

## groov EPIC Chassis

### Features

- > Secure mounting for power supply and processor, with or without *groov*® I/O modules
- > Mount on a panel or 35 mm DIN-rail
- > Modules pivot into place, plug into a module connector, and lock onto the chassis with a single screw
- > Processor and power supply interlock and are secured with a screw
- > UL Hazardous Locations approved and ATEX compliant



GRV-EPIC-CHS4

## DESCRIPTION

All *groov* EPIC® I/O mounting chassis are designed to hold an intelligent *groov* EPIC processor and power supply, with models available that can also hold 0, 4, 8, or 16 *groov* I/O modules.

The **GRV-EPIC-CHS4**, **GRV-EPIC-CHS8**, and **GRV-EPIC-CHS16** can hold a mix of *groov* analog, discrete, and serial I/O modules, because all modules have the same footprint. Field devices are wired directly to the top-mounted connectors on the modules. The module and chassis design allows modules to pivot into a specific mounting positions on the chassis.

The **GRV-EPIC-CHS0** is ideal for applications where I/O is not needed and cabinet space is at a premium.

### A Complete I/O Unit Where You Need It

With a GRV-EPIC-CHS4, GRV-EPIC-CHS8, or GRV-EPIC-CHS16, you can have a powerful I/O unit wherever you need it. From small applications in a limited physical space, to larger applications with complex requirements, the three models are designed to meet a large range of application requirements and physical space limitations.

## Beyond a PLC – Processing Power at the Edge

With a GRV-EPIC-CHS0, you can put a *groov* EPIC processor (GRV-EPIC-PR1) in tough, industrial locations where typical computers or networking equipment may not be able to operate. The processor can provide the computing power and networking connectivity you need to modernize and extend your applications and systems. To learn more about the capabilities of the *groov* EPIC processor, see [groov EPIC Processor Data Sheet](#) (form 2245).

## Agency Approvals and Compliance

All *groov* power supplies, voltage converters, pass-through power adapters, I/O modules, and processors are UL/cUL listed and compliant with the ATEX, Low Voltage, and EMC CE directives. Each module is factory tested twice before shipment and most modules are guaranteed for life.



## Part Numbers

Part	Description
GRV-EPIC-CHS0	Processor and power supply only mounting chassis
GRV-EPIC-CHS4	4-module analog/discrete/serial mounting chassis
GRV-EPIC-CHS8	8-module analog/discrete/serial mounting chassis
GRV-EPIC-CHS16	16-module analog/discrete/serial mounting chassis

## SPECIFICATIONS

All specifications assume the following:

- The air temperature 1 inch below the bottom of the chassis vents does not exceed 70 °C.
- The vents are unobstructed.
- The chassis is mounted in a horizontal orientation with the back of the unit mounted on a vertical surface.

For a diagram that shows the bottom of the chassis, see “Overall Dimensions with Power Supply, Processor, and Modules Mounted” on page 4. For a diagram that shows the chassis in standard orientation, see “Orientation and Clearances” on page 5.

Specification	GRV-EPIC-CHS16	GRV-EPIC-CHS8	GRV-EPIC-CHS4	GRV-EPIC-CHS0
Number of module slots	16	8	4	0
Maximum Power Rating	60 W with GRV-EPIC-PSAC 50 W with GRV EPIC PSDC 108 W with GRV-EPIC-PSPT			
Temperature (operating)	-20 °C to +70 °C			
Temperature (storage)	-40 °C to +85 °C			
Humidity (non-condensing)	5–95% RH			
Agency Approvals	UL/cUL(Class 1 Div. 2), CE, ATEX(Category 3, Zone 2), RoHS, DFARS; CB Scheme			
Warranty	30 months			

## DIMENSIONS: GRV-EPIC-CHS0, GRV-EPIC-CHS4, GRV-EPIC-CHS8, AND GRV-EPIC-CHS16

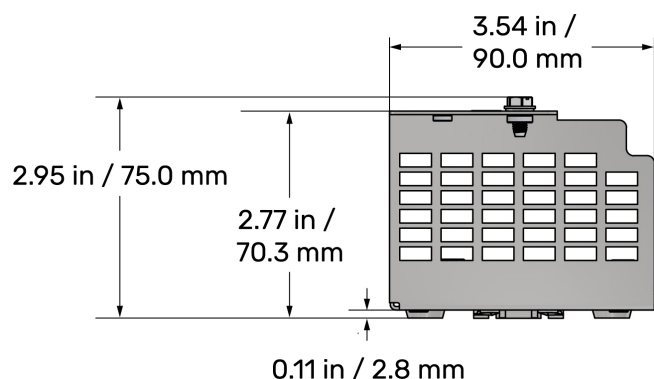
If you want to import these dimensions into an AutoCAD software system, go to the Opto 22 website and download [CAD Drawings: groov EPIC chassis](#).

Part Number	Description	Width (inches)	Width (mm)	Length (inches)	Length (mm)	Depth (inches)	Depth (mm)
GRV-EPIC-CHS0	0-module chassis	5.36	136.2	3.54	90.0	2.95	101.1
GRV-EPIC-CHS4	4-module chassis	5.36	136.2	6.81	173.0	3.98	101.1
GRV-EPIC-CHS8	8-module chassis	5.36	136.2	10.18	258.5	3.98	101.1
GRV-EPIC-CHS16	16-module chassis	5.36	136.2	16.91	429.6	3.98	101.1

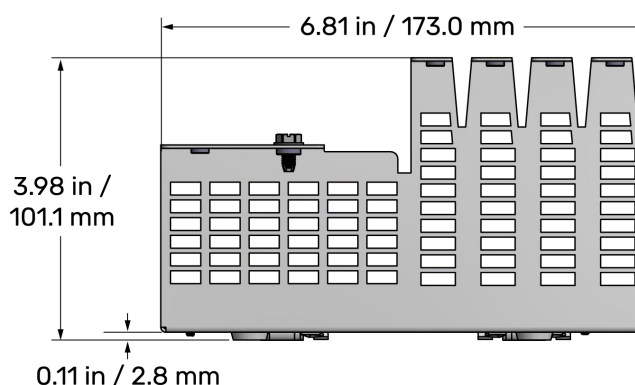
### Depth and Length Dimensions

These diagrams show the bottom view of the chassis.

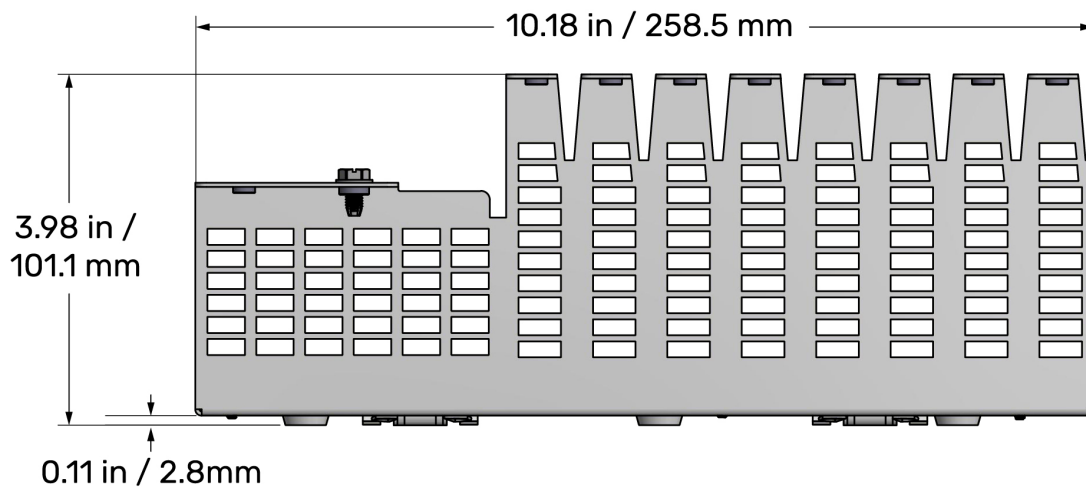
GRV-EPIC-CHS0



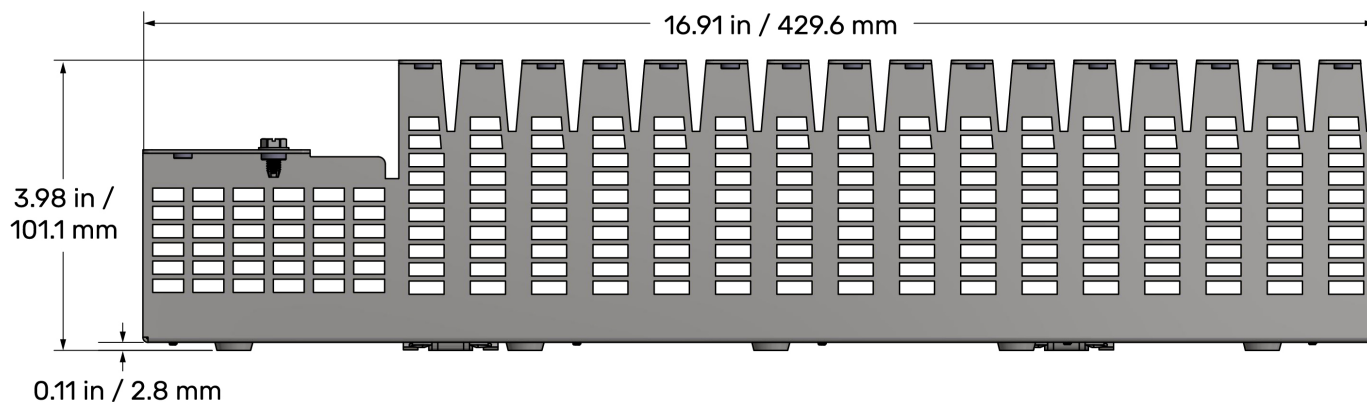
GRV-EPIC-CHS4



## GRV-EPIC-CHS8



## GRV-EPIC-CHS16



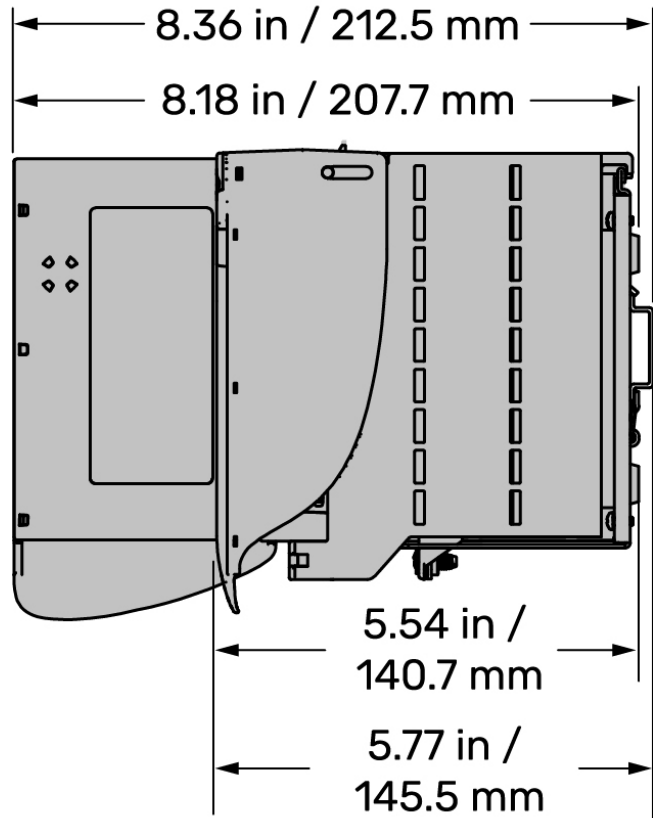
## Overall Dimensions with Power Supply, Processor, and Modules Mounted

The following diagrams show the dimensions of a 16-module chassis with a power supply, processor, and 16 modules mounted on it, with the touchscreen open in a two different positions. The DIN rail shown is a standard 35 mm DIN rail (not sold by Opto 22). When you are determining a location for the chassis, ensure you comply with the orientation and clearances indicated in ["Orientation and Clearances" on page 5](#).

### End View

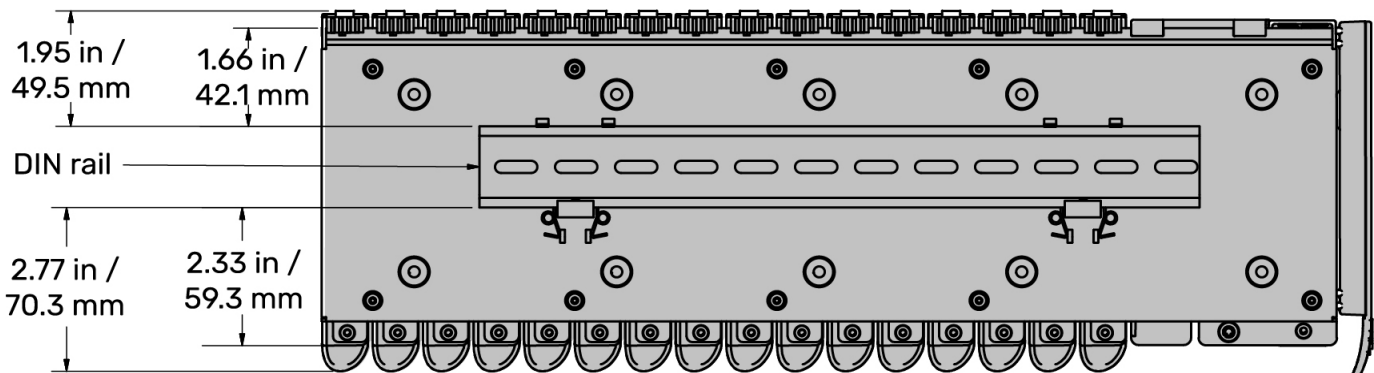
The dimensions shown in the diagram to the right show the touchscreen in two positions:

- Open. Those are the dimensions at the top of the diagram.
- Closed. Those are the dimensions at the bottom of the diagram.



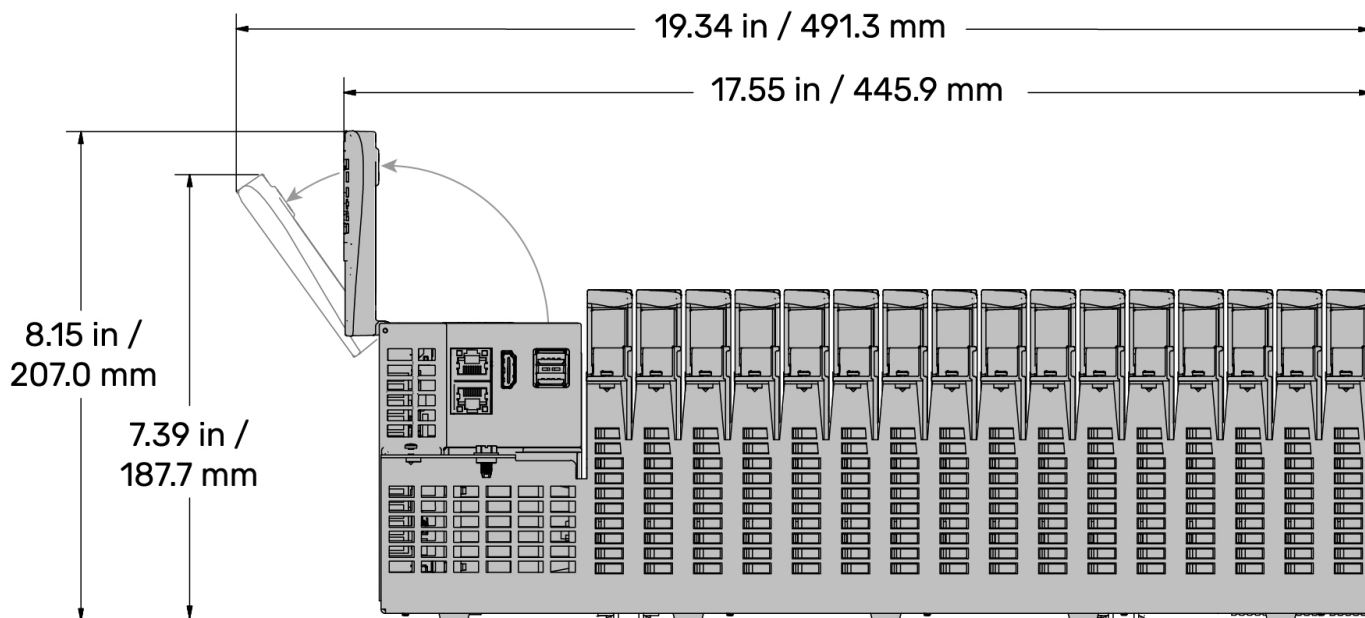
### Back View

The dimensions shown in the following diagram indicate the distance between the DIN rail (if used) and the edges of the chassis and the edges of the unit (if modules are mounted to the chassis). The view shows the touchscreen open upright, perpendicular to the view.



## Bottom View

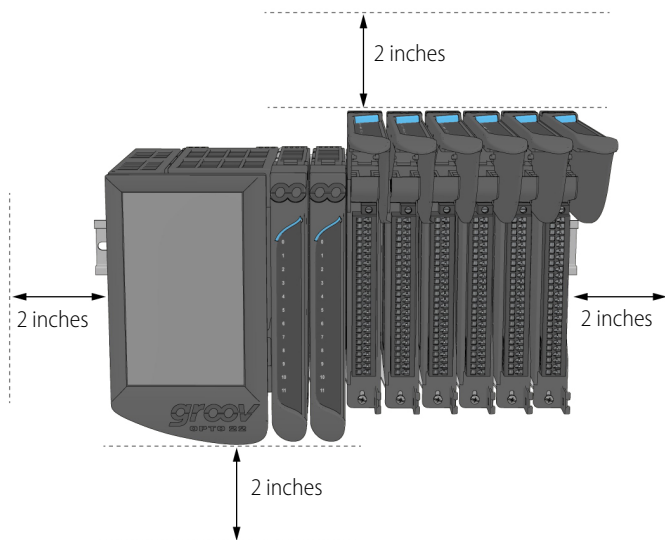
The dimensions in the following diagram show the display open in two positions: upright and out to its fullest extension.



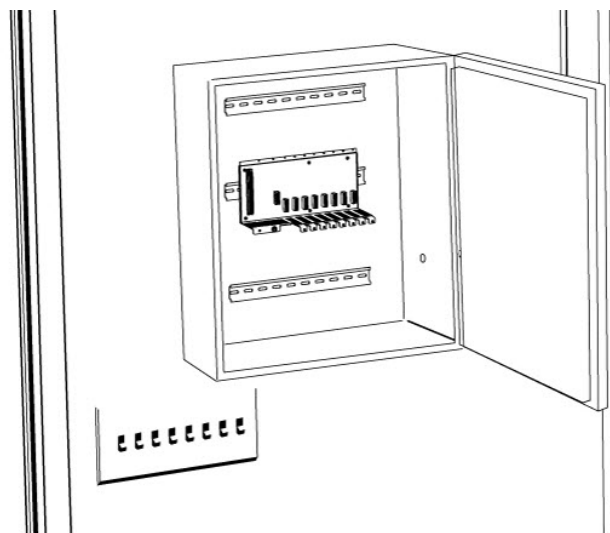
## ORIENTATION AND CLEARANCES

The diagrams in this section show the orientation and the clearances recommended to ensure compliance with the specifications.

The diagram below shows a chassis (with modules, power supply, and *groov* EPIC processor mounted on the chassis) with arrows indicating a minimum 2 inch clearance all around the unit.



The diagram below shows the chassis mounted in a cabinet in a horizontal orientation.



## ASSEMBLING AND MOUNTING

Before assembling and mounting your equipment, make sure you have the necessary clearances to ensure good ventilation, and that the area where you will be installing the equipment does not exceed the specifications listed in “Specifications” on page 2. Check the following:

- Ensure that there is a minimum of 2 inches clearance on the top, bottom, each side, and front of the rack, after the processor, power supply, and modules are mounted.
- Ensure that the vents at the bottom of the chassis are not obstructed.
- When you choose a mounting location, ensure that the location complies with the orientation and clearances specified in “Orientation and Clearances” on page 5.

### Mounting on a DIN Rail

The chassis is built with DIN rail adapters for use on 35 mm DIN rail. No additional assembly is required.

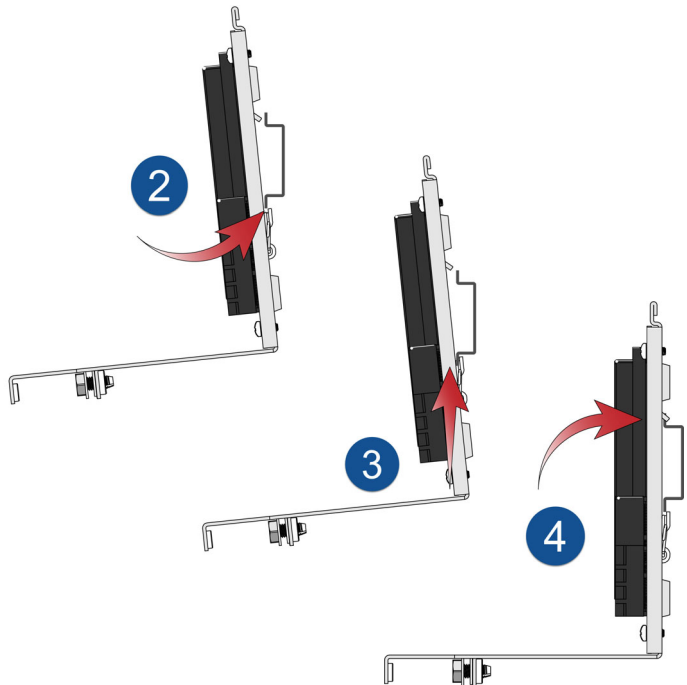
Mount the empty chassis to the DIN rail before installing the *groov* EPIC power supply, processor, or I/O modules.

To mount the chassis to a DIN rail, follow these steps:

1. Hold the chassis so that the module connector numbers are facing right side up.
2. Hold the chassis at an angle such that the top of the DIN rail adapter is away from the DIN rail and the bottom of the DIN rail adapter can slide behind the bottom lip of the DIN rail.
3. Push the bottom part of the chassis upward, making sure that you feel the clip catch on to the rail, and simultaneously push the top half of the chassis toward the DIN rail until the top of the DIN rail adapter engages the top lip of the DIN rail.

Before you release the chassis, verify that the top and bottom of the DIN rail adapters have engaged the DIN rail.

4. For all chassis models, mount the power supply and the processor. For the chassis models that also hold *groov* I/O modules, mount the modules onto the chassis.



### Mounting on a Panel

#### Using Chassis as Template

Use this method if you have the chassis on hand to use as a template.

1. Review the mounting hole dimensions on the next page and the dimensional drawings in previous pages to determine required product and option clearances.
2. Opto 22 ships the backplane attached to the chassis, so remove the backplane to gain access to the chassis mounting holes.
3. Use the chassis as a template to mark holes.
4. After the chassis is securely mounted, attach the backplane with the retention screws provided.

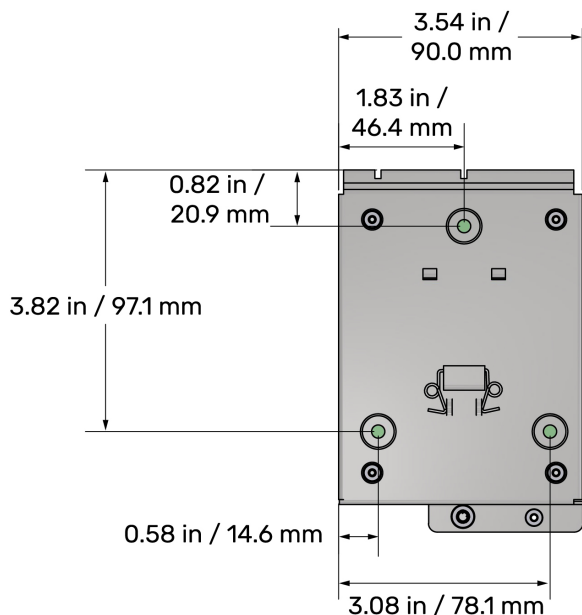
#### Alternate Method: Prefabrication of Panels

If you do not have the chassis on hand, review the diagrams on the next page to determine mounting hole positions.

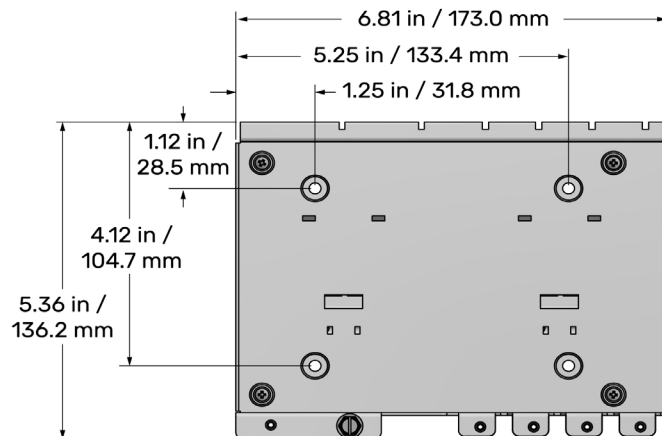
## Mounting Hole Dimensions

The following diagrams show the length measurements from the edges of the chassis to the center positions of the mounting holes. When you install the chassis, use pan head screws of up to 10-32 in size.

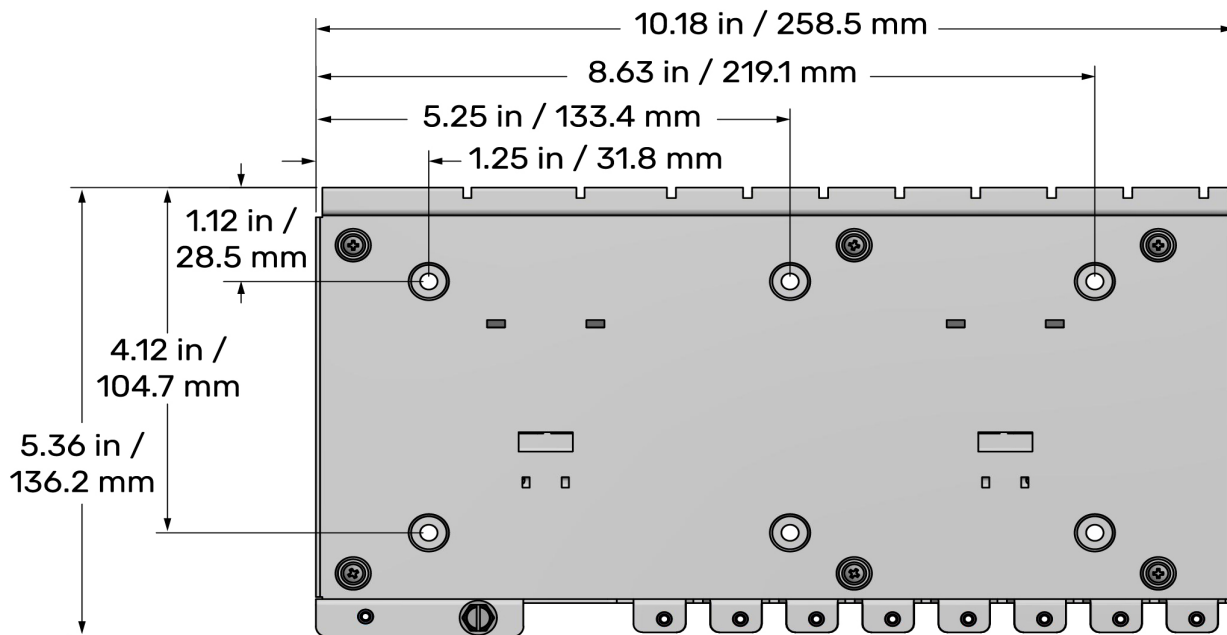
### GRV-EPIC-CHS0



### GRV-EPIC-CHS4



### GRV-EPIC-CHS8



## GRV-EPIC-CHS16

