# POWER-GATE™

## Solid-State Relays and Switches

POWER-GATE™ is 99.9% efficient at full current.


You work hard and play hard. You need your equipment to do the same. At Perfect Switch, LLC, our goal is to manufacture products that provide better value through increased performance, reliability, and quality. Using tomorrow's engineering technology today, our dedicated team designed ***POWER-GATE*** ™ to be a reliable partner in the toughest conditions.

More efficient and reliable than mechanical contactors, switches, and solenoids, our solid-state, high-current relays and switches set the benchmark to which all others aspire. Utilizing a unique manufacturing process, we create products that reach plateaus of efficiency that elude the competition. We call it "The Perfect Switch," and that's precisely what ***POWER-GATE*** ™ is.

Need to switch electrical loads on boats, cars, RV's, buses, emergency vehicles, photovoltaic arrays or equipment? ***POWER-GATE*** ™ is the solution.

Need to switch 8 to 32 volt loads up to 500 continuous amperes with no arcing, no moving parts, and no degradation over time? ***POWER-GATE*** ™ is the solution.

Contact us and find out if ***POWER-GATE*** ™ **is the solution you've been searching for.**

# Technical Specifications

| | |
|---|---|
| **Applications:** | Military, aeronautic, automotive, marine, industrial machinery, photovoltaic, fleet utility. |
| **DC Current Capacity:** | Up to 500 amperes continuous at rated voltage 8 to 32 VDC (see figure 1) |
| **ON-Resistance:** | 50 to 100 millionths of an Ohm. This is equivalent to two to four inches of 4AWG welding cable, or a little over a foot of 4/0 (quadruple-ought)cable. |
| **Control Voltage:** | Factory configured 5 to 32 VDC required to activate switch. Input resistance for control voltage is 33k ohms. |
| **Turn-on Time:** | Less than one millisecond (see figure 2). |
| **Turn-off Time:** | Less than twenty milliseconds (see figure 3). |
| **Temperature Rise:** | < 25 degrees C above ambient temperature. |
| **Leakage Current:** | Leakage current to the load (relay off) is < 1mA, typically <1uA. |
| **In-Rush Current:** | Four times rated continuous current decaying to the rated current level within fifteen milliseconds. |
| **Over-Voltage:** | Supply voltage should not exceed 32 VDC for more than one minute. |
| **Under-Voltage:** | The device will shut down when the supply voltage drops below 7.75 volts. |
| **Transient Voltages:** | When transient voltage spikes reach 38 volts, the device will turn on until the spike drops below 34 volts. |
| **Over-Current:** | Current greater than the continuous rating for 150 milliseconds may cause the device to latch off, requiring the control voltage to be toggled off and back on to restore operation. |
| **Efficiency Rating:** | 99.9 % at full current. |
| **Weight:** | 18.56 oz (0.526kg) |
| **Enclosure:** | Stainless steel shell with full epoxy encapsulation. |
| **Terminals:** | 3/16" x 1.5" silver-plated copper buss with 5/16-20 x 5/8" hex-head bolt/washer/nut. |
| **Other Information:** | Device must be grounded.<br>Operating temperature -20°C to +70°C.<br>Remote switch w/ wire harness or built-in micro-switch.<br>Remote LED status display (optional).<br>No heat-sinking required.<br>Water-proof, shock-proof, vibration-proof, bomb-proof.<br>Custom configurations welcome.<br>Made in the U.S.A. |

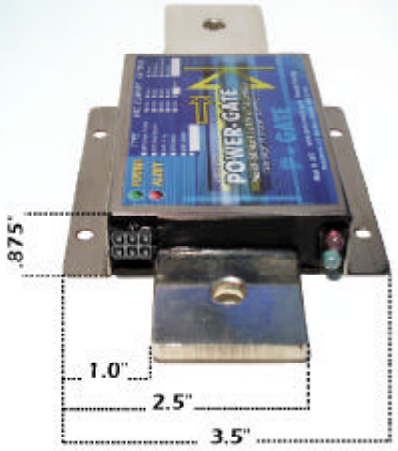



Figure 1

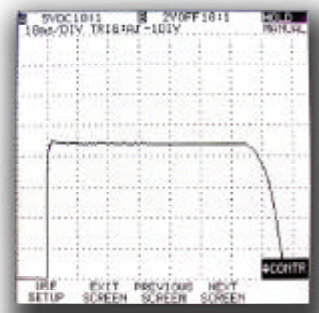


Figure 2

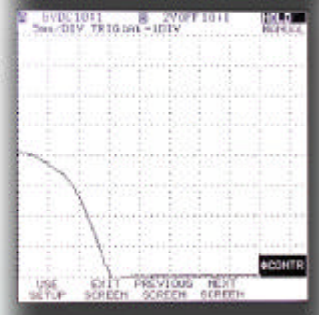
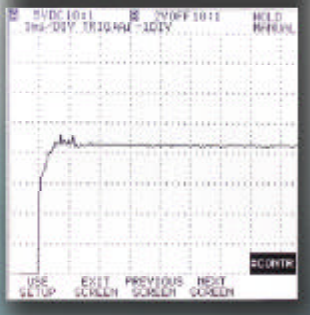


Figure 3



ACTUAL SIZE