SEL-651RA Installation Instructions for 8-Pin (Size 22) Receptacle for Voltage Inputs

Introduction

This 8-pin (size 22) receptacle provides an eight-pin male receptacle that exits from the bottom of the cabinet. The 8-pin cable is internally wired to 300 Vac voltage max inputs. The 8-pin receptacle provides a convenient way (by way of external cable, which is not included) to connect external potential transformer secondary outputs to the control. Depending on the secondary input voltage option of your control, you may wire to just the Y-side, just the Z-side, or both Y- and Z-side voltage inputs.

Parts

SEL Part Number	Description	Quantity
SEL-C2253	8-pin (size 22) voltage input receptacle harness	1
SEL-C5241	Ground wire	1
080-0101	5/8 steel wire clamp	2
140-0500	4-40 x 1/2" screw	4
140-0740	4-40 hex nut	4
144-0140	Plastic cap	1
310-0050	Zip ties	12

Installation

Step 1. Install the 8-pin (size 22) voltage input receptacle harness in the bottom of the cabinet in the center hole in the back row. See *Figure 1*.

a. Insert the receptacle harness inside the cabinet and insert the four screws from outside.

b. Install the nuts on the screws from the inside of the cabinet.

Step 2. Install the smaller ring terminal of the green/yellow ground wire and the two drain wires to the last connector screw and secure them with the last nut. See *Figure 1*.

Step 3. Use the existing nut to connect the larger ring terminal of the green/yellow ground wire to the ground stud. See *Figure 1*.

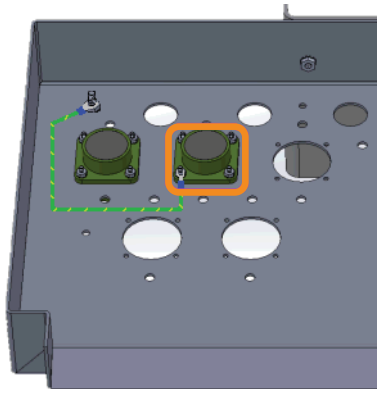


Figure 1 Install Ring Terminal

Step 4. If your unit is equipped with the fuse block for field wiring, go to *Wiring With Fuse Block*. Otherwise, go to *Wiring Without Fuse Block*.

Wiring Without Fuse Block

Step 1. Form a drip loop and route the harness wires to the left toward the 14-pin connector. See *Figure 2*.

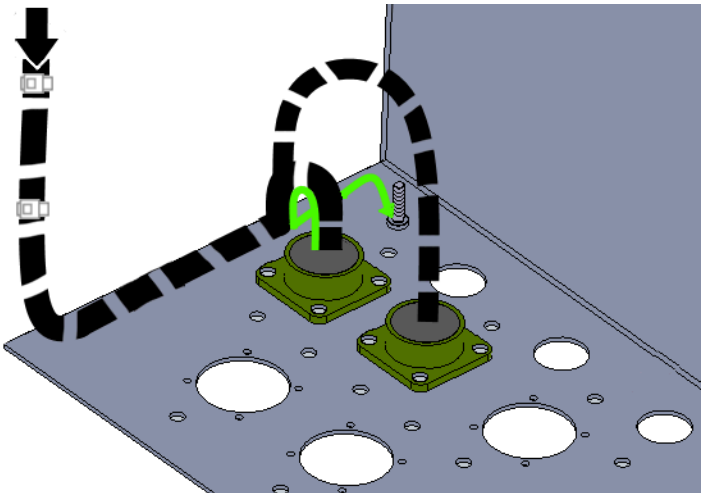


Figure 2 Form Drip Loop and Route Harness Wires

Step 2. Join the 8-pin wires with the main harness and route the wires through the wire loom and up the swing panel hinge through the existing wire clamps.

Step 3. Route the wires across the top of the control module. The accessory wires route separately from the main harness.

Step 4. 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 3*.

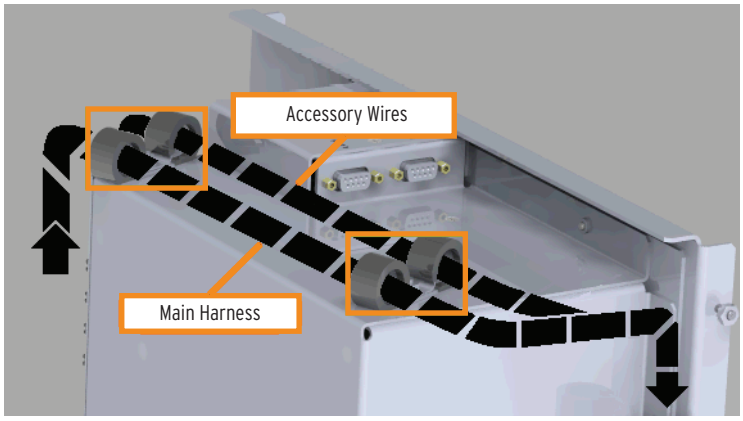
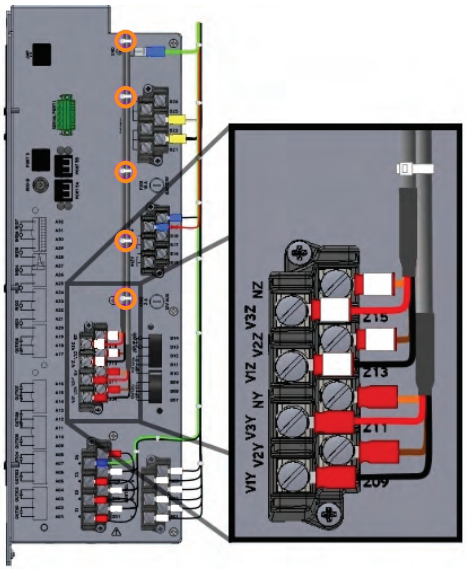


Figure 3 Secure Wires on Top of Control Module

Step 5. Attach the eight-pin harness wires according to the table in *Figure 4* as required for your specific secondary input voltage option. See *Table 1* for SIV-specific wiring. Note that the Z-side wires have white heat shrink on the ring terminals.

Table 1 SIV-Specific Wiring

SIV Option	MOT Character	Wire
Single phase	1	A, B, C, D only (Y side)
6 PT	A	A, B, C, D, E, F, G, H (Y and Z sides)
Z-side PT	B	E, F, G, H only (Z side)
Z-side PT	D	E, F, G, H only (Z side)
Y-side PT	F	A, B, C, D only (Y side)



8-Pin Wires:	To:
A (Black Wire)	Z09
B (Brown Wire)	Z10
C (Red Wire)	Z11
D (Orange Wire)	Z12
E (Black Wire)	Z13
F (Brown Wire)	Z14
G (Red Wire)	Z15
H (Orange Wire)	Z16

Figure 4 Attach Wires to Control Module

Step 6. Zip tie wires as necessary.

Wiring With Fuse Block

Step 1. Form a drip loop and route the harness wires to the bottom of the fuse block for field wiring. See *Figure 5*.

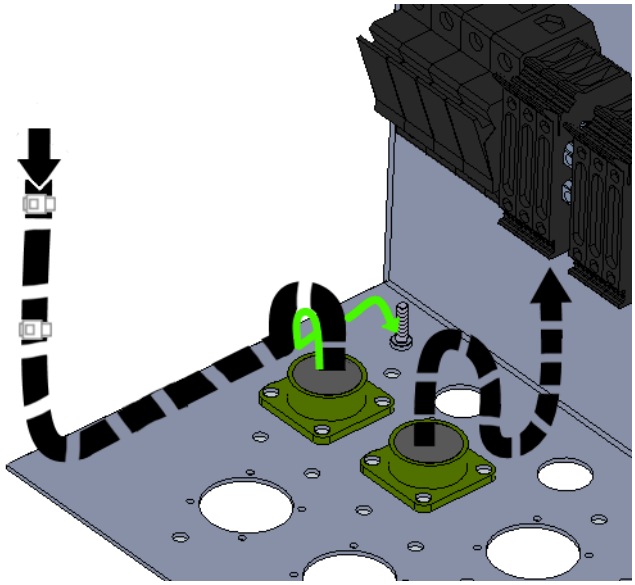
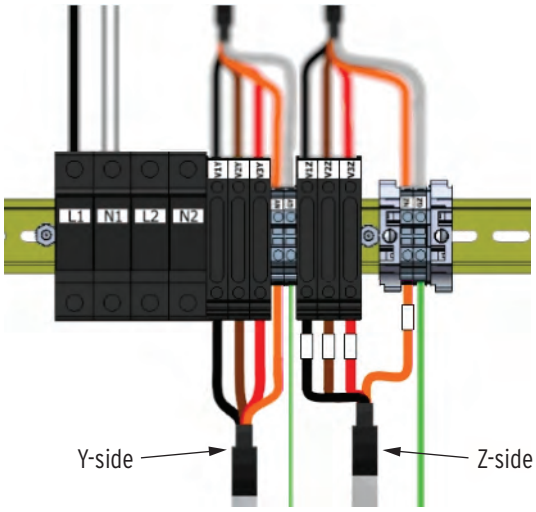


Figure 5 Route Harness Wires to Bottom of Fuse Block

Step 2. Cut the cables to a reasonable length, remove about 2 inches of the jacket, and strip the individual wires about 7/16 of an inch.

Step 3. The Z-side cable is marked with white heat shrink on the Z-side ring terminals to distinguish them from the Y-side ring terminals. Mark the end of the Z-side wires (wires from where the heat shrunk ring terminals were cut) for future reference.

Step 4. Attach the 8-pin harness wires according to the table in *Figure 6* as required for your specific secondary input voltage option. See *Table 1* for SIV-specific wiring.



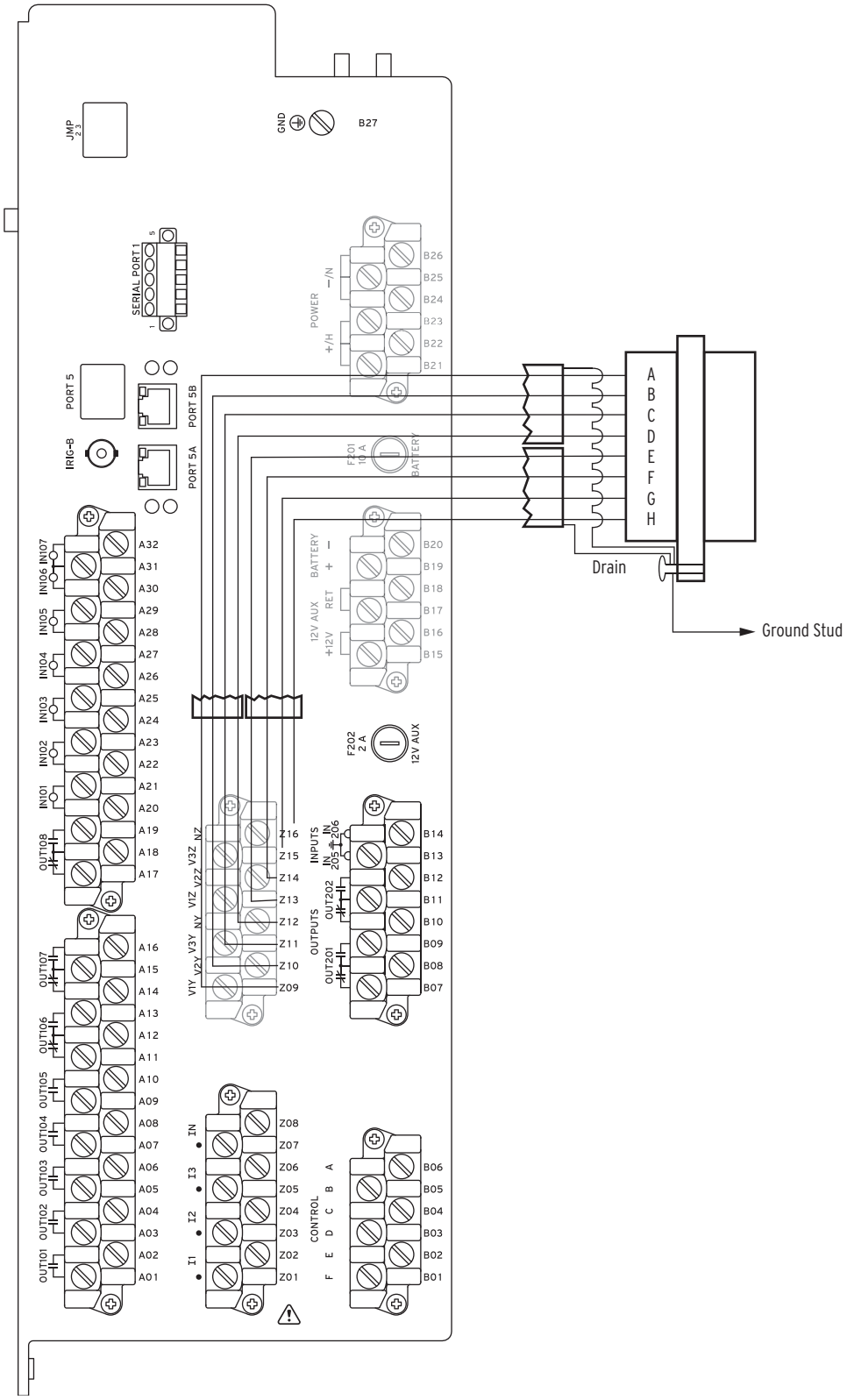
From: 8-Pin	To: Fuse Block
Black Wire (A, No Heatshrink)	V1Y - Bottom
Brown Wire (B, No Heatshrink)	V2Y - Bottom
Red Wire (C, No Heatshrink)	V3Y - Bottom
Orange Wire (D, No Heatshrink)	NY - Bottom
Black Wire (E, Heatshrink)	V1Z - Bottom
Brown Wire (F, Heatshrink)	V2Z - Bottom
Red Wire (G, Heatshrink)	V3Z - Bottom
Orange Wire (H, Heatshrink)	NZ - Bottom

Figure 6 Attach Wires to Fuse Block

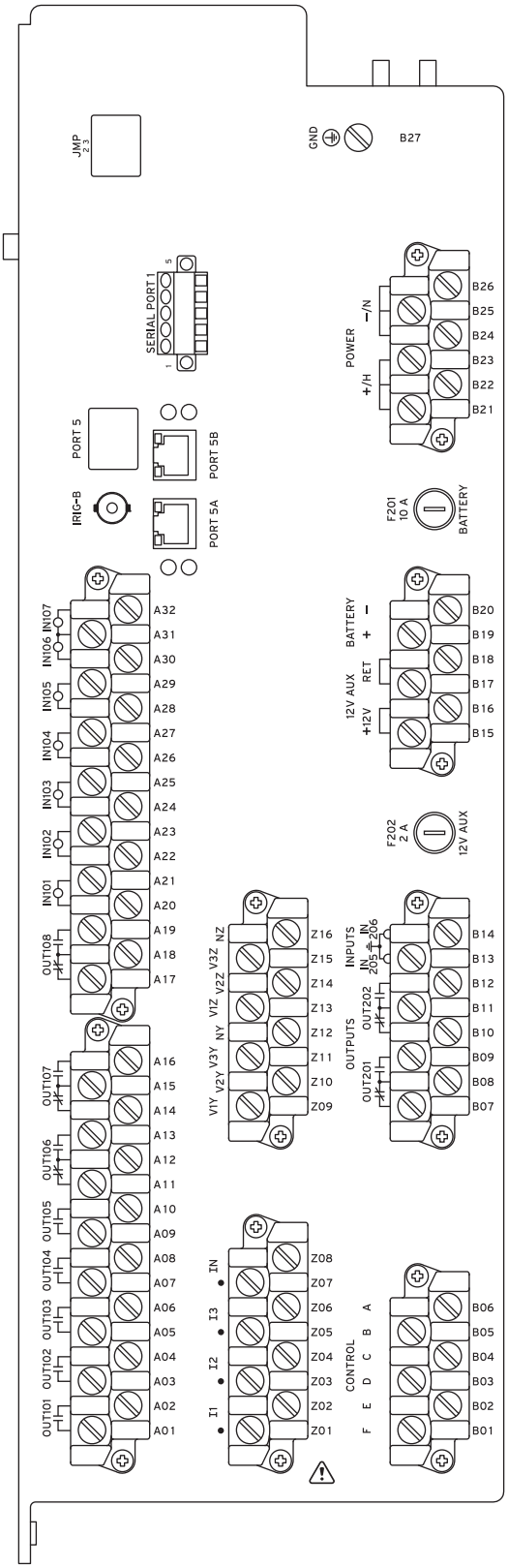
Step 5. Zip tie wires as necessary.

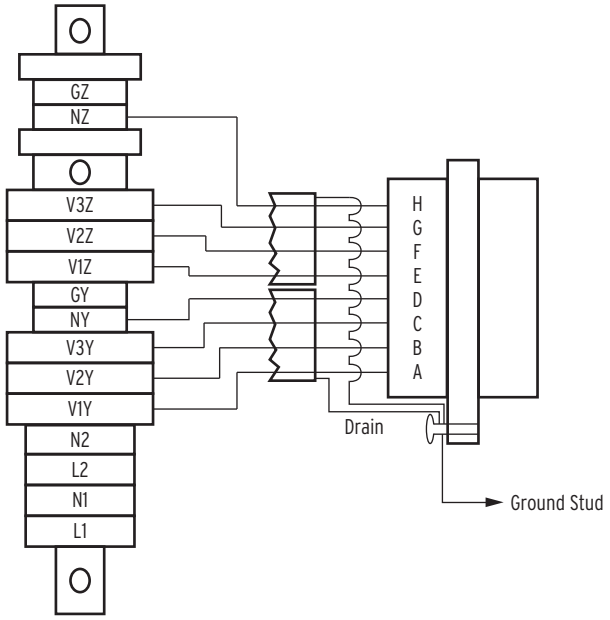
Wiring Diagrams

Without Fuse Block



With Fuse Block





Wiring between fuse block and control module not shown.

Technical Support

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

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⚠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.

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