Let's drive towards a net-zero



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with a resilient, end-to-end ecosystem that enables efficient and sustainable EV charging

EV Distribution Board

Power your EV infrastructure with Schneider Electric's EV Distribution Board

- Access to power for electric vehicle charging as per requirements within J9D4 of NCC 2022 Volume One; Building Code of Australia
- Designed in consultation with Australia's Electric Vehicle Council
- Performance and design verified to AS/NZS 61439.2 with actual tests conducted at an independent test facility
- Supports Australian Building Codes Board (ABCB) June 2023
 Master isolation recommendations with optional MCCB main switch and shunt trip
- Quick pricing and delivery turnaround for our standard 250A rated solution
- Suitable for both indoor and outdoor (IP66) installations
- Distinctive Gloss Green finish. Custom X15 Orange, N42 Grey or natural stainless steel finish also available
- Load Management System (LMS) architecture in a separate enclosure giving clients option for installation near the EV DB or other locations within the building



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Benefits of FV DB

Compliance to Section
J9D4 within NCC 2022

Compliance to

standard

AS/NZS 61439.1&2

- · Sized to support parallel operation of 24 x EV chargers
- DIN-rail spaces for future installation of 24x36mm wide kWh meters
- Option to have Load Management System inside the EV DB or within a separate enclosure
- · Comes with all necessary labels indicated in J9D4
- · Design verified to all the relevant clauses within AS/NZS 61439.1&2 standard
- · Our tested configuration covers parallel loading on all the outgoing circuits thereby covering the most onerous performance arrangement and be able to give maximum available power to each connected charger
- QR code on each DB for quick access to documentation: as built drawings, routine test report, data sheets



EcoStruxure[™] EV Charging Expert: Load Management System

EcoStruxure EV Charging Expert allows EV charging to be monitored, controlled and maximised based on the realtime available power in the building. It allows for dynamic distribution of available power among charging stations.

It controls the operation of a set of charging stations to ensure cost and energy efficiency constraints are adhered to.

se.com/ecostruxure-ev-charging-expert



Defining maximum power with a dynamic or static current set point

- 2 Metering the facility and charging stations consumption
- Algorithms to allocate power to electric vehicles based on real-time needs and availability

Load Management System box dimensions (mm)

Dimensions



- EV charging expert Minimum 5x charge points Expandable to support up to100x charge points
- 24V DC power supply

1P RCBO 3

- 4 8 port Modicon unmanaged switch
- 5 Space to add more unmanaged switches



Note: If requested, LMS architecture can come installed inside the EV DB as well



Electrical installation with energy management

From 1 to 100 charging stations depending on the EV Charging Expert model selected.



Energy management solution with EV Charging expert



Set point "D" is fixed. The power is distributed between all connected vehicles.

Static energy management



EV DB Specification

Торіс	Specification
IP rating	Indoor (IP42, 54) and Outdoor (IP66)
Height	1500mm
Width	580mm
Depth	235mm (including door)
Metal type	Zinc annealed Mild Steel. Stainless Steel option also available on request
Colour	Mistletoe Gloss Green (98451040). X15 Orange, N42 Grey also available on request
Metal thickness	1.6mm (enclosure)
Incomer type	Switch, MCCB Isolator
Incomer rating	250A*

Торіс	Specification
3Ph Power meter	EM3255 (standard or NMI type). Other meter options available on request
Outgoing circuit breaker options	Type A RCBOs : 1P & 3P MCBs : 1P & 3P MCCBs : up to 250A
Plinth	Available on request
Gland plate	Top & Bottom (Indoor) Bottom (outdoor)
Gland plate material	Steel. Aluminium available on request
Rainhood	Available for outdoor EV Distribution board
Door locking	CL001 or Padlockable

* >250A incomer ratings also available when requested

Frequently asked questions (FAQ's)

1. How do I contact Schneider Electric to get EV Distribution Boards for my project?

Email your requirement to au.estimating@schneider-electric.com

- What 3P metering options are available for EV Distribution Board? EM3255 (NMI or non-NMI type). Other meter types available on request.
- 3. Do EV Distribution Boards need any load management system (LMS)?

Yes. Clause 2.b from J9D4 asks for a charging control system that can manage and schedule charging of EVs in response to total building demand.

4. Does Schneider Electric's EV Distribution Board come with LMS?

Yes. Our **standard** solution is LMS parts being supplied inside a separate enclosure. Refer page 2 for more information on default LMS design proposed with our EV distribution board.

5. Should my EV Distribution Board be designed to support 24 EV chargers ?

Yes. Table J9D4 requires one EV DB to support up to 24 EV car park spaces.

6. How many EV chargers can a Schneider Electric's standard EV distribution board power up?

As of yet:

- 24*1Ph 7.4kW chargers, or
- 8*3Ph 11kW chargers, or
- 8*3Ph 22kW,
- or a combination of above with an overall DB loading up to the rating of incomer.

Our EV DB is designed to give the maximum performance for the number of chargers it can support, and power availability per charger.

- What is the maximum rated current (Ina) of the standard EV Distribution Board solution?
 - · 250A with INS250 as incomer
 - 225A with CVS250 Isolator as incomer. With forced ventilation, Ina can be enhanced to 250A.
- 8. Can I remote trip EV Distribution Board if needed?

Yes, to support ABCB June 2023 Master isolation recommendations, you can ask for the incomer as a MCCB Isolator which would come with a 'shunt trip' to remotely shutdown the incomer, and hence the EV DB. 9. Can I parallelly operate all my connected circuits and still get the best desirable current performance?

Yes. Our EV DB solution has been designed verified to the maximum and most onerous performance with respect to temperature rise clause within the AS/NZS 61439.2 standard.

For example: in our standard 250A rated EV DB solution, you can 'parallelly operate',

- 21*1Ph EV chargers at 32A and remaining 3 at 26A, or
- 7*3Ph EV chargers at 32A and remaining 1 at 26A, or a combination of circuits.

Please note that Schneider Electric's EV Distribution Board has been designed verified to the maximum and most onerous performance with respect to temperature rise clause within the AS/NZS 61439.2 standard.

10. How does my standard Load Management System (LMS) box looks when ordered with EV Distribution Board?

Part type	Quantity
24V DC power supply	1
8 port unmanaged switch	1
6A SP RCBO 10kA 30mA	1
EV charging expert supporting 15 chargers	1

11. Can I customize the LMS box? For example: request more unmanaged switches, additional EV charger management support, LMS inside the EV DB?

Yes. Reach out to <u>au.estimating@schneider-electric.com</u> for available customisation options, or speak to your Schneider Electric representative for more details.

12. Clause 2.f from J9D4 specifies DIN rail space for each sub-circuit electricity metering. How is this managed inside Schneider's solution?

Our EV Distribution Board comes with 2 x DIN rows that can be used to install 24*kWh meters (36mm wide).

13. My site has lot of 3-Ph chargers, high-current DC chargers and I want to run those at maximum possible loading. What solution should I use?

PrismaSeT modular switchboard shall be the right option. Reach out to your Schneider Electric representative to get a list of accredited PrismaSeT partners who can offer this solution.

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