



# SEL-651RA Installation Instructions for Terminal Block Wired to I/O and EIA-485

## Introduction

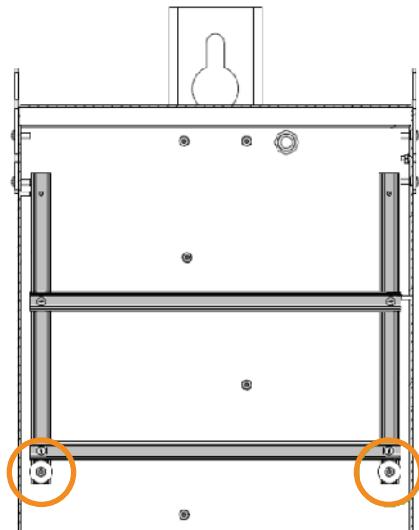
This accessory provides auxiliary terminals in the back of the cabinet wired to the input/output (I/O) and EIA-485 terminals on the control module. This accessory requires the accessory mounting kit (included), which provides the physical means to mount accessories on the back of the cabinet behind the SEL-651RA control module. The cross channels and channel nuts are adjustable to accommodate most accessories with mounting dimensions less than 241.3 mm (9.5 in) high and 406.4 mm (16 in) wide. There are approximately 56.64 mm (2.23 in) between the back of the control module and the accessory mounting bracket. The 12-terminal block is also included, which provides five 12 V and five return positions. The input power or battery power energizes the 12 V terminals when the control is operable.

## Parts

SEL Part Number	Description	Quantity
P1460	16-position screw-terminal connectors (STCs) (pre-assembled to P9751)	2
P9748	Accessory mounting kit subassembly	1
P9751	Terminal block wired to I/O and EIA-485 subassembly	1
P9950	Accessory mounting kit auxiliary parts	1
SEL-C2252	Red wire	1
SEL-C5533	Black wire	1
080-0101	Cable clamps	4
140-3150	10-32 self-locking nut	5
142-0260	Fender washers	2
310-0050	Zip ties	12

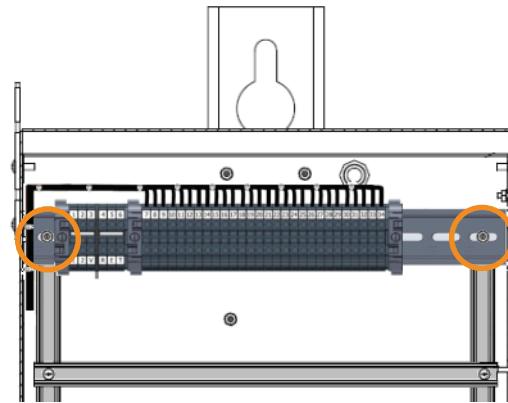
## Installation

- Step 1. Install the accessory mounting kit subassembly to the back of the cabinet. Secure the accessory mounting kit to the cabinet with the two fender washers and two nuts on the bottom studs only. See *Figure 1*.



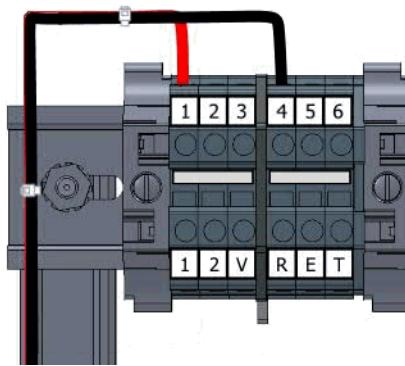
**Figure 1 Install Accessory Mounting Assembly**

Step 2. Install the terminal block wired to I/O and EIA-485 subassembly to the top of the accessory mounting kit with two nuts. See *Figure 2*.



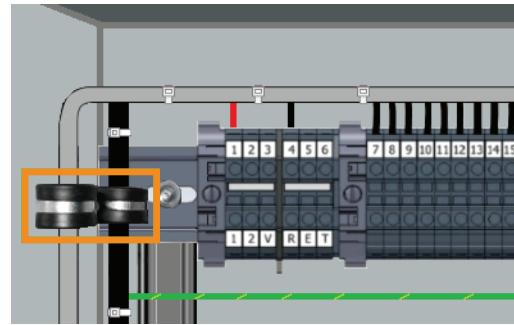
**Figure 2 Install Terminal Block Assembly**

Step 3. Install the red and black wires to the top of Terminal 1 and Terminal 4, respectively. See *Figure 3*.



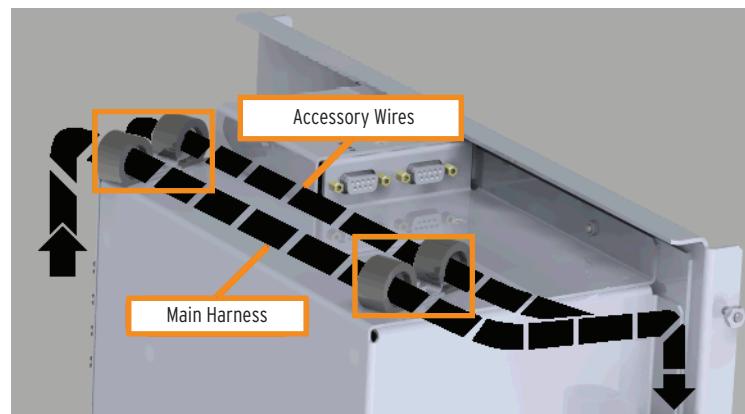
**Figure 3 Install 12 V Terminal Block Wires**

Step 4. Install wire clamps to the side of the cabinet with a nut and route wires (red, black, and all the other wires/wire assemblies already attached to the terminal block) through them. See *Figure 4*.



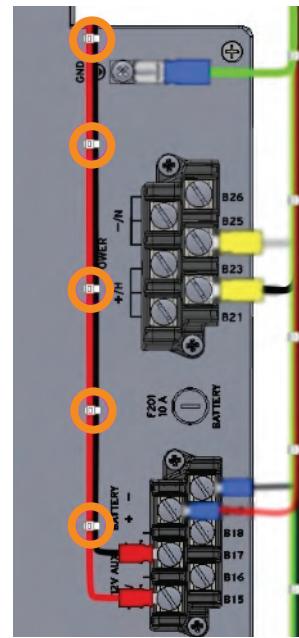
**Figure 4 Secure Terminal Block Wires**

- Step 5. Route the wires down the side of the cabinet to the bottom of the cabinet near the 14-pin connector.
- Step 6. Connect the green/yellow ground wire to the ground stud in the bottom of the cabinet with the existing nut.
- Step 7. Route the wires through the existing wire clamp on the floor of the cabinet.
- Step 8. Route the wires through the wire loom and up the swing-panel hinge through the existing wire clamps.
- Step 9. Route the wires across the top of the control module. The accessory wires route separately from the main harness.
- Step 10. Use the existing nuts to secure the wires to the top of the control module with the two accessory wire clamps (if they are not already installed). See *Figure 5*.



**Figure 5 Secure Wires on Top of Control Module**

- Step 11. Route the wires down the other side of the control module and attach the red wire to B15 and the black wire to B17. See *Figure 6*.

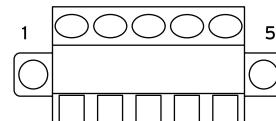


**Figure 6 Connect 12 V Wires**

**NOTE:** If your unit is not equipped with the EIA-485 option, there will be no EIA-485 plug on which to connect the EIA-485 wires.

Step 12. Install the prewired STCs in the I/O positions (A01–A32).

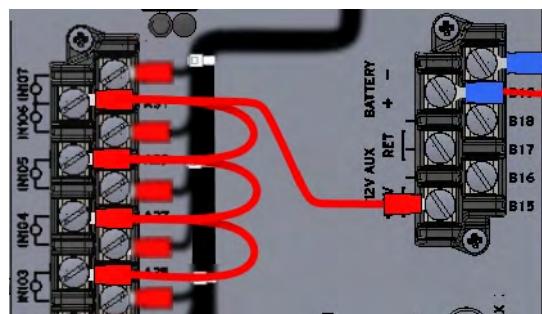
Step 13. Connect the EIA-485 wires to the plug in the **SERIAL PORT** position, per *Figure 7*.



Wire	Pin
White twisted with black	1
Black twisted with white	2
Red twisted with black	3
Black twisted with red	4
Drain	5

**Figure 7 EIA-485 Pinout**

Step 14. Connect the loose end of the wire attached to A31 to B15. See *Figure 8*.

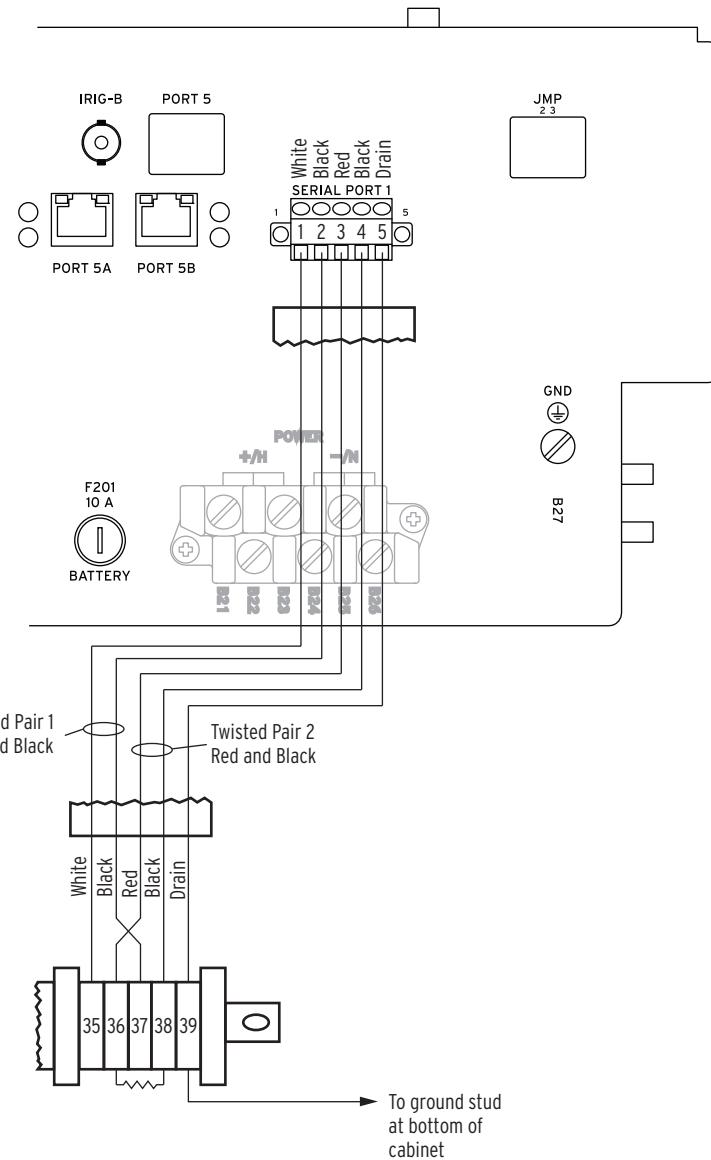


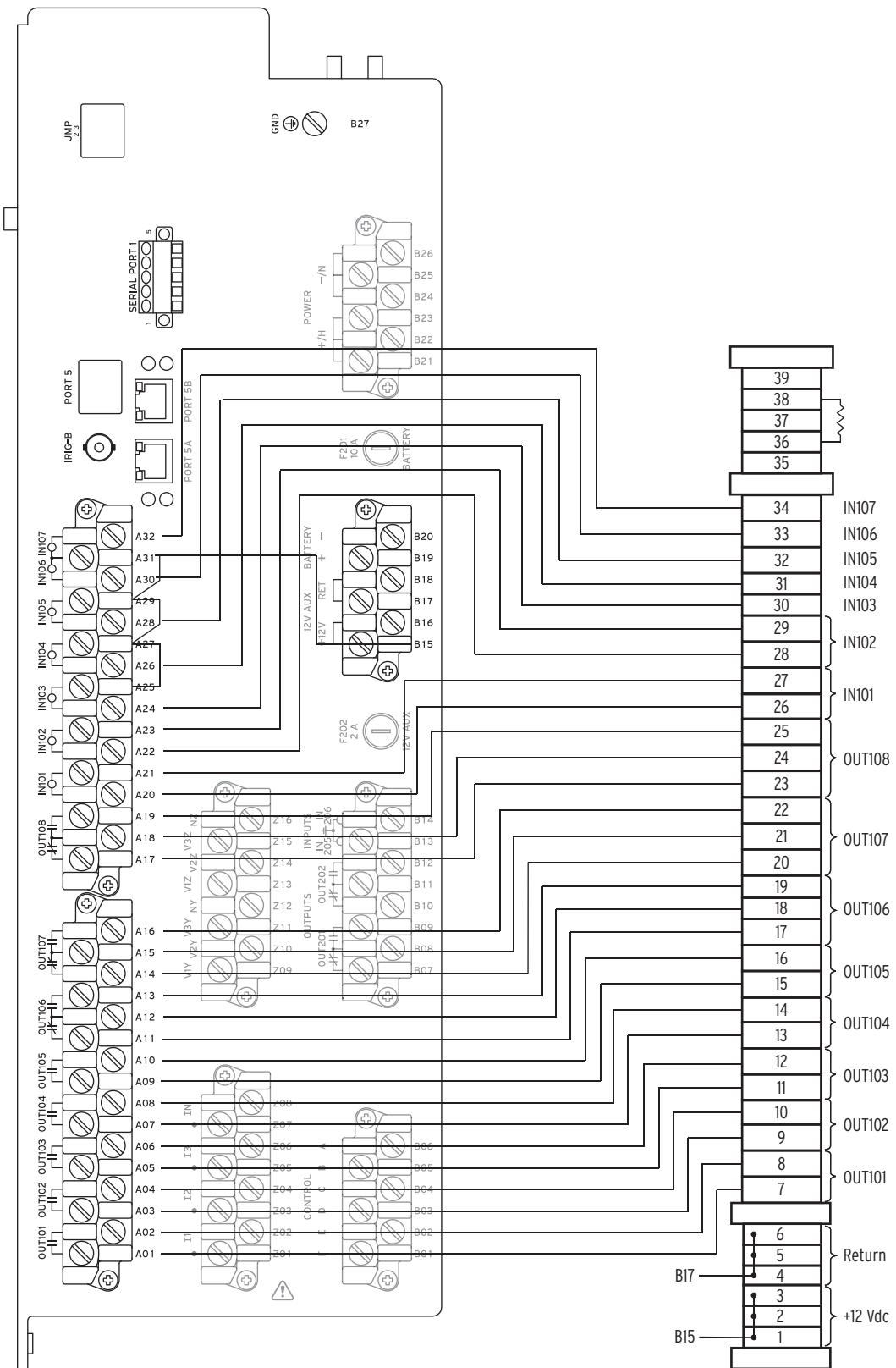
**Figure 8 Connect A31 to B15**

Step 15. Zip tie wires as necessary.

# Wiring Diagrams

**NOTE:** If your unit is not equipped with the EIA-485 option, there will be no EIA-485 plug on which to connect the EIA-485 wires.





# Technical Support

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We appreciate your interest in SEL products and services. If you have questions or comments, please contact us at:

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