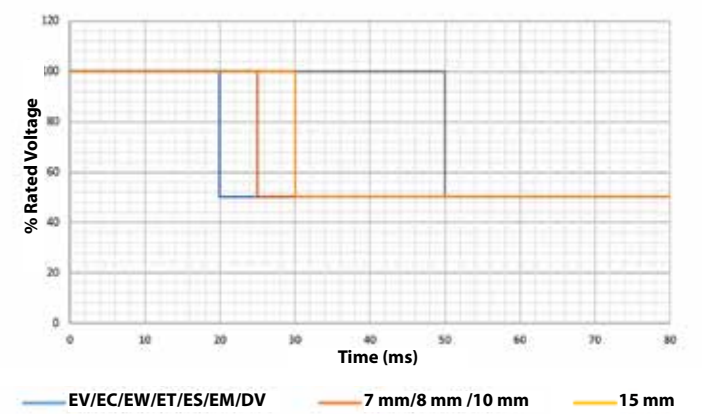
HIT & HOLD CIRCUIT RECOMMENDATIONS

Hit and hold circuits allow valves to be held on for long periods of time at a lower voltage than their rated voltage. The general principle is that the valve is energized to full power for a short period of time before dropping the voltage and current to a specified level. In a typical hit and hold circuit, the hit is at the standard rated voltage for a specified period of time. The hold is usually 50% (or less) of the rated voltage. Here are some of our recommendations for designing successful hit and hold circuits using Clippard valves.



EV, ES, EM, AND DV VALVES

For our standard mouse valves, Clippard recommends hitting the valve with 100% of the rated voltage for 20 ms minimum, and then dropping the voltage to 50% of the rated value. If the valve is being used with reverse flow, the hit time may need to be extended depending on the pressure.

- EV Series (p. 4)
- ES (p. 23)
- EM Series (p. 22)
- DV Series (p. 32)

Example:

For a 12 VDC valve, hit the valve with 12 VDC for 20 ms, then drop the voltage to 6 VDC

7 MM (SV), 8 MM (ST), AND 10 MM VALVES

For our 7 mm, 8 mm, and 10 mm valves, Clippard recommends hitting the valve with 100% of the rated voltage for 25 ms minimum, and then dropping the voltage to 50% of the rated value.

- 7 mm SV Series (p. 29)
- 8 mm ST Series (p. 30)
- 10 mm (p. 40)

Example:

For a 12 VDC valve, hit the valve with 12 VDC for 25 ms, then drop the voltage to 6 VDC

15 MM VALVES

For our 15 mm manifold mounted valves, Clippard recommends hitting the valve with 100% of the rated voltage for 30 ms minimum, and then dropping the voltage to 50% of the rated value.

- 15 mm (p. 42)

Example:

For a 12 VDC valve, hit the valve with 12 VDC for 30 ms, then drop the voltage to 6 VDC