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*.
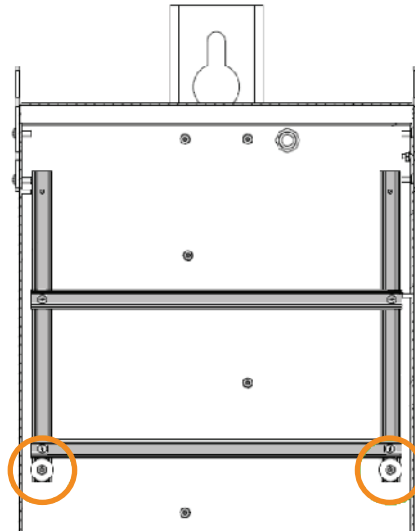
Figure 1   Install Accessory Mounting Assembly

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*.
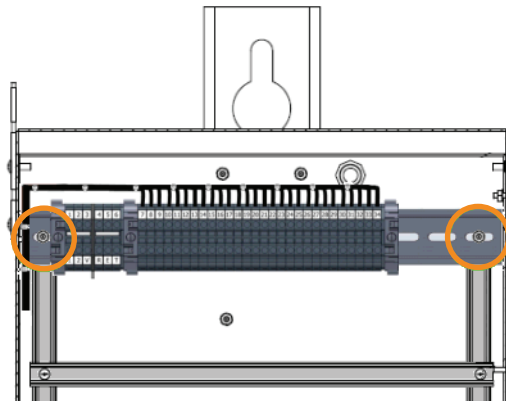

Figure 2   Install Terminal Block Assembly

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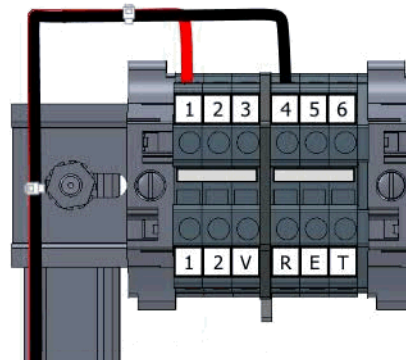

Figure 3   Install 12 V Terminal Block Wires

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*.
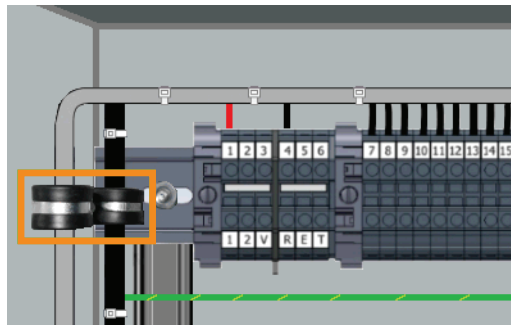
Figure 4   Secure Terminal Block Wires

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*.
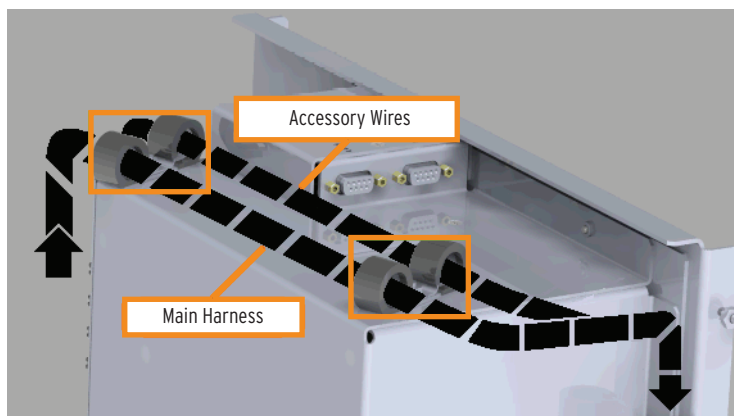

Figure 5   Secure Wires on Top of Control Module

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*.
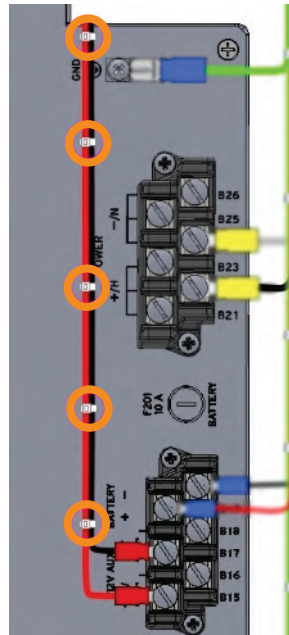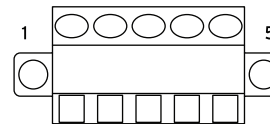
Figure 6   Connect 12 V Wires

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*.
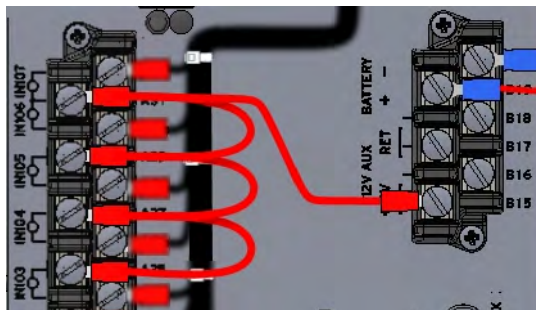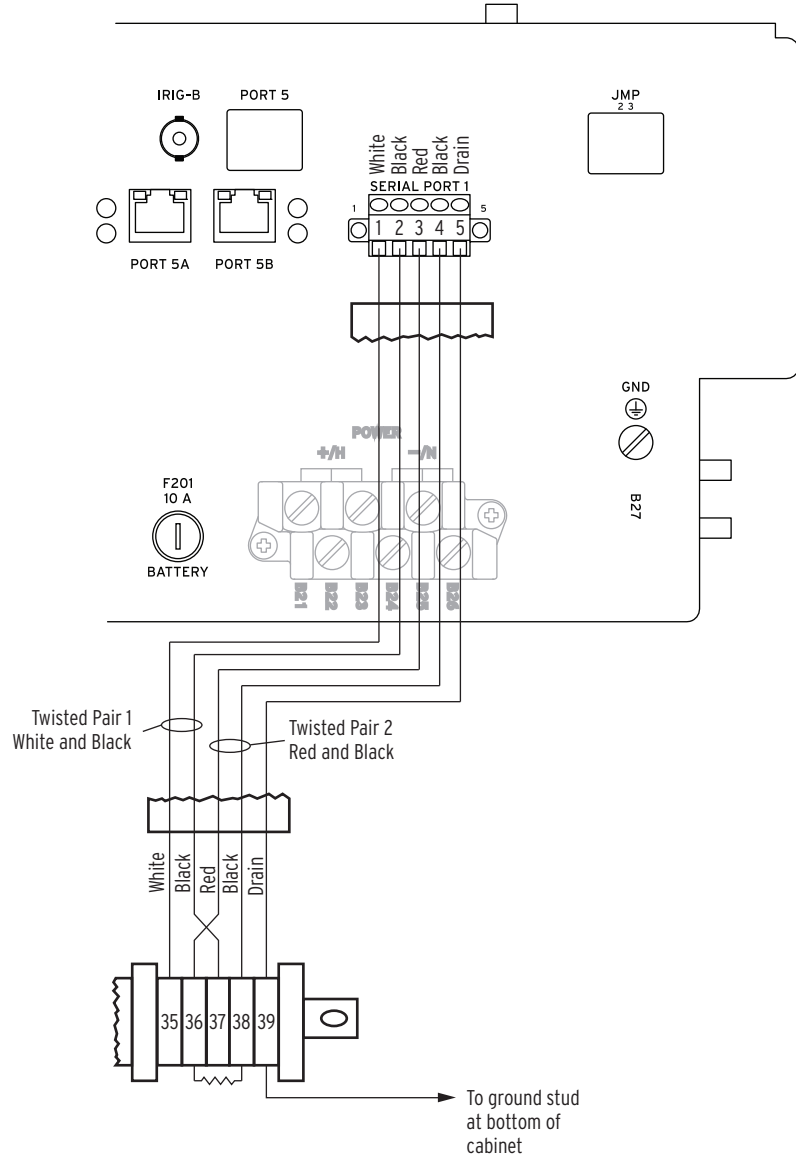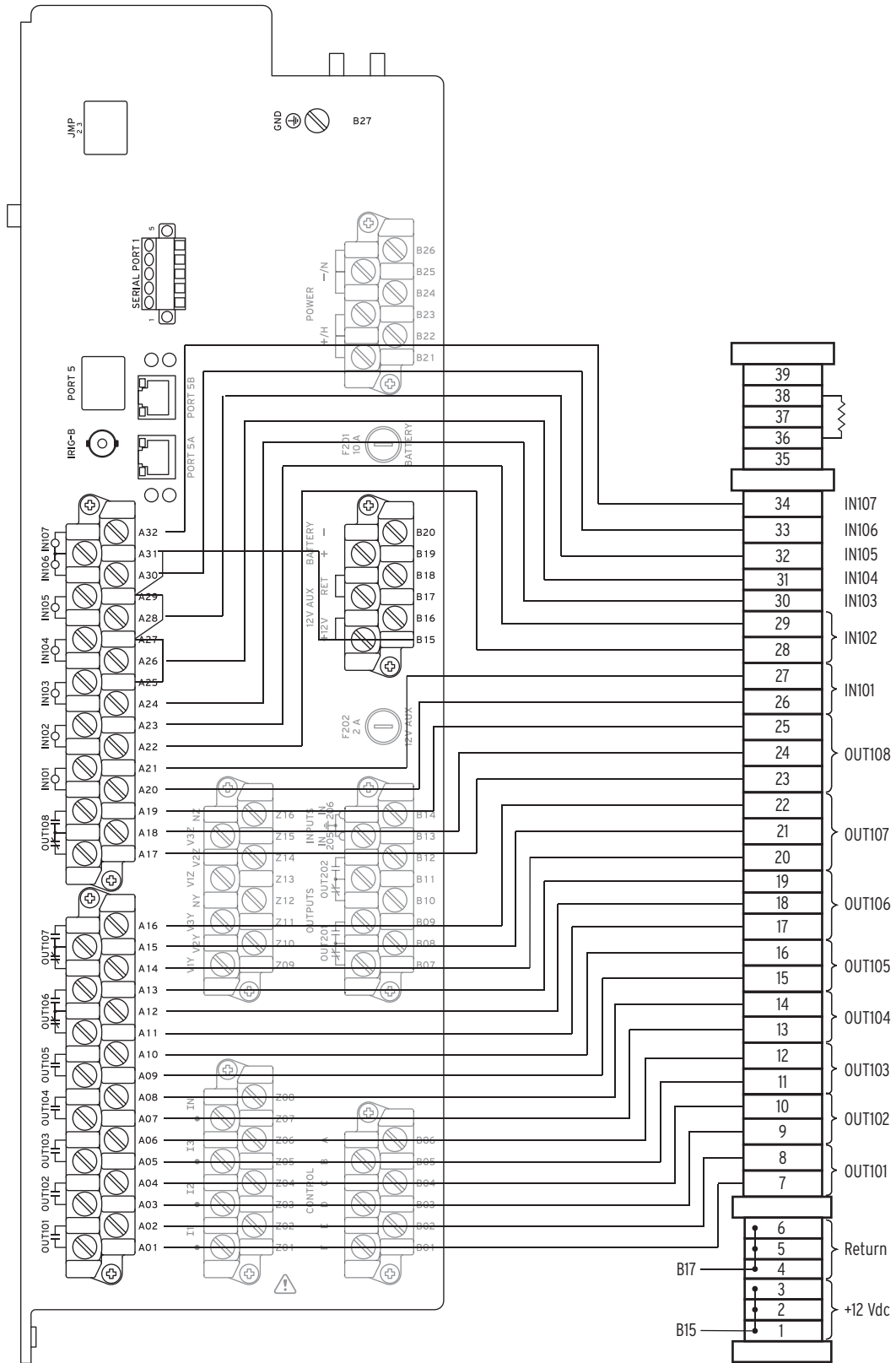

Figure 8   Connect A31 to B15

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.

JMP 2 3

GND B27

SERIAL PORT 1

5

1

PORT 5

PORT 5B

PORT 5A

IRIG-B

POWER

−/N

+/H

B26
B25
B24
B23
B22
B21

F201 10 A

BATTERY

BATTERY −

12V AUX RET +12V

B20
B19
B18
B17
B16
B15

F202 2 A

12V AUX

IN106 IN107
IN105
IN104
IN103
IN102
IN101
OUT108

A32
A31
A30
A29
A28
A27
A26
A25
A24
A23
A22
A21
A20
A19
A18
A17

INPUTS IN205 IN206
OUTPUTS OUT202

V1Z V2Z V3Z NZ
V1Z V2Z V3Y NY
V1Y V2Y V3Y

Z16
Z15
Z14
Z13
Z12
Z11
Z10
Z09

B14
B13
B12
B11
B10
B09
B08
B07

OUT107
OUT106
OUT105
OUT104
OUT103
OUT102
OUT101

A16
A15
A14
A13
A12
A11
A10
A09
A08
A07
A06
A05
A04
A03
A02
A01

IN
I3
I2
I1

CONTROL
F E D C B A

Z08
Z07
Z06
Z05
Z04
Z03
Z02
Z01

B06
B05
B04
B03
B02
B01

⚠

39
38
37
36
35

34 — IN107
33 — IN106
32 — IN105
31 — IN104
30 — IN103
29
28 } IN102
27
26 } IN101
25
24 } OUT108
23
22
21 } OUT107
20
19
18 } OUT106
17
16
15 } OUT105
14
13 } OUT104
12
11 } OUT103
10
9 } OUT102
8
7 } OUT101

6
5 } Return
B17 — 4
3
2 } +12 Vdc
B15 — 1

Factory Assistance

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

Schweitzer Engineering Laboratories, Inc.
2350 NE Hopkins Court
Pullman, WA 99163-5603 U.S.A.
Tel: +1.509.332.1890
Fax: +1.509.332.7990
Internet: selinc.com
Email: info@selinc.com

⚠WARNING

Operator safety may be impaired if the device is used in a manner not specified by SEL.

⚠AVERTISSEMENT

La sécurité de l'opérateur peut être compromise si l'appareil est utilisé d'une façon non indiquée par SEL.

SCHWEITZER ENGINEERING LABORATORIES, INC.

2350 NE Hopkins Court • Pullman, WA 99163-5603 U.S.A.
Tel: +1.509.332.1890 • Fax: +1.509.332.7990
www.selinc.com • info@selinc.com

PLS651RA-13