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**Introduction**

The MP Charge Controller Bracket (MP-CCB) allows the most commonly used charge controllers on the market to be mounted to a Magnum enclosure. This bracket can be easily mounted on either the left or right side of the Magnum MMP (Mini Magnum Panel) or MP (Magnum Panel) enclosure. It is designed to work with specific MidNite, MorningStar, or OutBack charge controllers.

The MP-CCB comes with the necessary hardware to secure the bracket to an enclosure, and to mount a charge controller to the bracket (see Figure 1).

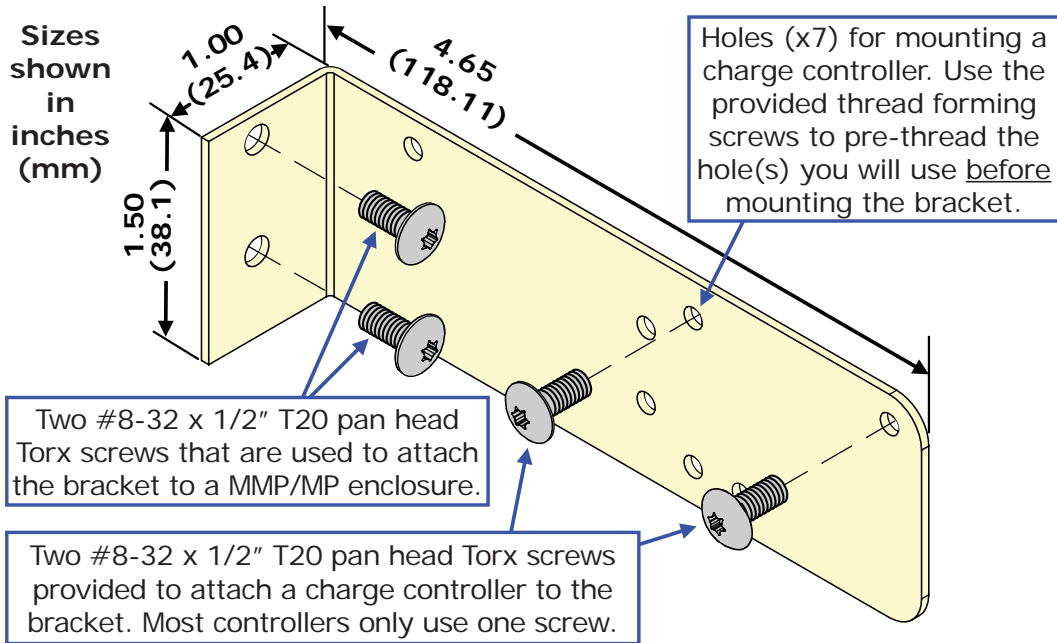


Figure 1, MP-CCB Physical Dimensions

**Installation**

Before proceeding, use Table 1 to determine for your particular charge controller:

- which side of the enclosure (left or right) to mount the controller,
- which enclosure mounting holes (upper or lower) to use to attach the bracket,
- which bracket hole(s) (A-G) to use to attach the controller.

Table 1, Mounting Holes Used for Charge Controllers

Charge Controller	Holes to use: (Bracket) / [Enclosure]	
	Left Side Install	Right Side Install
Classic w/o Turbo (MN)	(B) / [upper]	(F) / [upper]
Classic w/Turbo (MN)	(A) / [upper]	(F) / [upper]
FlexMax 80 (OB) <sup>1</sup>	NA	(G) and (E) / [upper]
Tristar (MS)	(D) / [lower]	(C) / [lower]

(MN) = MidNite, (OB) = OutBack, (MS) = MorningStar

**Note 1** - The FlexMax 80 is taller than most controllers and may not fit if something is mounted above it. If an MPX extension is to be installed on an MP enclosure, mount the MPX on the left side to allow the FlexMax 80 to be mounted on the right hand side.

## MP-CCB Instruction Sheet

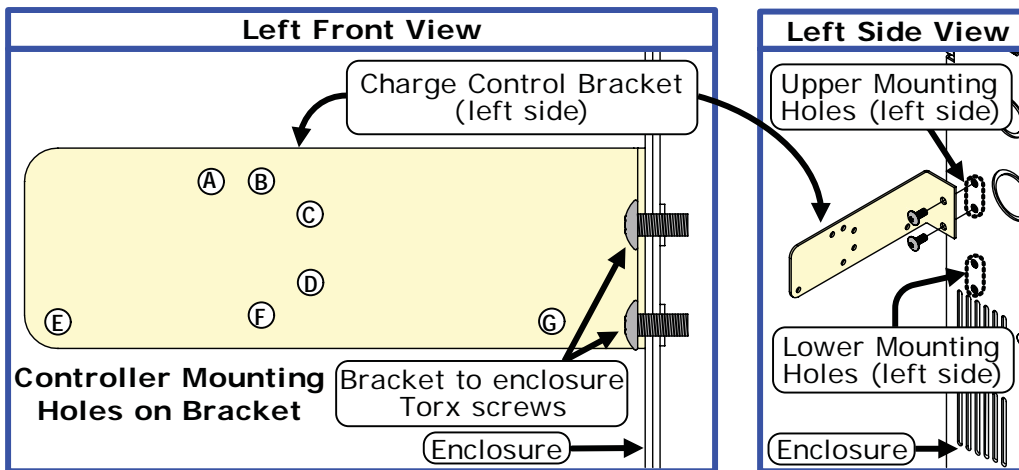
Refer to Figure 2 or 3 — depending on which side of the enclosure the charge controller will be mounted — to locate the enclosure mounting holes you will use to attach the bracket to the enclosure and the controller to the bracket. Use the provided T20 thread forming screws to pre-thread your selected mounting hole. It is easier to do this now rather than when installing the equipment.

After pre-threading your particular bracket hole(s), attach the bracket to the enclosure. Before you mount the charge controller to the attached bracket, remove the appropriate knockout from the side of the controller and an adjacent knockout on the side of the enclosure. This allows you use a 1" close nipple with two locknuts to secure the charge controller to the enclosure (in addition to the bracket), and provides a path to run the necessary wiring between the two units.

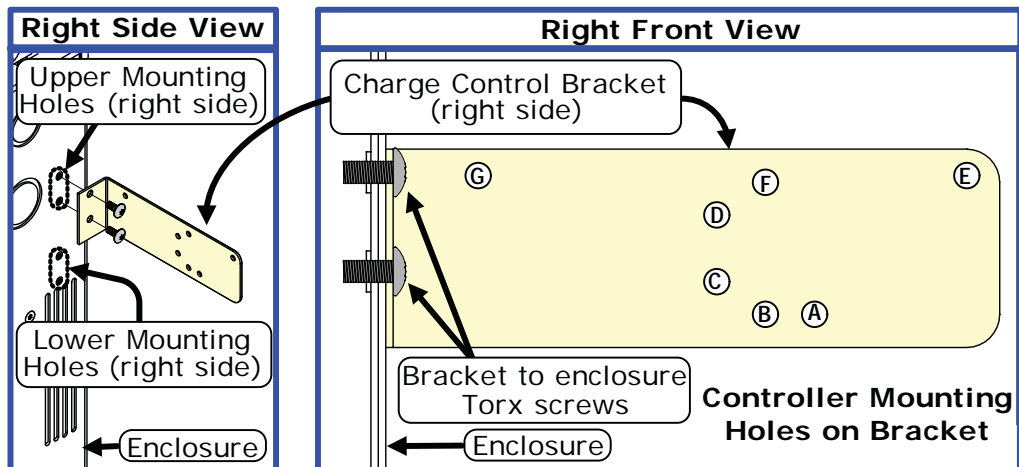


**Info:** It may take three locknuts on the close nipple to anchor the controller to the enclosure. An additional locknut may be required between the enclosure and the controller to act as a spacer. Also, a standard 1" plastic bushing should be used on the nipple ends to protect the wire insulation as it enters/exits the nipple.

Mount the controller to the attached bracket using the supplied hardware. Insert the close nipple through the knockouts and secure with the locknuts.



*Figure 2, Holes Used to Mount Bracket on Left Side of Enclosure*



*Figure 3, Holes Used to Mount Bracket on Right Side of Enclosure*