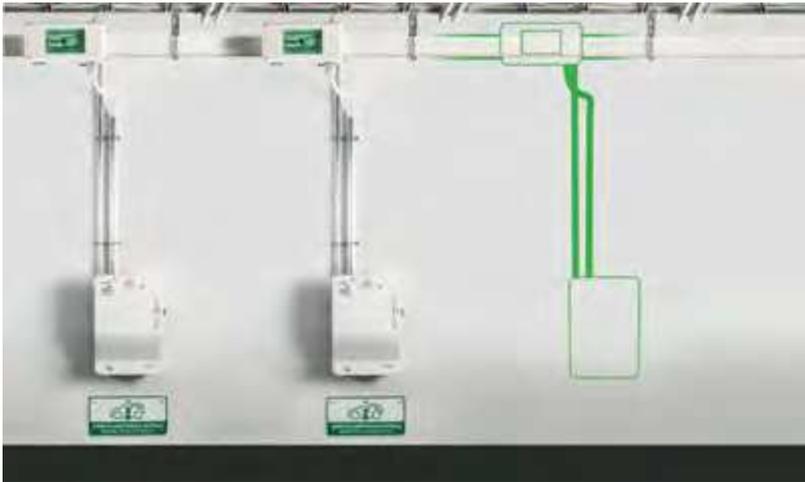
A reliable, scalable and pluggable electrical distribution solution is provided by the Canalis busbar trunking system.

This solution is well adapted to indoor car parks, company garages…

• **Canalis KN,** distribution from 40 to 160 A, Tap-off units from 16 to 63 A

• **Canalis KS,** distribution from 100 to 1000 A, Tap-off units from 16 to 400 A.
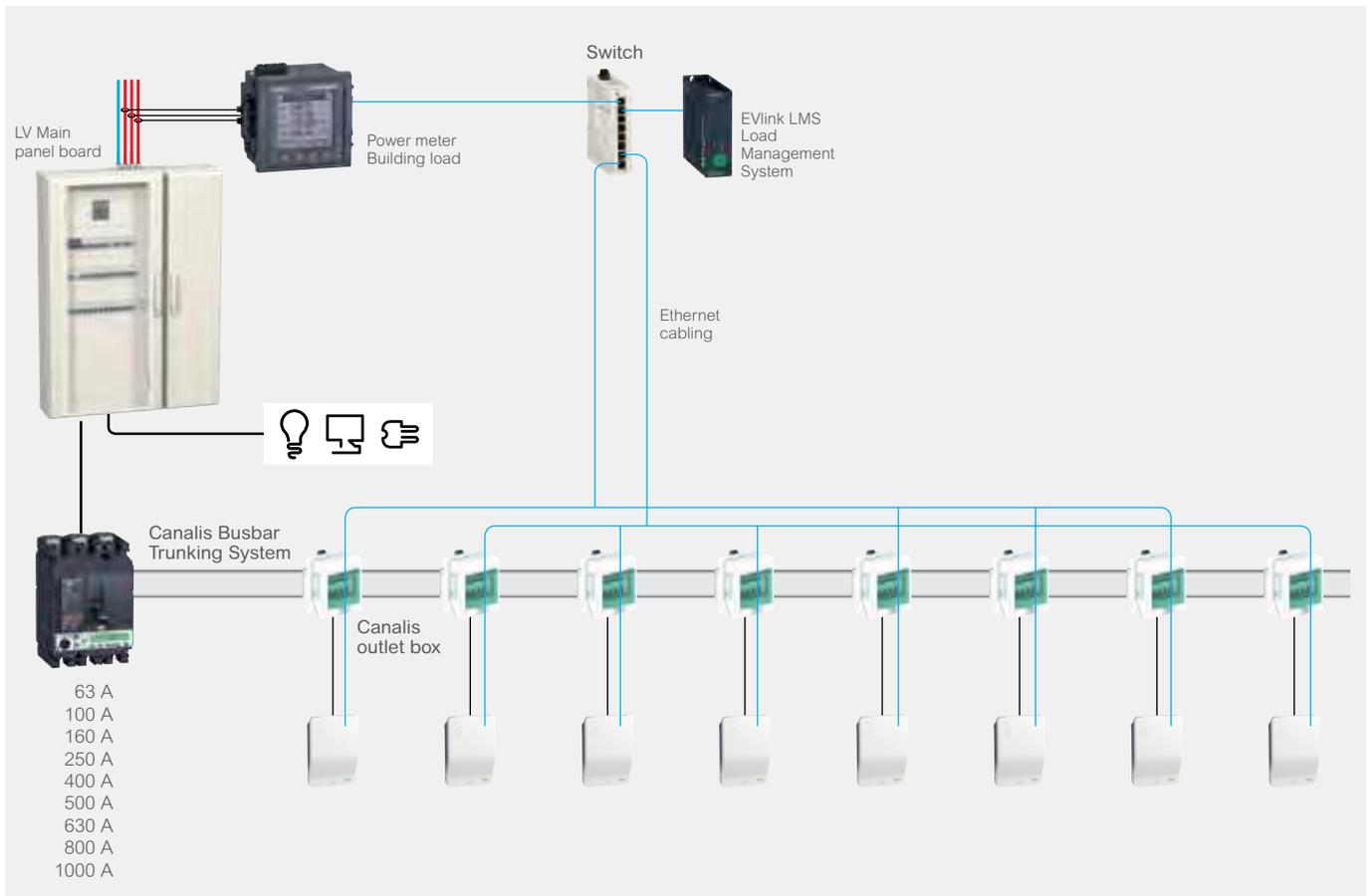
› Canalis KN, Canalis KS preassembled protection kits for EV chargers*

NEW

• **2-pole and 4-pole pre-assembled and pre-cabled kits for Canalis KN up to 160 A integrating:**
  - 1 x 8-module tap-off unit
  - 1 x circuit breaker
  - 1 x RCD B-type for electric vehicle applications

Charging station power	Description of the kit	Included			Kit reference
kW		Tap-off unit	MCB	RCD	
3.7	Protection kit Canalis KN 8 mod. 2P MCB 25 A RCD B EV	KNB63SM48	A9F04220	A9Z51225	**EVK8KN2PB25**
7.4	Protection kit Canalis KN 8 mod. 2P MCB 40 A RCD B EV		A9F04240	A9Z51240	**EVK8KN2PB40**
11	Protection kit Canalis KN 8 mod. 4P MCB 25 A RCD B EV		A9F04420	A9Z61425	**EVK8KN4PB25**
22	Protection kit Canalis KN 8 mod. 4P MCB 40 A RCD B EV		A9F04440	A9Z51440	**EVK8KN4PB40**

NEW

• **2-pole and 4-pole pre-assembled and pre-cabled kits for Canalis KS up to 250 A integrating:**
  - 1 x 8-module tap-off unit
  - 1 x Ccircuit breaker
  - 1 x RCD B-type for electric vehicle applications

Charging station power	Description of the kit	Included			Kit reference
kW		Tap-off unit	MCB	RCD	
3.7	Protection kit Canalis KS 8 mod. 2P MCB 25 A RCD B EV	KSB63SM48	A9F04220	A9F04220	**EVK8KS2PB25**
7.4	Protection kit Canalis KS 8 mod. 2P MCB 40 A RCD B EV		A9F04240	A9F04240	**EVK8KS2PB40**
11	Protection kit Canalis KS 8 mod. 4P MCB 25 A RCD B EV		A9F04420	A9F04420	**EVK8KS4PB25**
22	Protection kit Canalis KS 8 mod. 4P MCB 40 A RCD B EV		A9F04440	A9F04440	**EVK8KS4PB40**

* Check availability in your country.

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