

Ambulance Module Disconnect Switch

SSC42-275 Series

The ultra reliable solid state alternative to mechanical solenoid contactors.

Technical Description

The InPower Model SSC42-275 Series Module Power Disconnect Switch is designed for use in ambulances to disconnect battery power from module loads such as emergency lights, patient compartment lights, flood lights, loading lights, etc. The module disconnect switch includes a high current solid state contactor (power switch), a current sensor, and a micro-processor control/monitor circuit. It has an over current shutdown rating of 275 amps with a surge rating of 800 amps, and provides automatic shutdown for over current, high temperature and loss of ground conditions. Three standard models are available, listed below, though this product can be customized to meet specific requirements.

Five control inputs allow for a variety of different application configurations, including three time delayed power shut-off modes. Input A allows control of the power switch from a +12 volt switch without a timed shut-off function. Input B and Input C provide an adjustable off-delay power shut-off (module power is shut off after the timer has expired). Input B is activated from a +12 volt signal, and Input C from a ground signal. The time delay period can be set by the user via a potentiometer (screwdriver adjustment). Input D allows mode control from one, two or three momentary ground signal pulses, providing a power switch turn-on for 5, 10 or 15 minutes, respectively. Input E allows for a momentary ground input that will cancel (reset to zero) all timer shut-off modes.

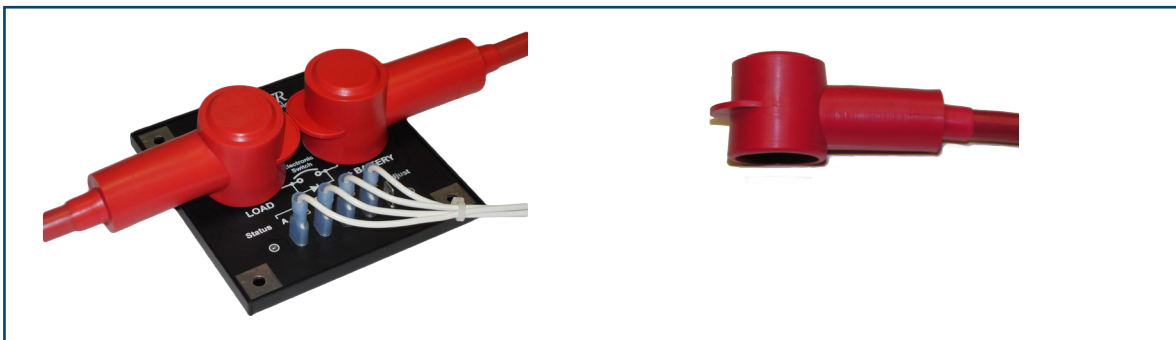
An amber LED indicator is provided to display the power switch status. It will be illuminated anytime the power switch is on, and it will flash to indicate if the power switch is on and in a timed shut-off mode (timer running). The LED will flash at a high rate to indicate a fault shut down condition.

Two 3/8 - 16 threaded studs with brass contact pads provide the DC power terminations. Optional terminal boots are available that will cover the power terminals. These terminal boots are flexible PVC (UL94-V2 rated) and offer protection from both the environment and accidental shorting. The five control inputs are 0.25 inch male Faston blade terminals, and the four mounting hole pads provide the required connection to ground. The module is sealed to protect it from the environment.

Key Features

- 100% Solid-State Construction
- 275 Amp Capacity with Over Current Shutdown
- User-Adjustable Power Shut-Off Timer
- Multiple Internal Operating Modes
- 800 Amp Surge Capability
- Low Profile Design
- Over Temperature Shutdown
- Made in the USA right in our own facility
- Terminal Rubber Boot Option for Protection

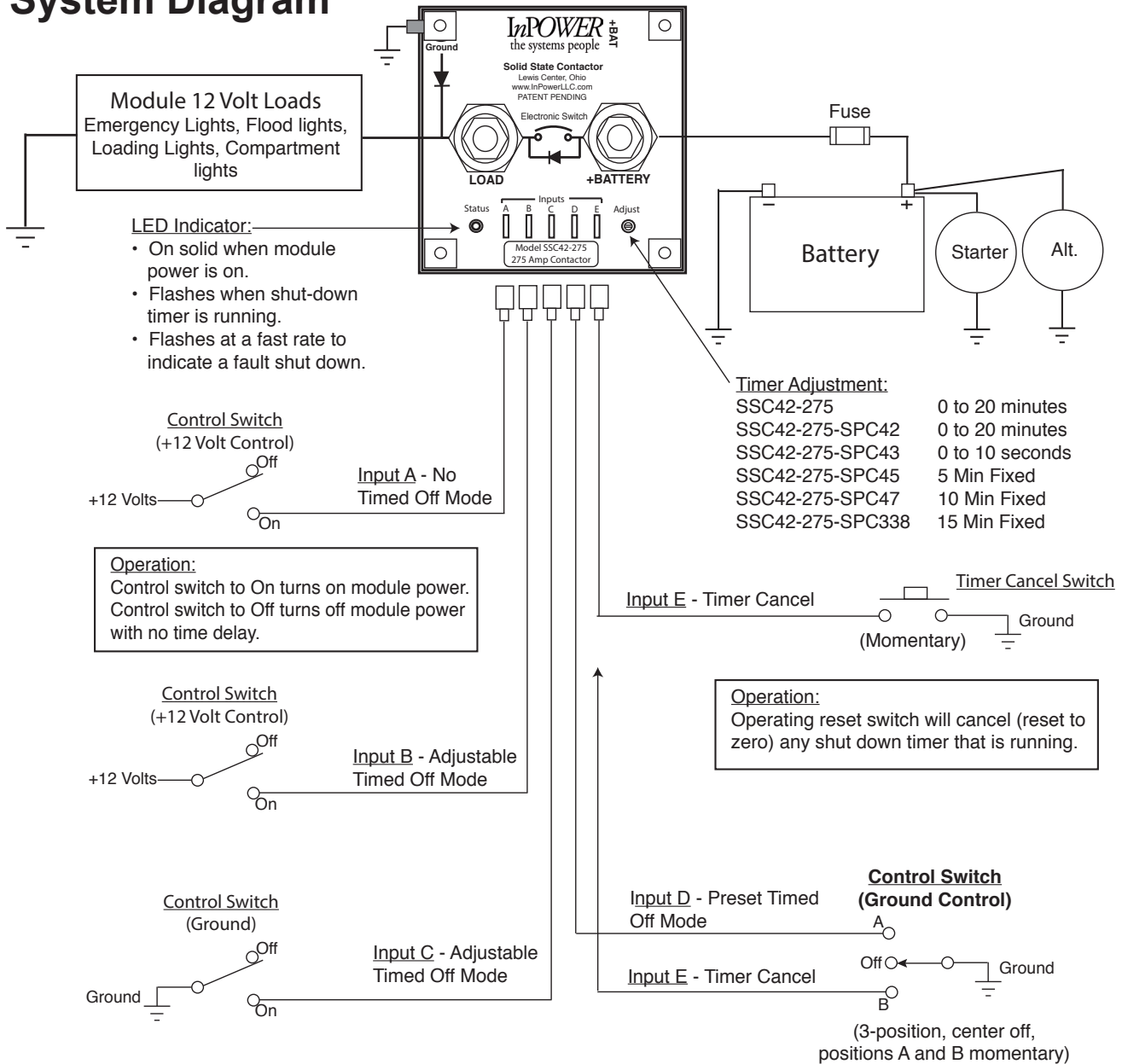
Terminal Rubber Boot Option



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System Diagram



Input B and Input C:

Operation - SSC42-275 & SSC42-275-SPC43:
Control switch to On turns on module power. Control switch to Off starts adjustable timer. When timer expires, module power turns off.

Operation - SSC42-275-SPC42:
Control switch to On turns on module power and immediately starts adjustable timer. When timer expires module power turns off. Control switch must be turned of prior to next operation.

Operation:
Momentarily pressing control switch to position A once will turn on module power for a fixed 5 minute period. Pressing it twice will do same but for 10 minutes, and three times for 15 minutes. Pressing it a fourth time will reset/cancel the sequence and turn off the module power.

Momentarily pressing control switch to position B will reset (cancel) any timer shut down mode that is running.

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Specifications

Under voltage shut-off:	+7.5 Vdc (150 milliseconds)
Current rating:	
Current trip rating:	275 Amps (750 milliseconds)
Surge current rating:	800 Amps
On-resistance at maximum current:	660 micro ohms
Turn-on delay:	10 milliseconds
Turn-off delay:	10 milliseconds
Control Input:	
Connector type:	0.250 inch male Faston blade terminal (5 total)
Control voltage:	
Input A:	>2.6 Vdc to activate
Input B:	>2.6 Vdc to activate
Input C:	<2.1 Vdc to activate
Input D:	<2.1 Vdc to activate
Input E:	<2.1 Vdc to activate
Weight:	0.30 lbs (0.136 kg)
Dimensions:	4.15 x 4.15 x 1.50 Inches
Power terminals:	Two stainless steel 3/8 - 16 threaded studs with stainless steel locking nuts.
Mounting surface:	For optimal performance a metal mounting surface should be provided such as a 1/8 x 16 x 16 inch aluminum plate.
Terminal boot covers:	Order terminal boots to match cable size (not supplied with product). InPower Model TB28-2 for 8 to 2 gauge cable, TB28-3 for 2 to 2/0 gage cable.

Mechanical Drawing

