## **POWER EQUIPMENT**

## **CHF**

CHF Constant Current Regulator FERRORESONANT, AIR-COOLED, 50/70 KW



## **Compliance with Standards**

FAA: L-828/L-829 AC 150/5345-10 (Current Edition). ETL

Certified.

Military: UFC 3-535-01; NAVAIR 51-50AAA-2

## Uses

## FAA L-828/ L-829

Supplies three or five precision output levels to power series lighting circuits on airport runways and taxiways.

#### **Features**

- Advanced CCR architecture produces minimal EMI, high efficiency, and near unity power factor for AC 150/5345-10 test conditions, exceeding FAA and military requirements for power factor and efficiency. Advanced architecture has excellent input power factor and efficiency at all intensity steps and lower loads.
- Does not exceed the conducted power line emission limits given in Table 4 of AC 150/5345-10 with testing as specified in the Code of Federal Regulations (CFR) Title 47, Subpart B, Section 15.107b. Does not exceed the radiated emission limits given in Table 5 of AC 150/ 5345-10 with testing as specified in the Code of Federal Regulations (CFR) Title 47, Subpart B, Section 15.109b.
- Optional integrated ACE<sup>TM</sup> unit provides state-of-the-art remote control and L-829 monitoring capability. True-RMS output current and voltage, VA, watts, lamps-out, and series circuit insulation resistance (IRMS) value to be alternately displayed. A visual indication is also provided for all other FAA-monitored parameters, including open circuit, overcurrent, loss of input power, loss of input voltage, low VA (drop in load VA of 10%), Remote/Local status, and incorrect output current.
- Available in one class and style:
   Class 2 = 20 A maximum output current (50-70 kW only)
   Style 2 = 5 Brightness Steps
- If input power loss occurs, operation will resume within five seconds after restoration of input power
- Field upgrade available from L-828 to L-829 with ACE<sup>TM</sup> unit
- Input and output lightning protection included

## **Theory of Operation**

Ferroresonant circuitry and a solid-state control system accurately regulate the output current to within the FAA-allowable range from

no load to full load and with input voltage variations of -5% to +10% of nominal.

## ACE<sup>TM</sup> Unit

The optional ACE<sup>TM</sup> unit provides L-829 monitoring and optional field Insulation Resistance Measurement System (IRMS) and optional CCR input power monitoring capability. Each unit is installed internally in each CCR that requires remote control and/or monitoring within the airfield lighting electrical vault. Optional CCR input monitoring monitors the following:

- · CCR input current
- · CCR input voltage
- CCR input volt-amps (VA)
- · CCR input power (watts)
- · CCR input power factor
- · CCR % efficiency

The ACE<sup>TM</sup> unit is also a component of ADB Safegate's distributed control and monitoring system. Each unit can be easily connected to an Airport Lighting Control & Monitoring System (ALCMS) by simply adding redundant communication wires. See ADB Safegate RELIANCE Power ACE3 data sheet 3097 for additional information.

## **Environmental Operating Conditions**

Temperature: L-828: -40 °C to +55 °C (-40 °F to +131 °F)

L-829: 0 °C to +55 °C (32 °F to +131 °F)

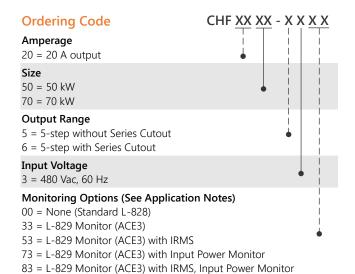
Humidity: 10 to 95%

Altitude: 0 to 6,600 ft (2,000 m)



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## **Electrical Supply**

Power Input:	60 Hz, single-phase, available in 480 VAC
Power Factor:	0.95 or more for 50 and 70 kW
Efficiency:	93% minimum for 50 kW 94% minimum for 70 kW
Remote Control:	120 VAC, 60 Hz or +48 VDC, ±10%

## **Dimensions**

CCR Size	Dimensions (H × W × D)	Weight (lbs / kg)
50 kW	70 × 33 × 34 (in.) 177.8 × 83.8 × 86.4 (cm)	2150 lbs / 975.2 kg
70 kW	70 × 33 × 34 (in.) 177.8 × 83.8 × 86.4 (cm)	2400 lbs / 1088.6 kg

## **CCR Kits**

Various kits are available to customize CCRs for specific application requirements.

Current Sensing Relay Kit 94A034	Current Sensing Relay Kit	94A0343
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## **Application Notes**

Monitoring Option	Application Notes
00	L-828 with Analog Current Meter on door. Remote Control through multi-wire connection to terminal block in CCR. No monitoring.
33	L-829 Monitoring with RELIANCE Power ACE3 Advanced Control Equipment.
	Remote control from ACE3 to ADB Safegate ALCMS through ethernet or serial communication cable. Multi-wire connection to terminal block in CCR also available.
53	Includes Monitoring Option 33, and
	Insulation Resistance Measurement System (IRMS)
73	Includes Monitoring Option 33, and
	Input Power Monitoring through ACE3
83	Includes Monitoring Option 33, and
	Insulation Resistance Measurement System (IRMS)
	Input Power Monitoring through ACE3

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