

SMART PANEL FOR ELECTRIC VEHICLES

PRODUCT DESCRIPTION

The SMP is a smart control panel specially designed to charge multiple electric vehicles from the same power source whose capacity is limited.

- Measurement Canada certified metering of the electricity consumption of each EV charging station branch circuit, thus allowing the SMP to be installed on the building's common electrical infrastructure;
- Quarterly usage reports are issued to allow for billing of the electricity consumption of each EVSE.

HOW DOES IT WORK?

The SMP monitors the total current draw of the distribution panel as vehicles are being connected to ensure that the configured amperage per phase set point is never exceeded. If the set point is reached, the SMP progressively disconnects vehicles based on charging time, protecting the existing infrastructure by redistributing the available energy to multiple vehicles on a rotating basis. When demand decreases, the disconnected charging stations are reconnected to resume charging.



ADVANTAGES

- Meters the electricity used for each charging circuit and allows for equitable charging to all users;
- Optimizes the power consumption to minimize the power demand and to respect the capacity of the distribution panel power supply;
- Alternates charging of vehicles to ensure that electrical capacity is never exceeded and to ensure that the charging time of all vehicles is fair;
- Can be installed in a different location than the distribution panel, due to its modular concept;
- Compact product that can be installed in small spaces.

The SMP is pre-wired to simplify on-site installation and is ready to be connected to the Internet.

PRODUCT NUMBER		SMP-12	SMP-15	SMP-18	SMP-21
Number of EV charging station branch circuits		12	15	18	21
Customizable range of total SMP current limit (amps per phase) and number of EV charging station in full charge simultaneously*	Minimum	56A (3 EVSE)			
	Minimum recommended by RVE	85A (4 EVSE)	111A (6 EVSE)	111A (6 EVSE)	140A (7 EVSE)
	Maximum	200A (10 EVSE)			
Branch circuit nominal amperage (amps)		40 (max 32A EV charging stations)**			
Standards and certifications		E-SAFE (ESA), Measurement Canada, NEMA-4			
Power terminal blocks		max AWG 4, Cu/AL***			
Operating voltage		208V, 60Hz, 3Ø 4 wires			
Net dimensions (W" x H" x D")		24" x 48" x 8"			
Shipping dimensions (W" x H" x D")		33" x 48" x 13,5"			
Net weight (kg)		57 Kg			
Shipping weight (kg)		68 Kg			
Network connection		Ethernet (RJ-45)			

*The number of EV charging station that can be powered simultaneously by the panel depends on the maximum total amperage per phase, which is determined by a software setpoint configured at the factory during production. This maximum amperage per phase must be specified by the electrician at the time of ordering the panel, depending on the electrical infrastructure that supplies the upstream distribution panel.

The actual number of active EV charging station varies depending on the load distribution between the three phases and the real-time power. The table above shows the current consumed by the panel when the EV charging station draws 32A and are optimally distributed among the three phases of the panel.

** For EV charging station up to 48A, please contact us.

*** Please refer to the installation manual for more information.

Notes: The SMP is compatible with the majority of chargers available on the market, however it is the customer's responsibility to ensure the compatibility of all the charger's functionalities with the panel's load shedding.

The distribution panel and circuit breakers are not supplied with the SMP.

WARRANTY

Internet connection required (minimum 1 Mbps upstream and downstream) to access the panel's power consumption reports and activate the manufacturer's warranty. The warranty is valid against defects in the built-in controls for one year from the date of delivery, provided that the panel is connected to the Internet and can be accessed remotely. The warranty is limited to the equipment and components supplied by RVE Inc. The installer of the panel is responsible for providing after-sales service to the end customer and for on-site visits if necessary.

INSTALLATION EXAMPLE

