

Product Dimensions

Figure 3 - Catalog Numbers 2090-SR120-09, 2090-SR040-09, 1394-SR9A, and 1394-SR9AF

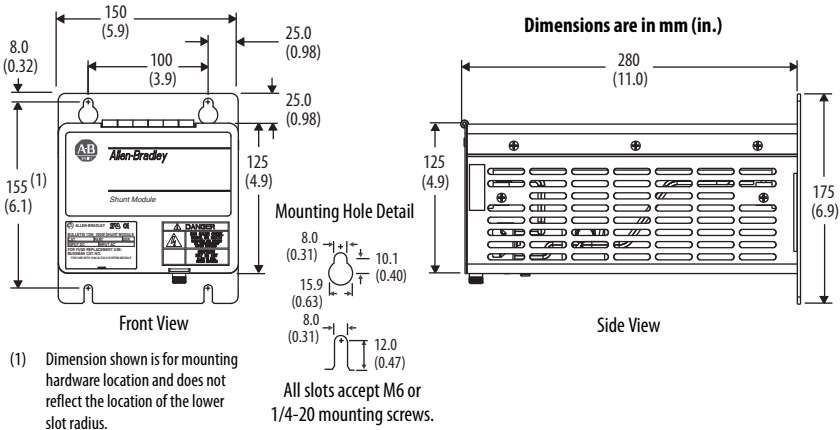
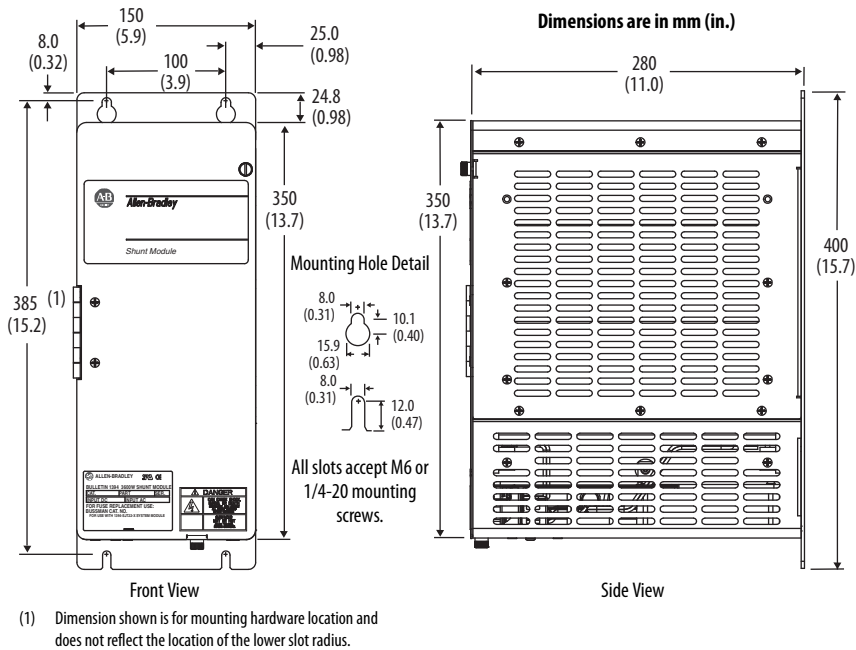


Figure 4 - Catalog Numbers 1394-SR36A, 1394-SR36AF, and 2090-SR040-18



Wire the External Shunt Module

This section assumes you have mounted your external shunt module and are ready to wire the shunt module power connections.

Refer to [Additional Resources](#) on [page 16](#) for the specific user manual with drive-end installation instructions for your servo drive.

IMPORTANT

The National Electrical Code and local electrical codes take precedence over the values and methods provided.

Wire must be copper with 105 °C (221 °F) 600V minimum rating.

Table 3 - DC-bus Wiring Requirements

External Shunt Cat. No.	Shunt Module Terminals	Recommended Wire Size mm ² (AWG)	Torque Value N·m (lb·in)
2090-SRxxx-xx	COL	6 (10)	1.8 (16)
	DC+		
1394-SR9Ax, 1394-SR36Ax	COL	8.4 (8)	
	DC+		

Follow these steps to wire your external shunt module.

1. Remove power from your drive system that includes the Bulletin 1394 or 2090 shunt module.



ATTENTION: This system can have multiple sources of power and more than one disconnect switch to de-energize the system. To avoid shock hazard or personal injury, verify that all power has been removed before proceeding.



ATTENTION: This product contains stored energy devices. To avoid hazard of electrical shock, verify that all voltage on the capacitors has been discharged before attempting to service, repair, or remove this unit. Do not attempt the procedures in this document unless you are qualified to do so and familiar with solid-state control equipment and the safety procedures in publication NFPA 70E.

2. Prepare the shunt DC-bus wires for attachment to the shunt power terminals by removing 10 mm (0.39 in.) of insulation.

IMPORTANT

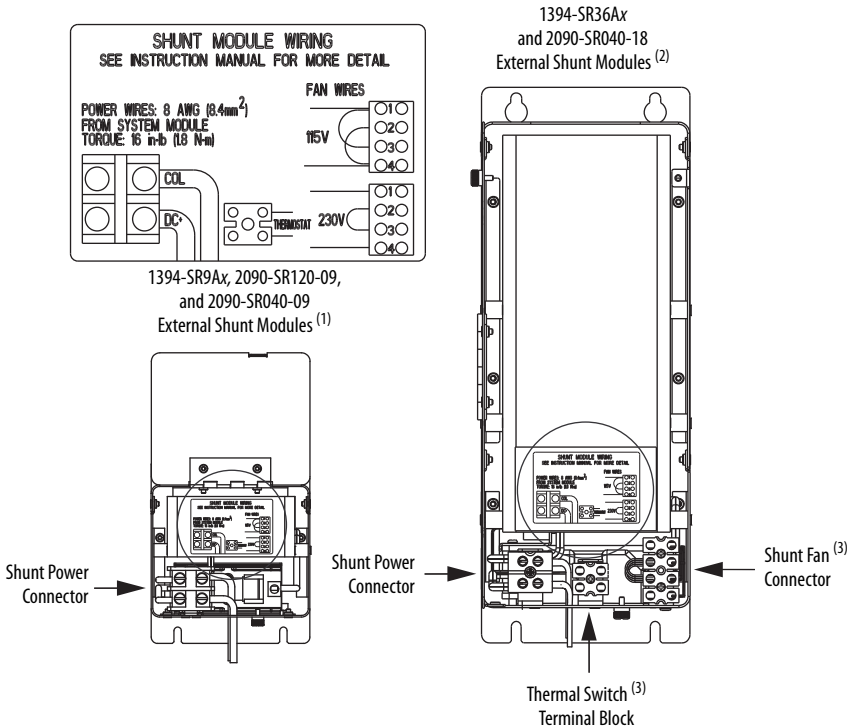
Use caution not to nick, cut, or otherwise damage strands as you remove the insulation.

3. Insert one wire into the shunt power terminal labeled COL.
4. Insert the other wire into the shunt power terminal labeled DC+.
5. Tighten both screw terminals.

Refer to torque values in the table on [page 9](#).

6. Gently pull on each wire to make sure it does not come out of its terminal; reinsert and tighten any loose wires.

Figure 5 - Shunt Module Terminations



- (1) Shunt module is shown with front cover open.
- (2) Shunt module is shown with front cover removed.
- (3) Only the 1394-SR36AF shunt module has the fan and thermal switch connections.

Replace the Shunt Module Fuse

Follow these steps to replace the fuse in your external shunt module.

1. Remove power from your drive system that includes the Bulletin 1394 or 2090 shunt module.

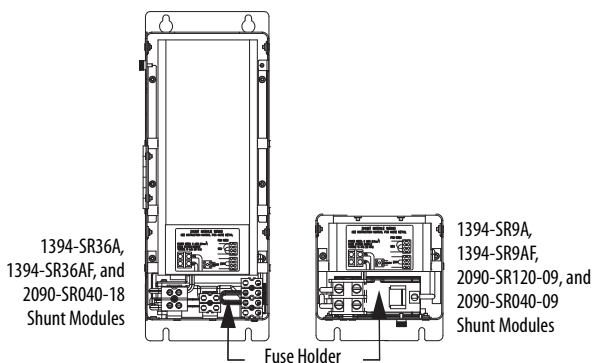


ATTENTION: This system can have multiple sources of power and more than one disconnect switch to de-energize the system. To avoid shock hazard or personal injury, verify that all power has been removed before proceeding.



ATTENTION: This product contains stored energy devices. To avoid hazard of electrical shock, verify that all voltage on the capacitors has been discharged before attempting to service, repair, or remove this unit. Do not attempt the procedures in this document unless you are qualified to do so and familiar with solid-state control equipment and the safety procedures in publication NFPA 70E.

2. Open the front door panel and locate the fuse holder.



In each case, the fuse holder is in the bottom center of the shunt enclosure, in some cases, behind terminal blocks.

3. Remove the blown fuse from the fuse holder.
Use a fuse puller or screwdriver to remove the fuse.
4. Insert the new fuse.
Refer to [External Shunt Module Specifications](#) on [page 15](#), for the properly rated fuse.
5. Close and secure the door panel.
6. Apply power to your system and verify proper operation.

External Shunt Module Specifications

This section provides specifications for the Bulletin 1394 and Bulletin 2090 external shunt modules.

Table 7 - External Shunt Module Specifications

External Shunt Module Cat. No.	Specifications						Bussmann Replacement Fuse
	Drive Voltage V AC	Resistance W	Peak Power kW	Peak Current Amps	Cont. Power Watts	Shipping Weight kg (lbs)	
1394-SR9A	200 ⁽¹⁾	4	41.0	101.25	300	3.63 (8)	FNQ-R-20-R1 ⁽¹⁾
	400		160.0	200			FWP50A14F
1394-SR9AF	200 ⁽¹⁾	4	41.0	101.25	900	3.63 (8)	FNQ-R-20-R1 ⁽¹⁾
	400		160.0	200			FWP50A14F
1394-SR36A	200 ⁽¹⁾	4	41.0	101.25	1800	8.6 (19)	FNQ-R-20-R1 ⁽¹⁾
	400		160.0	200			FWP50A14F
1394-SR36AF	200 ⁽¹⁾	4	41.0	101.25	3600	9.0 (20)	FNQ-R-25-R1 ⁽¹⁾
	400		160.0	200			FWP50A14F
2090-SR120-09	400	120	5.3	6.7	900	3.63 (8.0)	FWP-2.5A14F
2090-SR040-09	400	40	16.0	20.0	900	3.63 (8.0)	FWP-5A14F
2090-SR040-18	400	40	16.0	20.0	1800	8.6 (19.0)	FWP-6.3A14F

(1) Requires the use of an FNQ fuse with an adapter to allow the smaller body fuse to fit the larger FWP fuse holder.



ATTENTION: The Bulletin 1394 and 2090 shunt modules ship with fuses rated for 460V operation. For operation with drive systems that use 230V input power, you must replace the 460V shunt fuse with a 230V fuse. Failure to observe this precaution could result in equipment damage.

Table 8 - Environmental Specifications

Attribute	Value
Ambient operating temperature ⁽¹⁾	0...50 °C (32...122 °F)
Vibration	2 g at 10...2000 Hz
Shock	15 g 11 ms half sine
Altitude	1500 m (5000 ft)
Humidity, noncondensing	5...95%

(1) Power performance increases about 5.5 W for every 1 °C (3.1 W/°F) drop in ambient temperature.