Analog Output Card Installation Instructions

Use the following procedure to install analog output cards in *920i* indicators:

1. Disconnect indicator from power source.

⚠ Warning — *Disconnect power before removing indicator backplate.*

2. Place indicator face-down on an antistatic work mat. Remove screws that hold the backplate to the enclosure body.

⚠ Caution — *Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

3. Carefully align the large option card connector with connector J5 or J6 on the CPU board (see Figure 1). Press down to seat the option card in the CPU board connector.
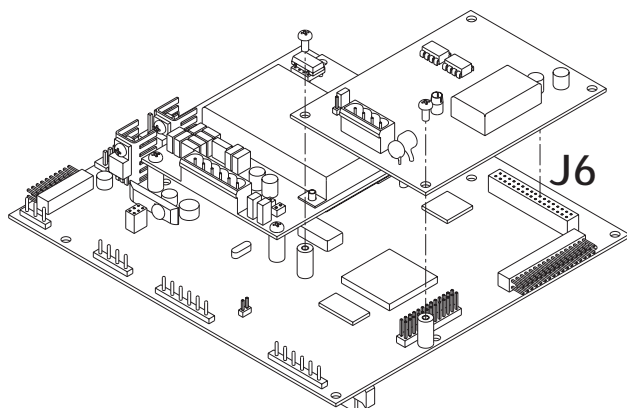

Figure 1. Installing Option Card Onto CPU Board

4. Use the screws and lockwashers provided in the option kit to secure the other end of the option card to the threaded standoffs on the CPU board.

5. Make connections to the option card as required. Use cable ties to secure loose cables inside the enclosure.

6. Set the mode select jumper (see Figure 3) for voltage or current output.

7. Once cabling is complete, position the backplate over the enclosure and reinstall the backplate screws. Use the torque pattern shown in Figure 2 to prevent distorting the backplate gasket. Torque screws to 15 in-lb (1.7 N-m).

8. Ensure no excess cable is left inside the enclosure and tighten cord grips.

9. Reconnect power to the indicator.

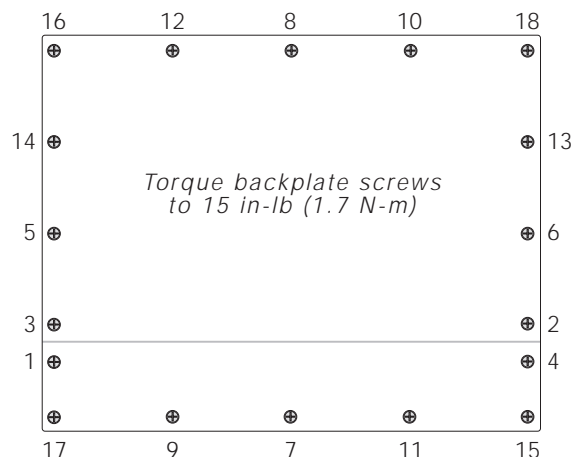10. Configure the analog output card as described on page 2.

Figure 2. 920i Enclosure Backplate

The *920i* automatically recognizes all installed option cards when the unit is powered on. No hardware-specific configuration is required to identify the newly-installed card to the system.

An analog output card installed at connector J5 on the CPU board is configured as ALGOUT1; a card installed at connector J6 is configured as ALGOUT2.
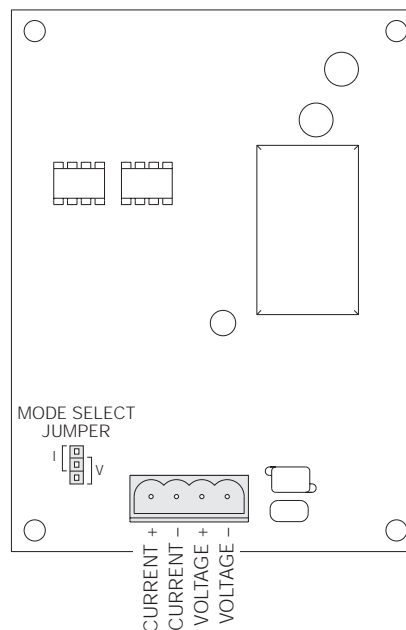

Figure 3. Analog Output Card

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Analog Output Calibration

The following calibration procedure requires a multimeter to measure voltage or current output from the analog output module.

NOTE: *The analog output must be calibrated **after** the indicator itself has been configured and calibrated.*

1. Enter setup mode and go to the ALGOUT menu (see Figure 3-1):

   - Set SOURCE1 for the number of the scale channel used as the source for the analog output

   - Set MODE1 to track either gross or net weight from that scale

   - Set OFFSET to 0% for 0–10 V or 0–20 mA output; set to 20% for 4–20 mA output

   - Set ERRACT to specify how the analog output will respond to system error conditions

   - Set MIN to lowest weight value to be tracked by the analog output

   - Set MAX to highest weight value to be tracked by the analog output

2. Connect multimeter to connector J1 on the analog output card:

   - For voltage output, connect voltmeter leads to pins 3 and 4

   - For current output, connect ammeter leads to pins 1 and 2

3. Adjust zero calibration: Scroll to the TWZERO parameter. Press ▽ to view zero value, then check voltage or current reading on multimeter. Use the numeric keypad to adjust the zero value up or down.

4. Adjust span calibration: Scroll to the TWSPAN parameter. Press ▽ to view span value, then check voltage or current reading on multimeter. Use the numeric keypad to adjust the span value up or down.

5. Final zero calibration: Return to the TWZERO parameter and verify that the zero calibration has not drifted. Use the numeric keypad to adjust the zero value as required.

6. Return to normal mode. Analog output function can be verified using test weights.

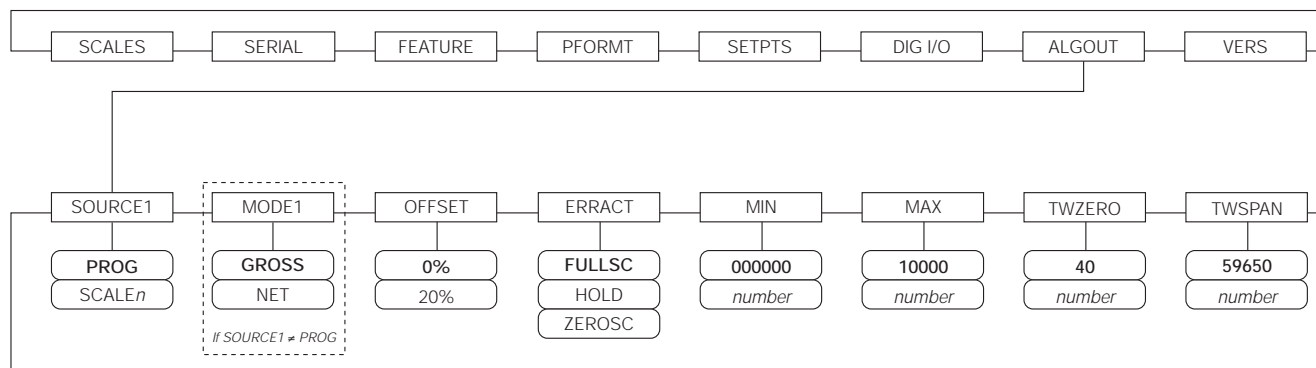See the *920i Installation Manual*, PN 67887, for more configuration information.

Figure 3-1. Analog Output Menu

Specifications

Resolution	16-bit, monotonicity over temperature
Linearity	±0.03% of full scale input
Current Output	0–20 mA or 4–20 mA (20% offset)
Maximum Load Resistance	840 Ω
Power consumption	3.9W (max. load @ 20 mA)
Voltage Output	0–10 VDC
Minimum Load Resistance	1.1 KΩ
Power consumption	3.9W (max. load @ 10 VDC)
Input Protection	Short circuit protection, 300W transient voltage suppression
	Protection for ESD, EFT (electrical fast transients), tertiary lightning, and system-generated transients per IEC 60001-4-2, 60001-4-4, and 60001-4-5; European Standards EN50082 and EN61000-4