

MPC Series

Managed Power Controllers

Models Covered:

MPC-8H-1	MPC-20VS20-1	MPC-20VS20-2	MPC-20VS16-3	MPC-20V-1
MPC-8H-2	MPC-20VD20-1	MPC-20VD20-2	MPC-20VD16-3	MPC-20V-2
MPC-16H-1	MPC-20VS30-1	MPC-20VS30-2	MPC-20VS32-3	
MPC-16H-2	MPC-20VD30-1	MPC-20VD30-2	MPC-20VD32-3	
MPC-18H-1				
MPC-18H-2				

Rack Mounting Options

Rack Mounting Options for MPC Units

The MPC offers a variety of different mounting options that allow the unit to be easily mounted in almost any equipment rack available. In addition to the standard "L" brackets included with all units, MPC-20V series units can also be mounted using standard mounting buttons, universal mounting brackets, "Hook" Brackets for Dell™ style racks or Zero-U Pocket Brackets for APC® style racks (or any other rack that features a "pocket" or channel for Zero Unit mounting).

1. "L" Bracket Mounting

The standard "L" brackets, included with the unit, can be used to mount all MPC-8H, MPC-16H or MPC-20V units in most standard equipment racks.

The "L" brackets allow horizontal format MPC-H units to be mounted facing forward or facing backward or mounted in the front of the rack or rear of the rack. When the "L" brackets are used with the vertical format MPC-20V, units can also be mounted facing either side of the rack.

1. **Attaching the Brackets to the MPC:** First determine which direction the MPC will face after mounting, and then secure the "L" Brackets to the MPC accordingly, using the screws provided with the mounting brackets.
 - a) **MPC-8H & MPC-18H (Horizontal) Units:** Each end of the unit has four screw holes that are used for mounting the "L" brackets to the MPC. When the unit is shipped from the factory, the "L" brackets are installed in a manner that allows the unit to be mounted facing the front of the unit. Note however, that the "L" brackets can also be easily removed and reinstalled to allow the unit to be mounted facing the rear of the unit. Use four screws (supplied with the bracket) to secure each bracket to the MPC.
 - b) **MPC-16H (Horizontal) Units:** Each end of the unit has eight screw holes; four screw holes for front mounting, and four screw holes for rear mounting. Use four screws (supplied with the bracket) to secure an "L" bracket to each side of the unit. If the front of the MPC unit will face outwards, use the front four holes; if the back of the MPC unit will face outward, use the rear four holes.
 - c) **MPC-20V (Vertical) Units:** The "L" brackets can either be attached to the back or side of the unit, and the unit can also be installed to face the front, rear, or either side of the equipment rack. Each end of the MPC features seven screw holes for attaching the brackets, this allows you to mount the brackets on either side of the unit, and in one of two possible positions on the back. When mounting the brackets on the back of the unit, use screw holes 1 and 2 or 2 and 3 as shown in Figure 1. Use two screws (supplied with the bracket) to secure one bracket to the top of the MPC and the second bracket to the bottom of the MPC.

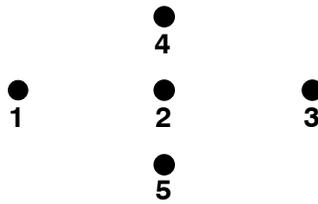


Figure 1: Mounting Holes; MPC-20V Back Panel

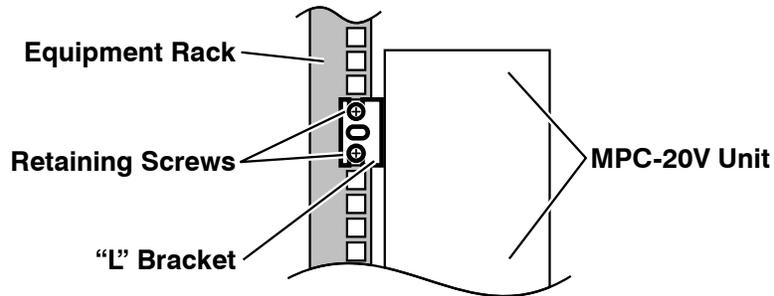


Figure 2: Attaching the "L" Brackets to the Equipment Rack (MPC-20V Shown)

2. **Attaching the "L" Brackets to the Equipment Rack:** Determine which direction the MPC unit will face in the rack, then line the "U" slots in the "L" Bracket up with two holes in the equipment rack mounting strip. Make certain that the unit is level, and then use two screws to secure each "L" bracket to the rack as shown in Figure 2.

2. Mounting Buttons

The Mounting Buttons allow MPC-20V (vertical) units to be mounted in any equipment rack that includes mounting button holes, as shown in Figure 4. Depending on the location of the mounting button holes in your equipment rack, this can allow the MPC-20V to be mounted on the posts at the rear of the equipment rack, or in some cases, even mounted on the outside of the rack corner posts.

1. **Attaching the Mounting Buttons to the MPC-20V:** Attach four Mounting Buttons to the back panel of the MPC-20V unit as described below:
 - a) Insert a retaining screw into each Mounting Button with the top of the screw aligned with the large end of the Mounting Button, as shown in Figure 3.
 - b) Locate the screw holes for the Mounting Buttons on the MPC-20V back panel. There are two screw holes at the top of the back panel and two holes at the bottom. Note that the screw holes for the Mounting Buttons are not the same holes shown in Figure 1; the Mounting Button screw holes are located at the top of the unit, directly above the screw holes shown in Figure 1, and at the bottom, about three inches below the holes shown in Figure 1.
 - c) Firmly attach two Mounting Buttons to the screw holes at the top of the MPC and two Mounting Buttons to the screw holes at the bottom of the unit.
2. **Attach the MPC to the Equipment Rack:** Align the Mounting Buttons with the top end of each mounting button hole (see Figure 4.) Press the mounting buttons into the mounting button holes, and then slide the unit downwards, so each Mounting Button seats firmly in the lower end of each corresponding mounting button hole.

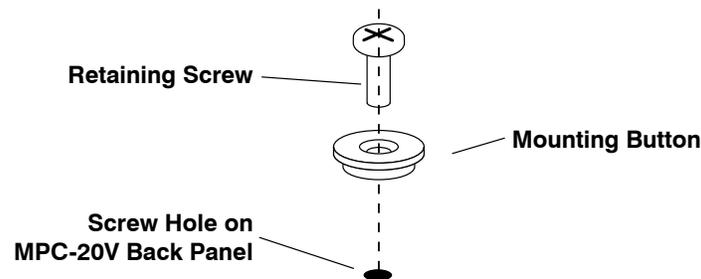


Figure 3: Attaching Mounting Buttons to MPC-20V (Vertical) Units

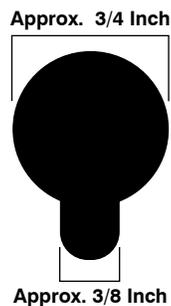


Figure 4: Mounting Button Holes

3. Hook Bracket Mounting (MPC-20V Only)

The Hook Brackets allow MPC-20V (vertical) units to be easily mounted in Dell™ style equipment racks. The Hook Brackets can be used to mount the MPC-20V in any rack that includes Dell™ style mounting rails as shown in Figure 5.

The Hook Brackets, which are supplied in a right and left hand pair, allow MPC-20V units to be mounted to any one of the four corner posts in a Dell™ style equipment rack.

1. **Attaching the Brackets to the MPC-20V:** First determine which direction the MPC will face after mounting, and then secure the Hook Brackets to the MPC-20V accordingly, using the screws provided.
 - a) The Hook Brackets can be attached to the back or sides of the unit, and the unit can also be installed to face the front, rear, or either side of the equipment rack.
 - b) Each end of the MPC features seven screw holes for attaching the brackets, this allows you to mount the brackets on either side of the unit, and in one of two possible positions on the back. When mounting the brackets on the back of the unit, use screw holes 1 and 2 or 2 and 3 as shown in Figure 1.
 - c) Use two screws (supplied with the bracket) to secure one bracket to the top of the MPC-20V and the second bracket to the bottom of the MPC-20V.
2. **Attaching the Hook Brackets to the Equipment Rack:** Insert each Hook Bracket's tab into one of the square holes in the corner post, then slide the bracket down until the hook locks in place with the rack as shown in Figure 5. After each Hook Bracket is firmly seated, use a retaining screw to secure each Hook Bracket to the equipment rack.

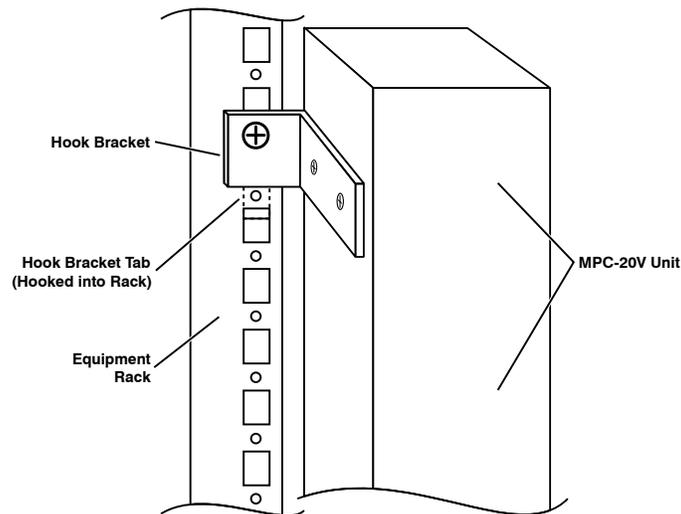


Figure D.5: Attaching the Hook Brackets to the Equipment Rack

4. Zero-U Pocket Bracket Mounting (MPC-20V Series Only)

The Zero-U Pocket Brackets allow you to mount the MPC-20V in APC® style racks, that include a pocket or channel for zero unit mounting as shown in Figures 6 and 7.

The Zero-U Pocket Brackets allow MPC-20V units to be mounted directly into the channel or pocket at the rear of the rack, and can either be nested inside the pocket in order to use as little space as possible, or mounted on top of the pocket, in order to provide a convenient cavity for routing cables. When the Zero-U Pocket Bracket is used, the MPC-20V will always be mounted facing the interior of the rack.

1. Attaching the Zero-U Pocket Brackets to the MPC:

- a) Determine whether the MPC-20V will be nested within the rack pocket, or will be mounted outside the pocket in order to provide a cavity for cable routing.
- b) Insert the screws supplied with the bracket into the three holes in the center of the Zero-U Pocket Bracket and then thread them into holes 4, 2 and 5 (see Figure 1) on the back of the MPC-20V unit as shown in Figures 6 and 7.

2. Attaching the Zero-U Pocket Brackets to the Equipment Rack: Align the MPC with the rack pocket and then use appropriate retaining screws to secure the Zero-U Pocket Brackets to the rack pocket as shown in Figures 6 and 7.

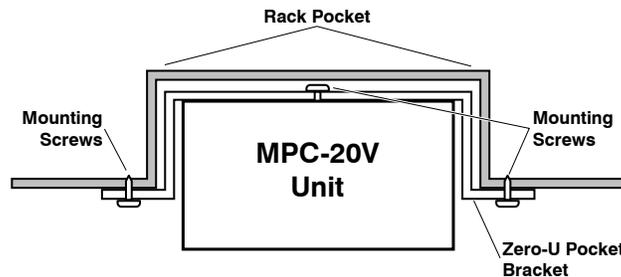


Figure 6: Zero-U Pocket Brackets (Cross Section; Nested in Pocket)

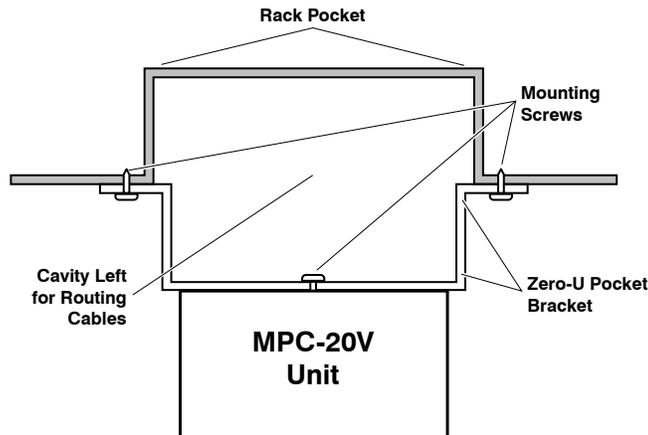


Figure 7: Zero-U Pocket Brackets (Cross Section; Outside Pocket to Allow Cable Cavity)

5. Universal Mounting Bracket (MPC-20V Series Only)

The Universal Mounting Brackets are used to mount vertical format MPC units to equipment rack posts or mounting pads. The Universal Mounting Brackets are often used in cases where the power supply cable enters the rack from above, and allow the unit to be easily mounted upside down.

To mount the unit using the Universal Mounting Brackets, proceed as follows:

1. Attach the Brackets to the Unit:
 - a) Locate the two pairs of mounting holes at the top and bottom of the MPC back panel. There should be a pair of holes at the top of the back panel and a pair of holes at the bottom.
 - b) Refer to Figure 8 on the following page, and then use the retainer screws to attach one Universal Mounting Bracket to the top of the back panel, and one Universal Mounting Bracket to the bottom of the back panel. Prior to attaching the mounting brackets, make certain that the beveled edge of the screw holes faces outward, so the head of the screw will nest within the bevel.
2. Attach the MPC unit to the Rack:
 - a) Use a retaining screw to secure the top mounting bracket to the equipment rack post or mounting pad as shown in Figure 8.
 - b) Make certain that the MPC hangs level and straight, and then use a retaining screw to attach the bottom mounting bracket to the lower portion of the rack post or mounting pad, securing the unit to the rack.

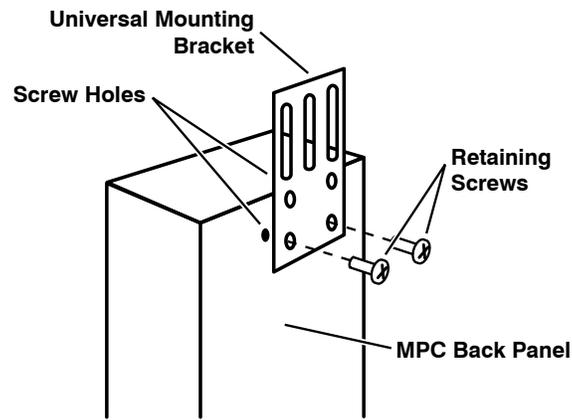


Figure 8: Attaching the Universal Mounting Bracket to the MPC Unit

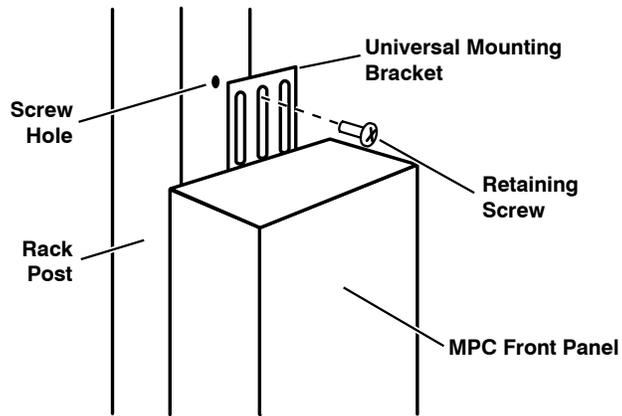


Figure 9: Attaching the Universal Mounting Brackets to the Rack

6. Output Cable Keeper

The Output Cable Keeper extends approximately two inches above the face of the MPC-20V unit, and provides a convenient means to tie output cables in place, to prevent them from being accidentally disconnected.

To install the Output Cable Keeper on your MPC-20V unit, please proceed as follows:

1. Refer to the electrical safety warnings in Chapter 4 and at the beginning of the MPC Series user's guide, and then disconnect the input power supply cables from the MPC-20V unit. Next, remove the output cables from the MPC-20V, noting the precise plug/location where each output cable was plugged in.
2. Align the Output Cable Keeper with the face of the MPC-20V unit as shown in Figure 10 below. Note that there are two horizontally aligned screw holes at the top of both the MPC-20V unit, and two vertically aligned screw holes at the bottom of the MPC-20V unit. Use the supplied mounting screws to securely attach the Cable Keeper to the face of the MPC-20V unit.
3. Reconnect the output cables to the same locations where they were previously plugged in, and then use a tie wrap to secure each output cable to the Cable Keeper.
4. Reconnect the input power supply cables to the MPC-20V unit.

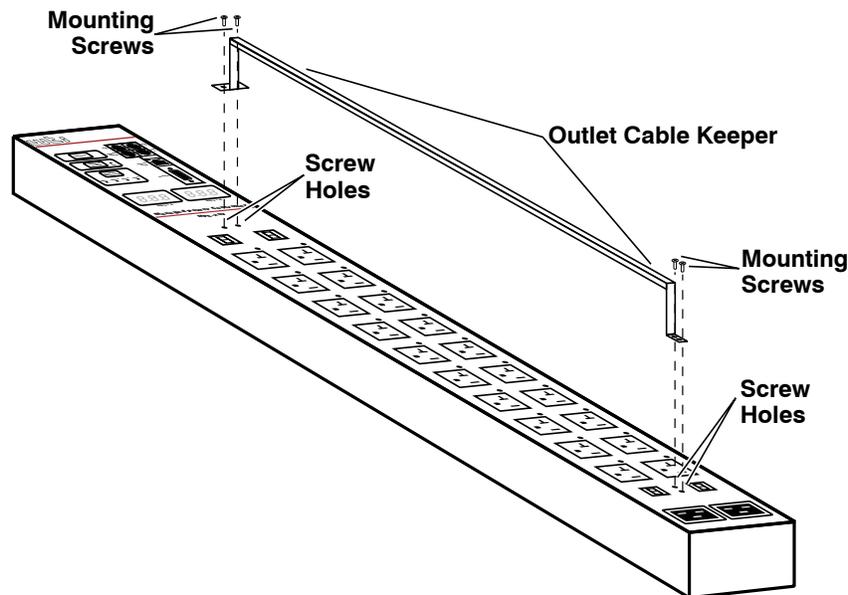


Figure 10: Installing the Output Cable Keeper (MPC-20V Units Only)

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