

# EM series EVEMS solutions

## Efficient energy management for EV charging



### The future is electric. Are you ready?

As electric vehicle (EV) adoption grows, so does the demand on the electrical grid and the need for convenient home charging solutions. Choosing the right technology for EV readiness has never been more important.

The **Microelectric®** products makes it possible with innovative **made in Canada** solutions.

EM series of EVEMS is the perfect solution when upgrades aren't an option due to capacity or budget. It provides a cost-effective, hassle-free path to EV readiness.

EVEMS devices can also be used as EMS devices to manage other residential electrical loads— HVAC, appliances, spa, and more.

### What is an EVEMS?

An Electric Vehicle Energy Management System (EVEMS) is designed to optimize energy management during EV charging.

By monitoring the residence's electrical capacity in real-time, an EVEMS ensures that charging only occurs when sufficient capacity is available.

This prevents system overloads, allowing EV owners to safely and efficiently charge their vehicles without exceeding their electrical capacity.


It enables a residence to be EV-ready, while avoiding costly upgrades to the electrical infrastructure when capacity is limited.

## EMEV-S Series

Single load EVEMS for 100 A/200 A main entrance

### Product specifications

- Choose from two enclosure options: Type 1 for indoor use or Type 3R for indoor and outdoor use
- Compact size that allows for easy installation in tight spaces
- S5 Series models can control one 50 A max EV charger
- S8 Series models can control one 80 A max EV charger
- Real-time current monitoring for service entrances rated up to 100 A or 200 A
- Easy and fast installation
- S5 Series models used in conjunction with H6 Series hubs can be used for multi-unit residential building (MURBs) installations
- Exclusive patented technology for smart monitoring and controlling
- Products evaluated using CSA SPE-1000

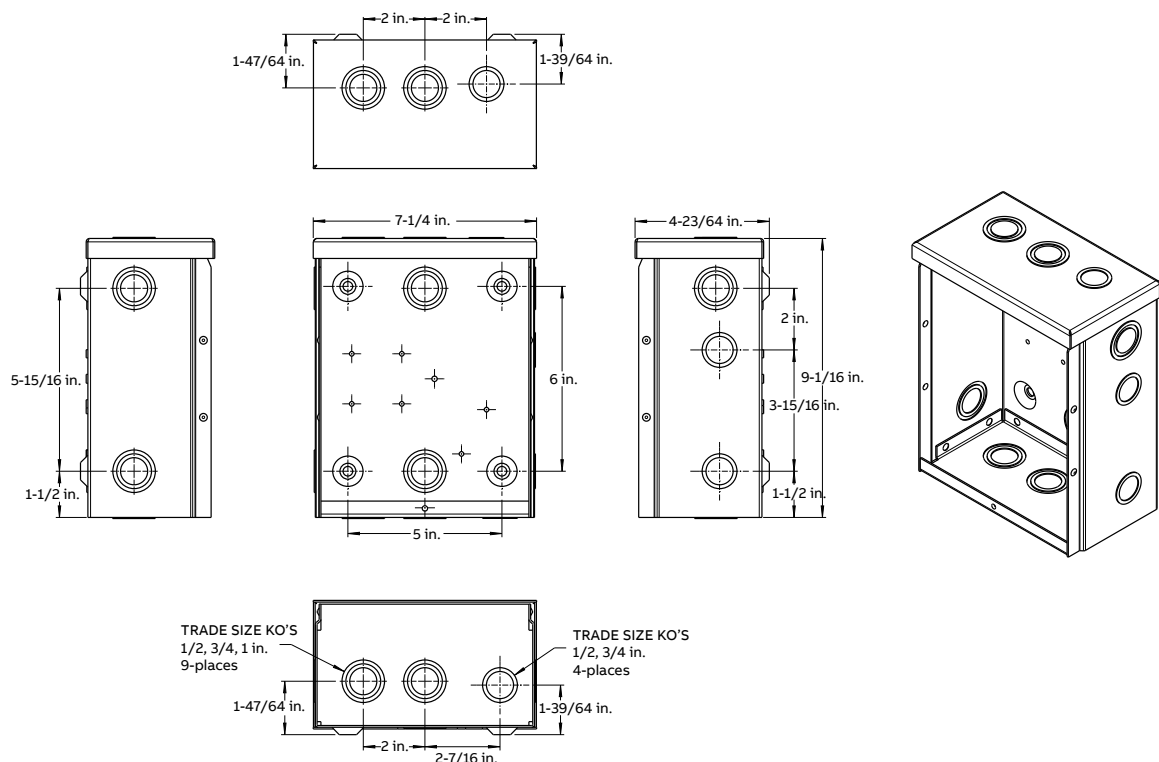
EMEV-S51-1	Cat no.	Service entrance to be monitored	EV charger to be controlled	Enclosure type	Operation temperature	Voltage	Frequency	Main lug wire size	Weight lb (kg)
	EMEV-S51-0	60-100 A 208, 240 VAC or 120/208 120/240 VAC	16 to 50 A load	Type 3R	-4°F to 104°F (-20°C to 40°C)	208/240 V AC single phase	50 – 60 Hz	14 – 4 AWG (Cu only)	7 (3.2)
	EMEV-S51-1			Type 1					
	EMEV-S52-0			Type 3R					
	EMEV-S52-1	125-200 A 208, 240 VAC or 120/208 120/240 VAC	Up to 80 A load	Type 1				14-2 AWG (Cu only)	13 (5.9)
	EMEV-S82-0			Type 3R					

### Diagrams

#### Type 1 Enclosure

#### Applicable to:

EMEV-S51-1  
EMEV-S52-1



## EMEV-S Series

Single load EVEMS for 100 A/200 A main entrance

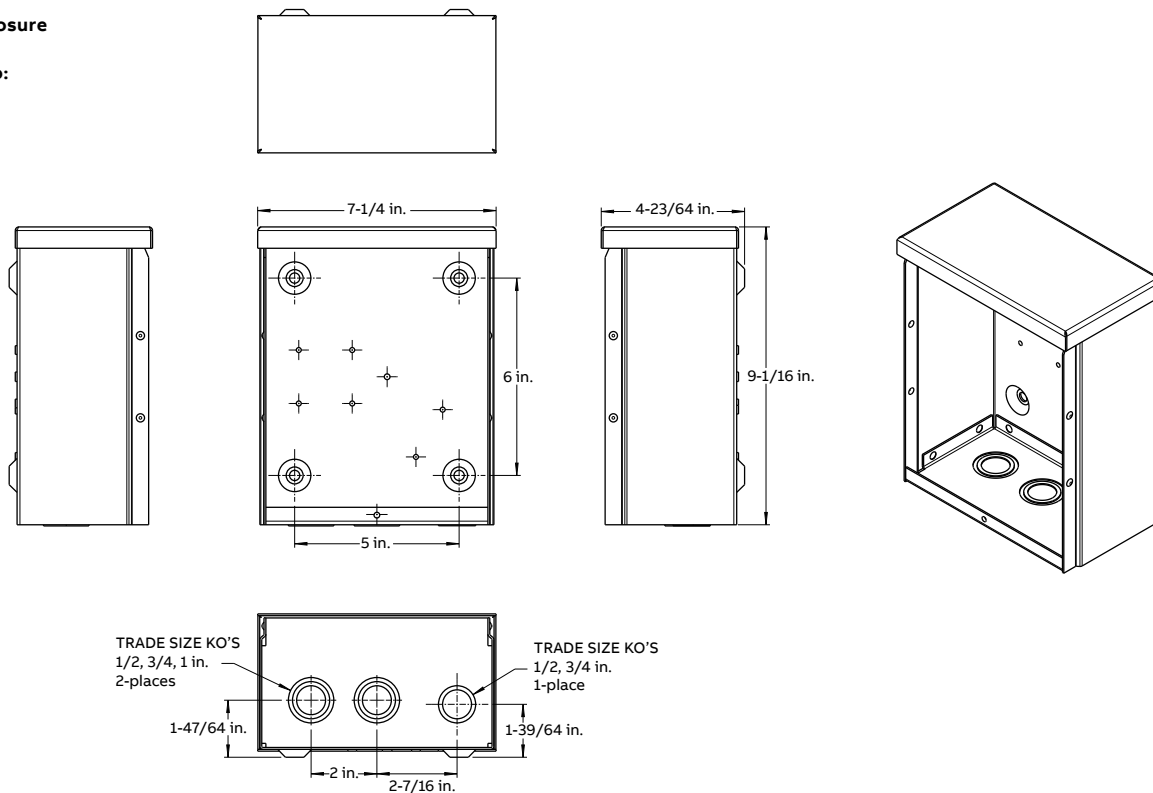
### Diagrams

#### Type 3R Enclosure

#### Applicable to:

EMEV-S51-0

EMEV-S52-0

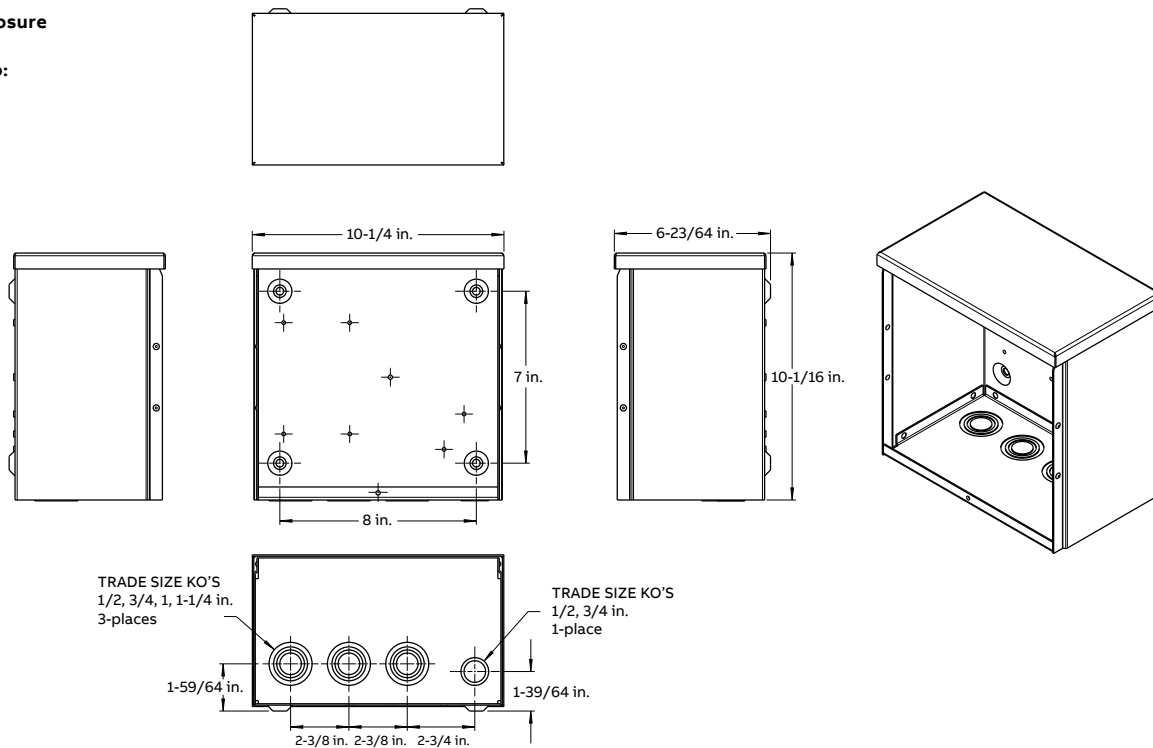


### Diagrams

#### Type 3R Enclosure

#### Applicable to:

EMEV-S82-0




EMEV-D Series

Dual load EVEMS for 100 A/200 A main entrance

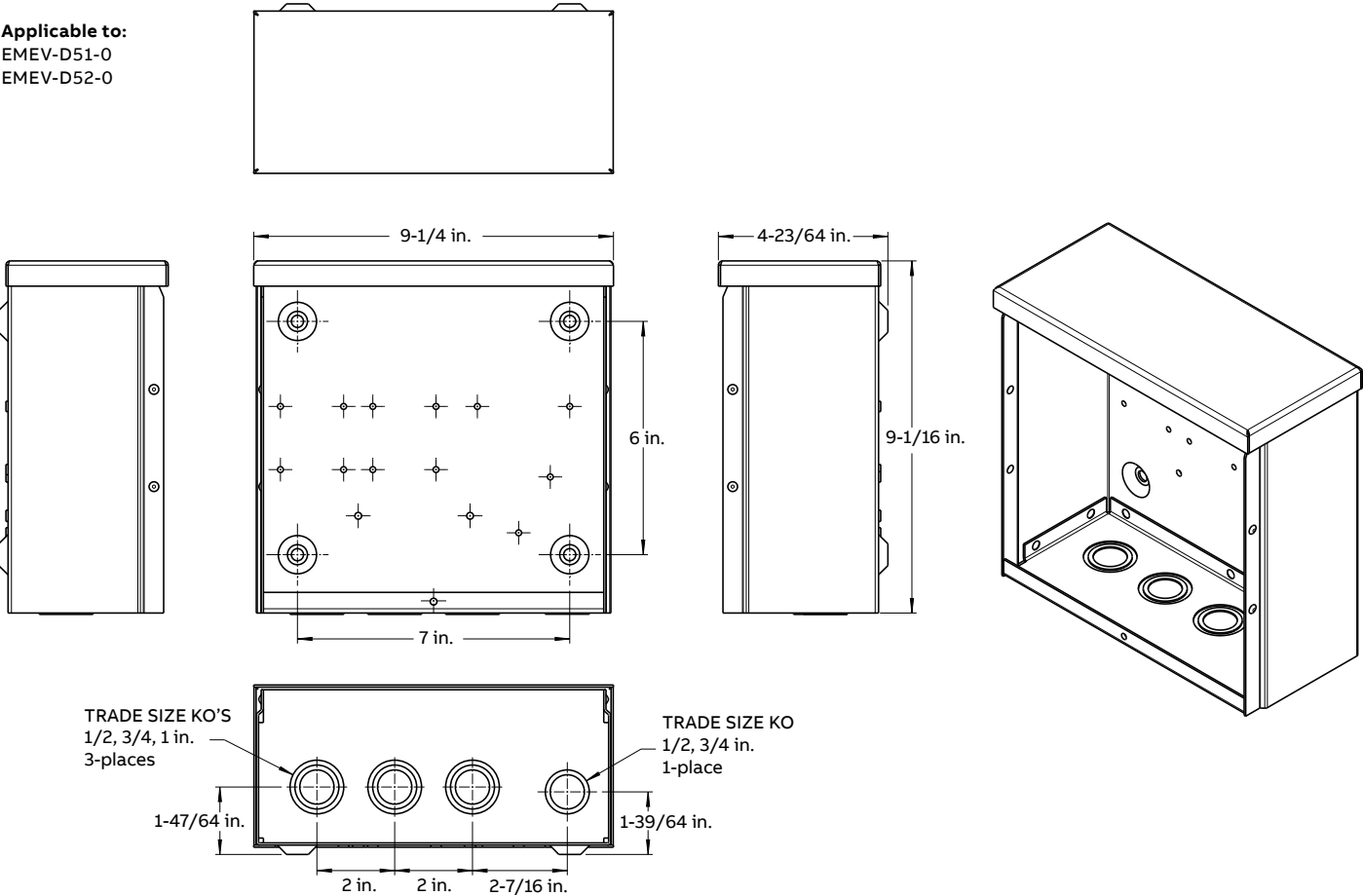
Product specifications

- Type 3R enclosure for indoor and outdoor use
  - Compact size that allows for easy installation in tight spaces
  - D5 EM series models can control two 50 A max EV chargers
  - Real-time current monitoring for service entrances rated up to 100 A or 200 A
- The intelligent algorithm will efficiently manage the two loads
  - Easy and fast installation
  - Exclusive patented technology for smart monitoring and controlling

EMEV-D51-0	Cat. no.	Service entrance to be monitored	EV charger to be controlled	Enclosure type	Operation temperature	Voltage	Frequency	Main lug wire size	Weight lb (kg)
	EMEV-D51-0	60-100 A 208, 240 VAC or 120/208 120/240 VAC	10 to 50 A per contactor	Type 3R	-4°F to 104°F (-20°C to 40°C)	208/240 VAC single phase	50 – 60 Hz	14 – 4 AWG (Cu only)	9 (4.1)
	EMEV-D52-0	125-200 A 208 Volts, 240VAC or 120/208, 120/240 VAC							

Diagrams

Applicable to:  
EMEV-D51-0  
EMEV-D52-0



EME-V-H Series

Multi-residential EVEMS HUB for 200 A main entrance

Product specifications

- Type 3R enclosure for indoor and outdoor use
  - Easy and fast installation
  - Compact size that allows for easy installation in tight spaces
  - Monitors multi-residential building main entrance to prevent overloading
  - Controls simultaneously up to 6 units of S5 EM series (single load) EVEMS
- The shift time function ensures all dwellings in a multi-residential building have equal access to charging
  - No power connection from HUB to main utility feed
  - Automatically detects the number of EM series EVEMS devices that are connected

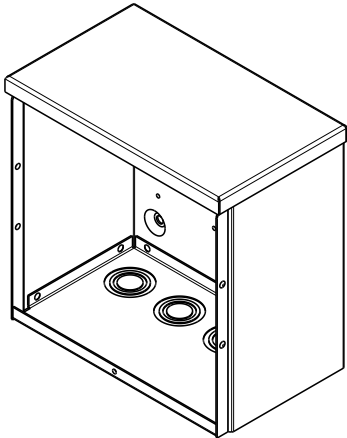
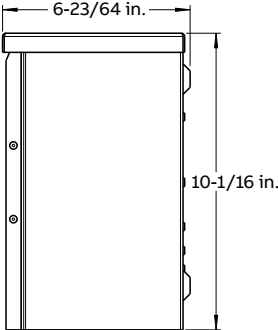
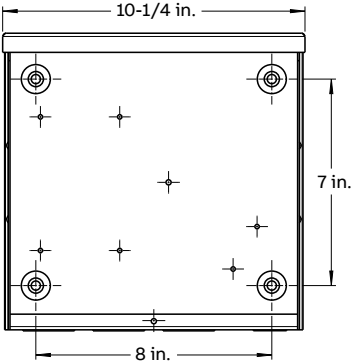
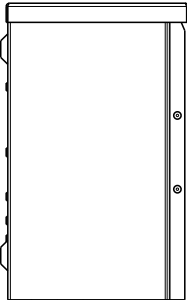
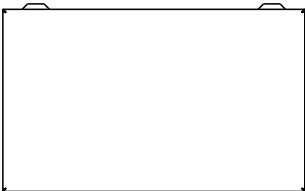
EME-V-H62-0



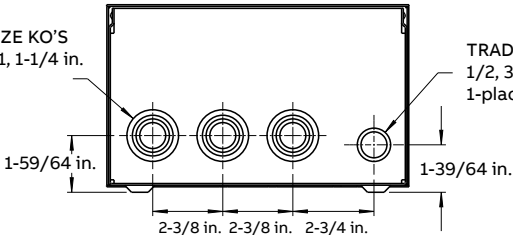
Cat. no.	Service entrance to be monitored	EV charger to be controlled	Enclosure type	Operation temperature	Device voltage	Device current
EME-V-H62-0	200 A 208 Volts, 240VAC or 120/208, 120/240 VAC					
EME-V-H64-0	400 A 208 Volts, 240VAC or 120/208, 120/240 VAC	12 – 48 A	Type 3R	-4°F to 104°F (-20°C to 40°C)	5 VDC Class 2	0.5 A
EME-V-H66-0	600 A 208 Volts, 240VAC or 120/208, 120/240 VAC					

Diagrams

Applicable to:  
EME-V-H62-0  
EME-V-H64-0  
EME-V-H66-0



TRADE SIZE KO'S  
1/2, 3/4, 1, 1-1/4 in.  
3-places



TRADE SIZE KO'S  
1/2, 3/4 in.  
1-place

## Tools

### Essential tools for optimal product installation

- Ensure your installation is functioning correctly
- Apply the correct torques to prevent future issues



#### Handheld – Operational testing device

- Specifically designed to verify EM series EVEMS proper operation during installation or maintenance
- Simulates main electrical service load (home energy consumption) from 0% to 100%
- Facilitates troubleshooting, demonstration and maintenance

Cat. no.	Description	Compatible with
EMEV-OTD	EVEMS Operational Testing Device	EMEV-S51-0, EMEV-S51-1, EMEV-S52-0, EMEV-S52-1, EMEV-S82-0, EMEV-D51-0, EMEV-D52-0, EMEV-H6



#### Adjustable torque screwdriver

- Provides the right torque for the different fasteners
- Clicks when the desired torque is reached
- Adjustable from 4 in-lbs. (0.5 Nm) to 53 in-lbs (6 Nm)
- 0.1 Nm precision scale for right setting
- Full set of 1/4" bits and foam protected case included
- Proper torque for connection points is required  
When not properly se-cured, connections hot spots can be developed as well as abnormal noise, unreliable operation and premature failure.

Cat. no.	Description
EMEV-ATS	Adjustable Torque Screwdriver