

SSC21-100
SSC21-150
SSC21-200

Intelligent Solid State Contactor



Technical Description

The SSC21-100, SSC21-150, and SSC21-200 are part of InPower's second generation family of high current solid-state DC contactors. These single channel power switches are rated at a continuous current rating of 100, 150, and 200 amps respectively. Low on-resistance solid-state switches and high current fly back diodes provide not only outstanding surge current capability for starting high in-rush current loads but also maximum voltage spike suppression for loads.

Applications include high current DC loads such as master battery disconnect switching, blower motors, auxiliary air conditioner units, lights, and hydraulic motors.

LED Status Indicator displays a *steady on* when the contactor is on and operating normally, or *flashes* when the contactor has automatically turned off as a result of a detected fault such as loss of ground, over-current, under-voltage or over-temperature.

Control of the unit is accomplished by applying a voltage on the control terminal to turn the unit ON. This voltage turns the unit ON when it is >8.0Vdc. Once the output has been turned ON, if the voltage on the control terminal is removed (or falls below 4Vdc) the unit output is turned OFF and can be turned ON again when the voltage is >8.0Vdc. In the case of a shutdown due to a Fault, the removal of the Control Voltage (or removing power from the BAT+) and then reapplying >8.0Vdc on the control terminal, will turn the output ON again if the faults are no longer present.

Voltage Hysteresis on the control input ensures high electrical noise immunity. An input control voltage greater than +8 volts will turn the contactor on and a voltage of less than +4 volts will turn the contactor off. The control input appears as 120 K-Ohm resistance to ground.

Packaging: The solid-state contactor is packaged in an plastic case with metal baseplate. The Control Input and GND Terminal utilize 8-32 studs with Brass nuts. Connect the GND terminal to a solid Battery Ground. Connections for the high current DC cable utilize 3/8"-16 threaded stainless steel studs with brass contact pads for low contact resistance. The low voltage disconnects are packaged in an plastic case with an anodized aluminum baseplate. Four corner mounting hole pads provide attachment to the mounting surface.

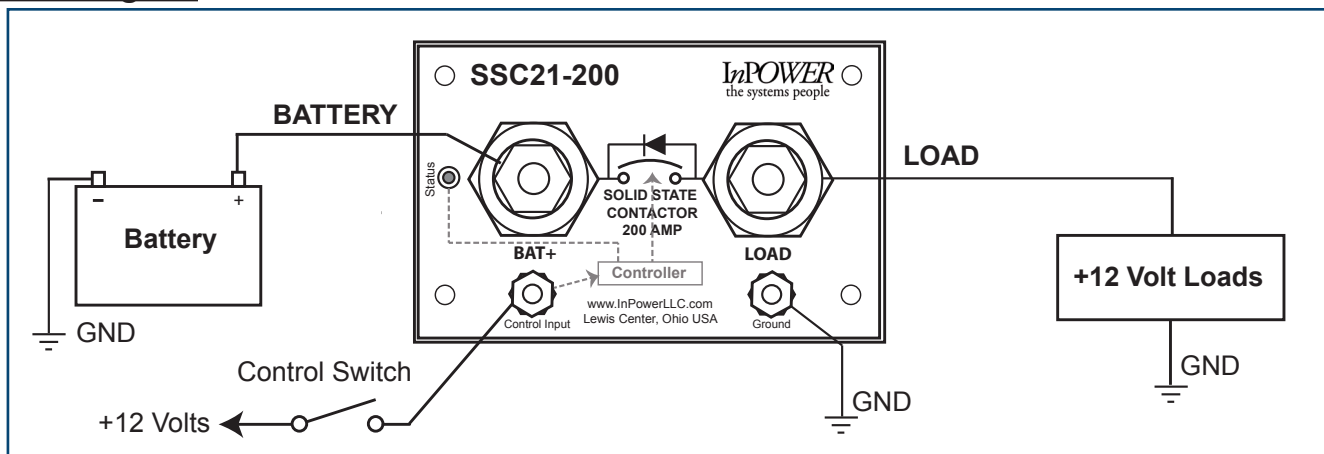
Key Features

- Sealed Case
- Compact Size and Low Profile
- Status LED Indicator
- 100 % Solid State Construction
- Automatic Over-Current, Under-Voltage, and Over-Temperature Fault Shutdown Protection
- Loss of Ground Detection
- Protective Terminal Boot Option

Ordering Guide

Model	Description
SSC21-100	Solid-state contactor, 100 Amp
SSC21-150	Solid-state contactor, 150 Amp
SSC21-200	Solid-state contactor, 200 Amp

System Diagram



SSC21-100 SSC21-150 SSC21-200

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Specifications

Maximum Current Rating (Max. current rating at 110° F (43° C)*):	<u>SSC21-100</u>	<u>SSC21-150</u>	<u>SSC21-200</u>
Type A Mounting**	100 Amps	150 Amps	200 Amps
Type B Mouniting**	75 Amps	100 Amps	125 Amps
On-resistance at maximum temperature and current:	1.6 milliohms		
* Mounting surface temperature			
** Mounting surface types:			
Type A - Mounting surface such as an aluminum plate 0.125 x 16 x 16 inch or larger.			
Type B - Mounting surface such as wood, plastic or free air.			
Operating Voltage Range:	+7.5 to +20.0 volts		
Case Maximum Temperature:	+185° F (85° C)		
Low Battery Voltage Trip:	+7.25 to +7.50 Vdc for ≥ 250 milliseconds on BAT+		
Loss of Ground Trip:	250 milliseconds		
Over-Current Trip:	100% to 110% of rated amperage for 500 milliseconds		
Logic Power Current Draw			
With Status LED Off:	80 milliwatts		
With Status LED On:	150 milliwatts		
Turn-On Delay:	25 milliseconds		
Turn-Off Delay:	25 milliseconds		
Control and GND Connectors:	8-32 stud, brass nuts (4-5 Inch-lbs Max)		
Control Input Voltage:	>+8.0 Vdc to activate, <+4.0 Vdc to deactivate		
Control Input Resistance:	120 K Ohm to ground		
BAT+ to LOAD Terminal			
Leakage Current:	75 microamps maximum		
Weight:	0.40 lbs (0.181 kg)		
Dimensions:	4.40 (111.76 mm) x 2.90 (73.66mm) x 1.30 inches (33.02 mm)		
Power Terminals:	Two (2) 3/8 - 16 threaded stainless steel studs, with locking nuts (10Ft-Lbs Min, 15Ft-Lbs Max) Optional Rubber Boots Available		
Mounting Bolts:	8-32 bolts, Qty 4, Torque to 4-5 inch lbs		

Load Considerations: Relays/Solenoids must incorporate Fly Back Suppression Diodes/Circuitry. These Relays/Solenoids (without suppression) can create large voltage and current spikes which damage electronics. Having inductive loads without suppression violates your unit's warranty and may damage your vehicle's electronics!

Mechanical Drawing

