



Protection for EV charging station installation

EV B type Earth leakage protection

"I want to provide EV charging solution to my customers with appropriated electrical protection".



Acti9 iLD B type for EV

An optimum solution to protect the EV charging stations

Customer story

More and more customers are driving electric cars, this is a real trend today. They are looking for a car park where they can rest, have fun or go shopping, but where they can also recharge their cars.

Improving my company's image by going green is good. Moreover I can benefit from the government's help and attract new customers.

Green customer analysis shows that they have a high profile, good salaries, better shopping and cultural behavior...

Investing in a good quality EV installation and complying with standards is important for my company's image.

Proposed solution

The EV charging station plug is manipulated daily by the customers, and it is usually installed outdoor, being exposed to rain, snow, dust, humidity and temperature variation.

That is why IEC 60364-7-722 standard require a 30mA residual current protection for direct contact.

Acti9 RCCB iLD B type EV is designed to:

- **Protect people** against **multifrequency** earth leakage current, generated by charging station technology that can cause fibrillation and electrocution.
- **Simplify** operation thanks to Acti9 VisiSafe and VisiTrip
- **Monitor and control** the electrical panel with PowerTag and Smartlink auxiliaries.
- **Be installed in coordination** with other upstream and parallel RCD (refer to Schneider Electric Residual Protection Device guide for coordination tables).

Customer benefits

For business owner

- **Peace of mind:** your customers will be protected against direct contact in compliance with IEC 60364-7-722 standards.
- **Enhance your green image:** installing the EV charging station helps generate new business, bring more customers, and improve your company's image regarding environment and new trends.

For electricians

- **Efficiency:** one stop shop with Schneider Electric for EV charging station and related electric protections (one manufacturer warranty, one technical support).
- **Improve your business:** Acti9 accessories and auxiliaries can help you to provide best-in class solution adapted to your customer needs, with metering and local or remote communication.



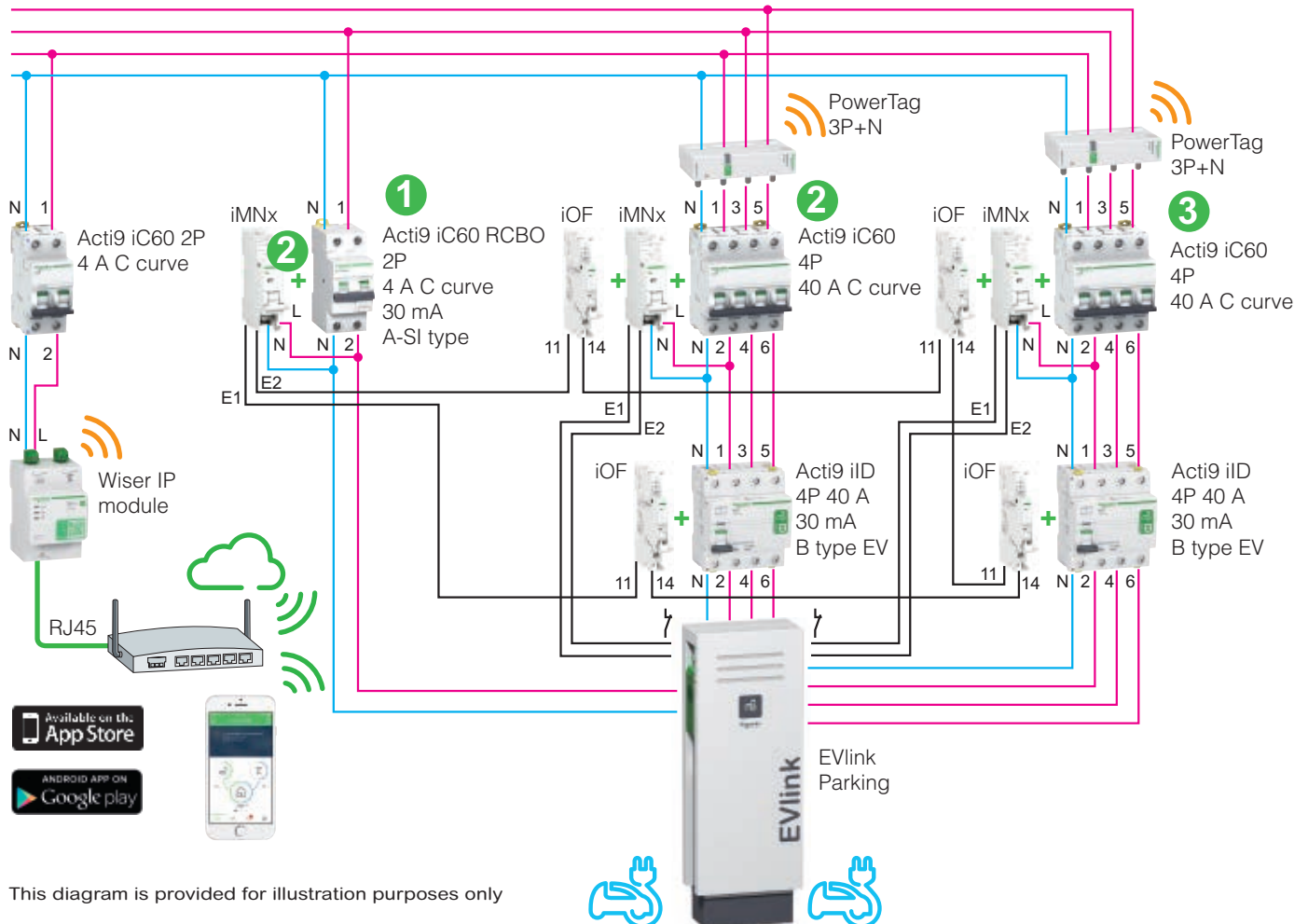
Applications

- Shops,
- Office buildings,
- Hospitals,
- Large buildings.
- ...

Ensure people protection and continuity of service with appropriate RCD

Solution diagram

230/400 V - 50 Hz



This diagram is provided for illustration purposes only

This diagram illustrates a 2x22 kW 3P + N sockets with type B RCCB and with additional isolation capabilities:

- A fault on a socket power circuit (due to overcurrent or insulation fault) will lead to a total shutdown of the station: iOF accessories wired in series with iMNx on RCBO ① will generate a total shutdown switching off the RCBO ① and thus switching off the full charging station.
- Moreover, in case of internal tripping order inside EV link (for the right or the left socket), iMNx installed on MCB ② and ③ will generate the electrical isolation of the socket opening the related MCB. The other socket will stay operational.
- Finally, in case of general supply shutdown, once the electrical supply will be back, the EV link will be operational. Indeed, the iMNx tripping unit are not sensitive to voltage supply absence and thus, will remain in their position.

Products used

Product	Description	Quantity	Reference
EVlink parking	EV charging station 2 sockets T2	1	EVF2S22P44R
Acti9 iID 2P 40 A 30 mA B type EV	RCCB for EV charging station	2	A9Z51240
Acti9 iMNx	Undervoltage release tripping unit	3	A9A26969
Acti9 iOF	Open/close auxiliary contact	4	A9A26924
Acti9 iC60 3P+N 40 A C curve	MCB for EV charging station	2	Specific to country
Acti9 iC60 2P 4 A C curve	MCB for other loads	1	Specific to country
Acti9 iC60 RCBO 2P 4 A C curve 30 mA A-SI type	RCBO for EV charging station	1	A9D27220
Wisier IP Module	IP communication module	1	EER31800
3P+N PowerTag energy sensor	Add-on energy sensor	2	A9MEM1541