920i® Programmable HMI Indicator/Controller

Single-Channel A/D Card Installation Instructions

PN 68532

Use the following procedure to install single-channel A/D 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. Press down to seat the option card in the CPU board connector.
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 (see Figure 1).

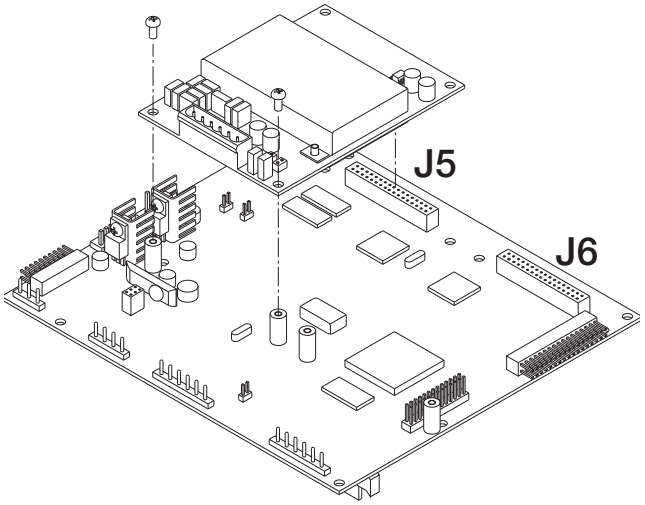

Figure 1. Installing Option Card Onto CPU Board

5. To attach cables from load cells or junction boxes to the A/D card, route the cables through the cord grips and wrap the shield wires around the ground stud on the enclosure. Secure shield wires to the ground stud with the kep nut included in the parts kit.

   See the *920i Installation Manual*, PN 67887, for more information about grounding cables.

6. Next, remove connector J1 from the A/D card. The connector plugs into a header on the card (see Figure 2). Wire the load cell cable from the load cell or junction box to connector J1 as shown in Table 1.

   If using 6-wire load cell cable (with sense wires), remove jumpers JP1 and JP2 before reinstalling connector J1. For 4-wire installation, leave jumpers JP1 and JP2 on.

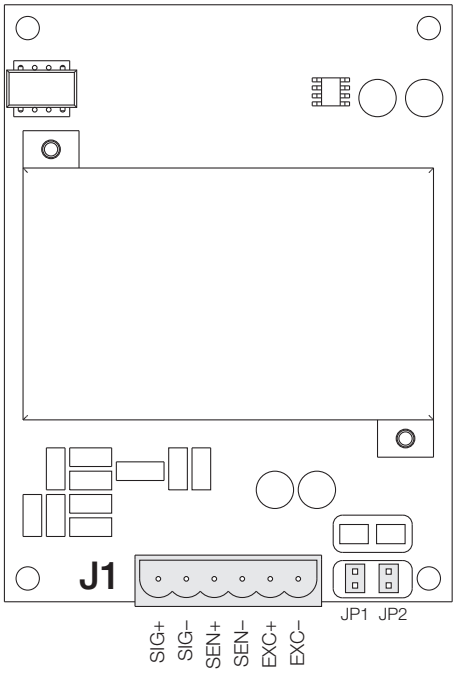

Figure 2. Single-Channel A/D Card

J1 Connector Pin	Function
1	+SIG
2	–SIG
3	+SENSE
4	–SENSE
5	+EXC
6	–EXC
For 6-wire load cell connections, remove jumpers JP1 and JP2.	

Table 1. A/D Card Pin Assignments

7. When connections are complete, reinstall load cell connector on the A/D card and use cable ties to secure the load cell cable to the inside of the enclosure.
8. Position the backplate over the enclosure and reinstall the backplate screws. Use the torque pattern shown in Figure 3 to prevent distorting the backplate gasket. Torque screws to 15 in-lb (1.7 N-m).

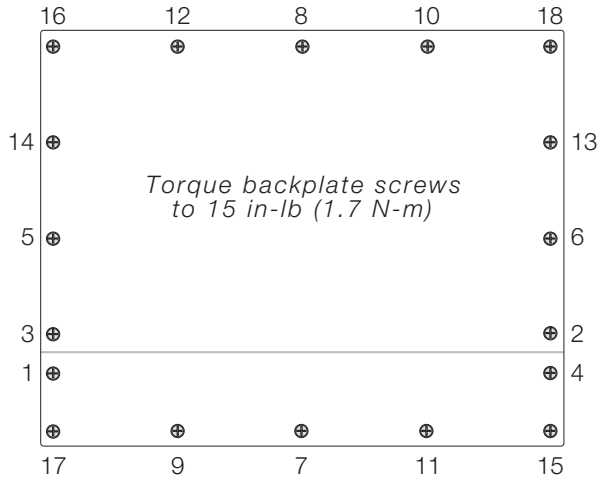

Figure 3. 920i Enclosure Backplate

9. Ensure no excess cable is left inside the enclosure and tighten cord grips.
10. Reconnect power to the indicator.
11. 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.

    Calibrate the A/D card using the procedures described in the *920i Installation Manual*, PN 67887.

Specifications

Excitation Voltage	10 ± 0.5 VDC, 16 x 350¾ or 32 x 700W load cells per A/D card
Sense Amplifier	Differential amplifier with 4- and 6-wire sensing
Analog Signal Input Range	–10 mV/V to +70 mV/V
Analog Signal Sensitivity	0.3 uV/grad minimum @ 7.5 Hz 1.0 uV/grad typical @ 120 Hz 4.0 uV/grad typical @ 960 Hz
A/D Sample Rate	7.5–960 Hz, software selectable
Input Impedance	>35 M¾ typical
Internal Resolution	8 000 000 counts
Wt Display Resolution	9,999,999
Input Sensitivity	10 nV per internal count
System Linearity	±0.01% of full scale
Zero Stability	±150 nV/°C, maximum
Span Stability	± 3.5 ppm/°C, maximum
Input Voltage Differential	±800 mV referenced to earth ground
Input Overload	Load cell signal lines ±10 V continuous, ESD protected
RFI/EMI Protection	Signal, excitation, and sense lines protected