

UltraSwitch

DCC Series Solid State Contactors



Key Features

- Ground-Activated Control Inputs
- 100% Solid State Design
- Dual, Individually Controlled Power Switches
- Completely Sealed Construction
- Automatic Over Current Shutdown
- Low & High Battery Voltage Shutdown
- Zero Standby Battery Current Draw
- Stainless Steel Power Terminals
- Compact Size

Environmentally sealed, dual electronic DC contactors with automatic shutdown protection offer many advantages over mechanical solenoid contactors.

InPower's UltraSwitch DCC Series is a family of dual solid state power switches with *ground activated* remote control, over current shut down, and high & low battery voltage shut down. The two electronic power switches are independently operated by remote control switches. Over and under voltage protection will shut off the unit if the battery voltage increases above 18.5 volts or decreases below 4.7 volts. With the power switches off, there is zero battery current drain.

Over current protection employs a sophisticated software-controlled scheme that incorporates a multi-level current/time profile, unlike fuses and mechanical circuit breakers that have one fixed curve determined by their thermal characteristics. The benefit of the multi-level approach is that over current shutdown protection can match more closely the characteristics of the various loads, which can have different turn-on surges and running amperages.

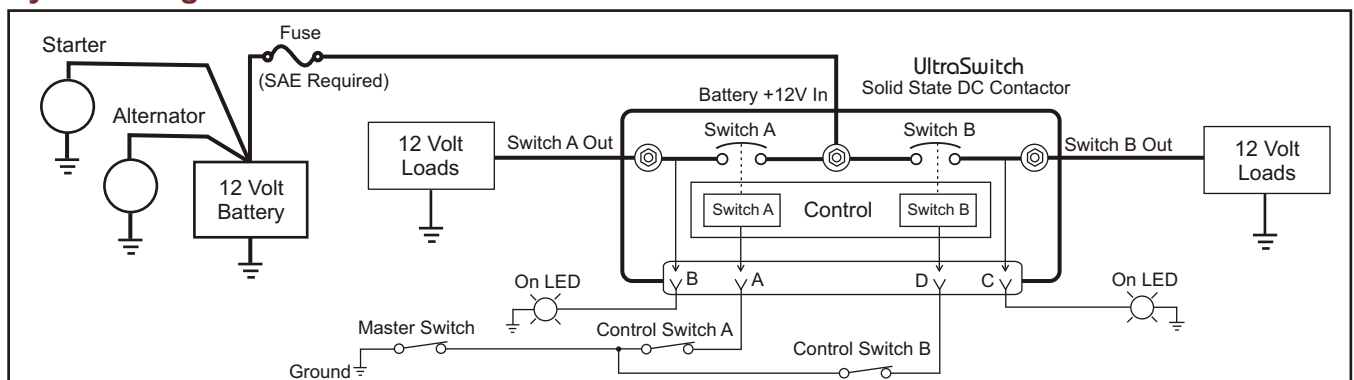
Connections for the high current DC cables utilize 3/8-16 stainless steel threaded studs. A unique standoff allows a rubber boot to be used for additional protection from the environment, as well as from accidental shorting. The housing is completely sealed and utilizes a Delphi *Metri-Pak 150* sealed control connector.

Remote control of the power switches requires a contact closure to battery ground to turn the power switches on. Under fault shutdown conditions, the remote input ground must be removed and reapplied to reset the power switches. Internal temperature sensing will turn off the power switches if the internal temperature increases to 145° F.

DCC UltraSwitch Models

Model	Switch A		Switch B	
	Surge	Continuous	Surge	Continuous
DCC 150-150	450 amps	150 amps	450 amps	150 amps

System Diagram



DCC Series Solid State DC Contactors

Specifications

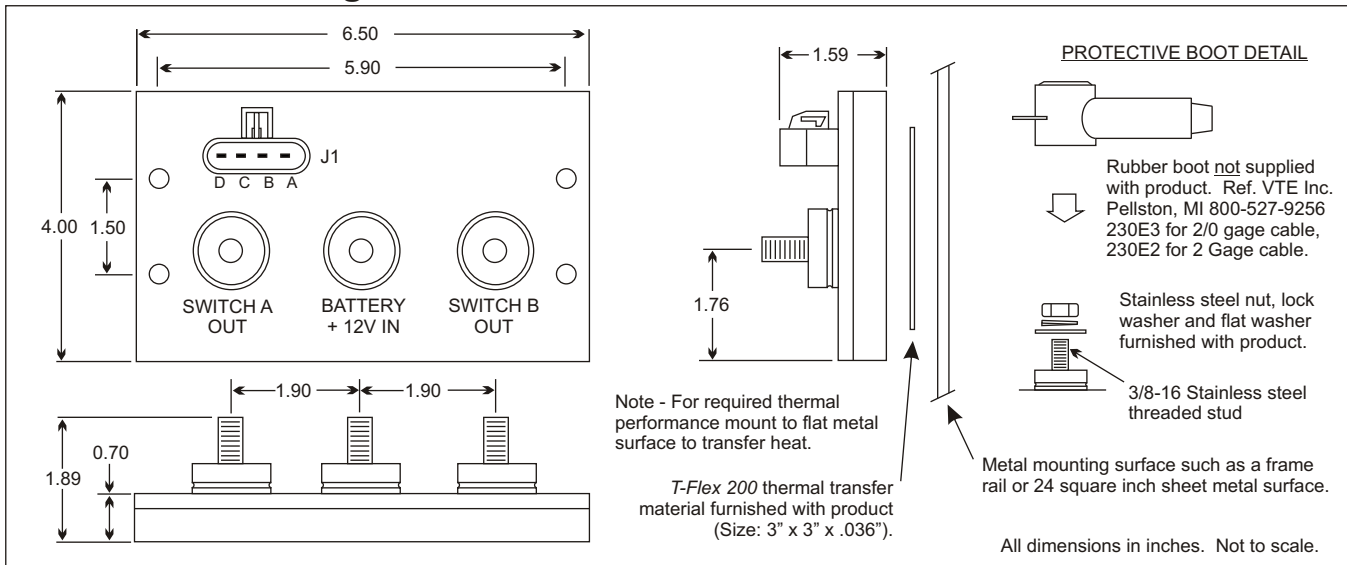
Operating Voltage Range: +5.0 to +18.5 volts (14.2 volt nominal)
 Current Rating:

Model	Switch A (Amps)		Switch B (Amps)	
	Surge	Continuous*	Surge	Continuous*
DCC 150-150	450	150	450	150

* The device's total continuous current rating (Switch A + Switch B), at the Battery In terminal, is 250 amps maximum.

Low Voltage Shutoff: Trip Voltage: 4.7 volts
 High Voltage Shutoff: Trip Voltage: 18.0 to 19.0 volts
 Case Operating Temperature Range: -40° F to +145° F
 Turn On Delay (Control Signal to Output): 500 milliseconds
 Turn Off Delay (Control Signal to Output): 500 milliseconds
 Control Signal Reset Time: Off for >2 seconds to reset fault shutdown
 Control Connector (J1):
 Type: Delphi *Metri-Pak 150* sealed, 4-terminal
 Terminals: Pin A Ground to close Switch A; Remove ground to reset or open switch
 Pin B Switch A LED status indicator output
 Pin C Switch B LED status indicator output
 Pin D Ground to close Switch B; Remove ground to reset or open switch
 Connector & Protective Boot Reference: See InPower Technical Bulletin TB-30 for details and purchasing source.
 Weight: 1.80 lbs
 Dimensions: 4.00" x 6.50" x 1.89"

Mechanical Drawing



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