

Which MP Switch Machine is Right for Me?

We are currently carrying 4 styles of MP Motor:

The [MP1](#) is the original MP motor, it is the smallest, and features an SPDT auxiliary contact (usually used for frog power switching), has fixed screw terminal connector and 3,6,9 mm throw adjustments, although, as with all MP motors, we recommend using music wire instead on the manufacturer-supplied rigid actuator pin for more flexibility in mounting. The MP1 has 3 wire control (but you can make it work with 2 wires using external diodes). You can't use the series bi-polar LED trick with MP Motors so if you need a LED position indicator either don't switch the frog or use an MP4, 5 or 10, all of which have DPDT contacts. Size including mounting ears: 1.63" x 1.7" x 0.67" (42mm x 42mm x 17mm)



The [MP4](#) was designed as a replacement for the [MP5](#) with an improved "Phoenix" style removable screw terminal connector. We expect the MP4 to become the standard DPDT version by the end of 2024. The package is 8mm longer than the MP5 but narrower as the connector only adds about 5mm. [MP4](#) has a DPDT contact (one side for frog power switching and the other for position feedback or lighting a LED to show position (You can't use the series bi-polar LED trick with MP Motors). [MP4](#) features a removable screw terminal connector, 2 or 3 wire control, and 3, 6, 9, and 12 mm throw adjustments. Size including mounting ears and connector: 2.1" x 2.5" x 0.8" (56 mm x 52 mm x 20 mm)



The [MP10](#) is similar to the [MP4](#) except that it has the mechanical footprint of a Tortoise by Circuitron (tm) motor. However the MP10 is only 20mm (~.75") high as opposed to the Tortoise's 83mm. MP10 uses the same removable screw terminal connector as the MP4, 2 or 3 wire control, and 3,6,9, and 12 mm throw adjustments. Size including mounting ears and connector: 2.3" x 2.2" x 0.8" (58 mm x 55 mm x 20 mm)



The [MP5](#) is a slightly larger package than an MP1 with a DPDT contact (one side for frog power switching and the other for position feedback or lighting a LED to show position (You can't use the series bi-polar LED trick with MP Motors). MP5 features a removable screw-less connector, 2 or 3 wire control, and 3,6,9, and 12 mm throw adjustments. The removable connector sticks out about 10mm (~0.5"). Size including mounting ears and connector: 1.7" x 2.5" x 0.76" (43mm x 63.5mm x 19.27mm)



So which MP motor should I choose? If you are going for small, top side mounting hidden in structures, modular layouts where you don't want things hanging down, upper decks where no LED indicator is needed (unless you're using juicers or don't care about frog power switching) the [MP1](#) is for you. Users needing a DPDT contact (both frog power switching and a LED indicator), removable connectors, or 12mm throw then an MP4, 5, or 10 are the better choices. [MP4](#) is the current design, so for new installations it is recommended over the [MP5](#). [MP10](#) is electrically similar to the [MP4](#) but has the same footprint as the Tortoise by Circuitron (tm) so it is preferred for replacements or if you have jigs and fixtures for installing tortii and want to maintain compatibility.

You can see our full line of motors, mounts, controllers and accessories at <https://www.modelrailroadcontrolsystems.com/switch-motors-drivers-mounts-etc/>