

POWER EQUIPMENT

CSS

Circuit Selector Switch



Compliance with Standards

- FAA:** L-847 AC 150/5345-5 (Current Edition). ETL Certified.
- ICAO:** In compliance with ICAO Aerodrome Design Manual, Part 5, para. 3.2.1.3

Uses

FAA L-847 ICAO

To switch the output of a constant current regulator (CCR) to one or more series lighting loops.

Features

- Easy installation and operation
- All solid-state-type switching control to activate reliable output vacuum relays
- Operated from remote or local control
- Up to four circuit selector switches available in a single unit
- Rated for 5,000 V at 6.6 A or 20 A

Theory of Operation

The L-847 circuit selector switch is designed to switch the output of a 6.6 A or 20 A CCR to one, two, three, or four series lighting loops using remote or local control. Turning off the L-847 from remote or local mode short-circuits the CCR output and disconnects all series lighting loops from the CCR output.

All ADB Safegate L-847 Circuit Selector Switch enclosures meet both Class A (indoor use) and Class B (outdoor use) requirements. They are suitable for Rating 1 (6.6 A, 5,000 V) and Rating 2 (20 A, 5,000 V) use. The optional fiberglass NEMA 4X enclosure is suitable for outdoor applications, and includes an internal anti-condensation heater.

Each L-847 series lighting circuit control is identical and consists essentially of a low-voltage, solid-state time-delay relay PCB controlled by remote or by local. The solid-state PCB controls a set of high-voltage vacuum relays. One of the high-voltage vacuum relays (KV2, KV4, KV6, or KV8) actually breaks/makes the series circuit lighting loop current. The other high-voltage vacuum relays (KV1, KV3, KV5, or KV7) switch the series lighting loop when appropriate. The power supply provides a regulated +24 VDC to the coils of the high-voltage vacuum relays and time-delay PCB.

The L-847 is controlled remotely via dry relay contacts that are connected to the L-847 remote control terminal block.

Ordering Code

44D4520 - X X X X X

Circuit Control

- 1 = One Circuit
- 2 = Two Circuit
- 3 = Three Circuit
- 4 = Four Circuit

Interlock Switch

- 0 = Without Interlock Switch
- 1 = With Interlock Switch¹

Monitor and Current Sensor

- 0 = Without Monitor and Current Sensor
- 1 = With Remote/Local Monitor and Current Sensor²

Type

- 0 = Standard L-847
- R = Reverse L-847⁴

Enclosure

- 0 = Standard NEMA 4 Enclosure³
- 1 = Stainless Steel NEMA 4 Enclosure⁴
- 2 = Fiberglass NEMA 4X Enclosure with Heater^{3,4}

Notes

- ¹ Used to switch CCR off when L-847 door is opened
- ² Remote/Local Monitor provides separate dry contact closures to indicate Remote or Local control status. The current sensor provides separate 120 VAC outputs indicating current is present on one of the L-847 outputs.
- ³ Enclosure painted aviation orange
- ⁴ Not ETL Certified

Operating Conditions

- Temperature: -40 °F to +131 °F (-40 °C to +55 °C)
Humidity: 0 to 100%
Altitude: 0 to 10,000 feet (3,000 m)

Reversed L-847

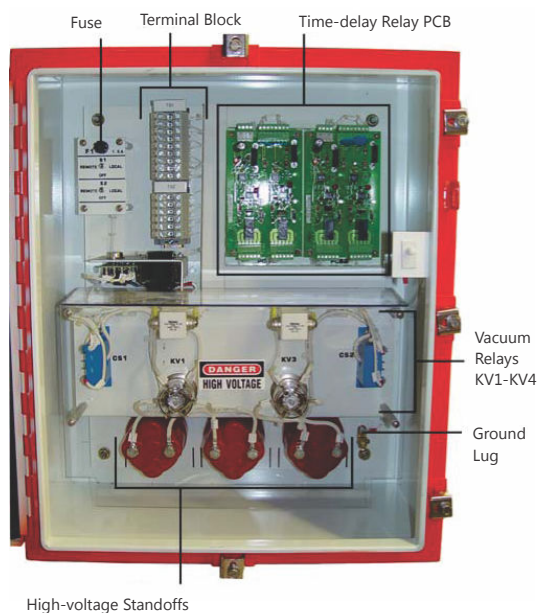
A special "reversed" L-847 is also available. This L-847 allows a single load to be individually powered from multiple CCRs.

A typical application would be to have a primary and a backup CCR connected to a single load. In case of primary CCR failure, the L-847 allows a backup CCR to be quickly manually switched into the circuit. Contact the ADB SAFEGATE Sales Department for details.

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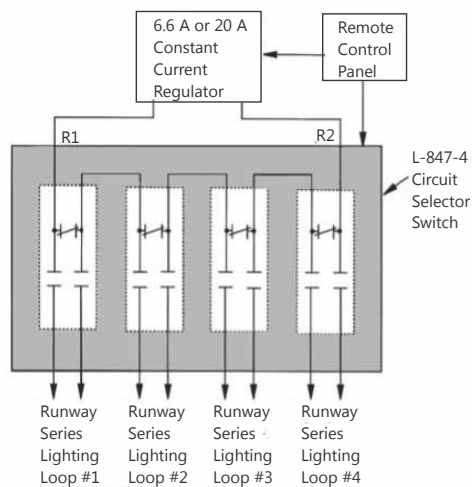
CSS

Inside View



Two Circuit Model Shown

Circuit Overview



4-circuit schematic shown. 1, 2 or 3 circuit model also available.

Input Power Requirements

Type	Average Volt Amp (VA)
L-847-1	40
L-847-2	65
L-847-3	85
L-847-4	110

Electrical

Input voltage:	120 VAC, $\pm 10\%$, 50/60 Hz
Control voltage:	120 VAC, $\pm 10\%$, 50/60 Hz
Output rating:	5,000 VAC at 6.6 A or 20 A

Dimensions

Type	H x W x D in (cm)	Weight lb (kg)
Standard Steel Enclosure		
L-847-1	20 x 24 x 10 (50.8 x 61 x 25.4)	50 (22.7)
L-847-2	20 x 24 x 10 (50.8 x 61 x 25.4)	54 (24.5)
L-847-3	24 x 30 x 10 (61 x 76.2 x 25.4)	71 (32.2)
L-847-4	24 x 30 x 10 (61 x 76.2 x 25.4)	75 (34)
Stainless Steel Enclosure		
L-847-1	24 x 30 x 10 (61 x 76.2 x 25.4)	62.5 (28.4)
L-847-2	24 x 30 x 10 (61 x 76.2 x 25.4)	66.5 (30.2)
L-847-3	24 x 30 x 10 (61 x 76.2 x 25.4)	83.5 (38.0)
L-847-4	24 x 30 x 10 (61 x 76.2 x 25.4)	87.5 (39.8)
Fiberglass Enclosure		
L-847-1	20.6 x 27 x 10 (52.3 x 68.6 x 25.4)	31 (14.1)
L-847-2	20.6 x 27 x 10 (52.3 x 68.6 x 25.4)	35 (15.9)
L-847-3	30.7 x 39.2 x 10 (78 x 99.6 x 25.4)	70.5 (32.0)
L-847-4	30.7 x 39.2 x 10 (78 x 99.6 x 25.4)	74.5 (33.9)