Digital I/O Expansion Card Installation Instructions

PN 67601

Use the following procedure to install digital I/O expansion cards in *720i*, *820i*, and *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 *920i* CPU board, J6 on the *820i* CPU board, or J12 on the *720i* CPU board. Press down to seat the option card in the CPU board connector.
4. Use the screws and lock washers 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).

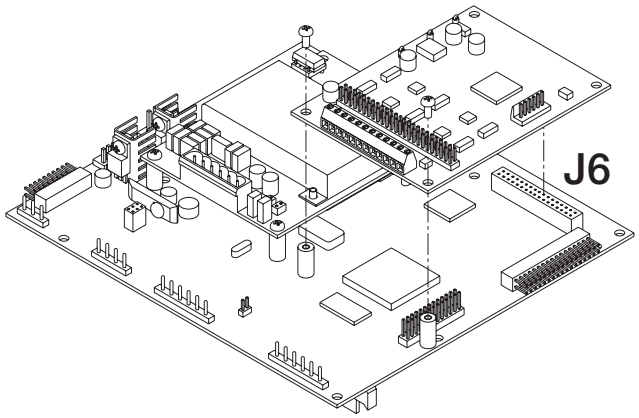

Figure 1. Installing Option Card Onto 920i CPU Board

5. Make connections to the option card as required. Figure 2 shows connections available on option card connector J3 (up to eight digital I/O channels). Connector J2 provides all 24 channels using a 50-pin ribbon cable (see Table 1).

   Use cable ties to secure loose cables inside the enclosure. Once cabling is complete, position the backplate over the enclosure and reinstall the backplate screws.

Use the torque pattern shown in the indicator *Installation Manual* to prevent distorting the backplate gasket. Torque screws to 15 in-lb (1.7 N-m).

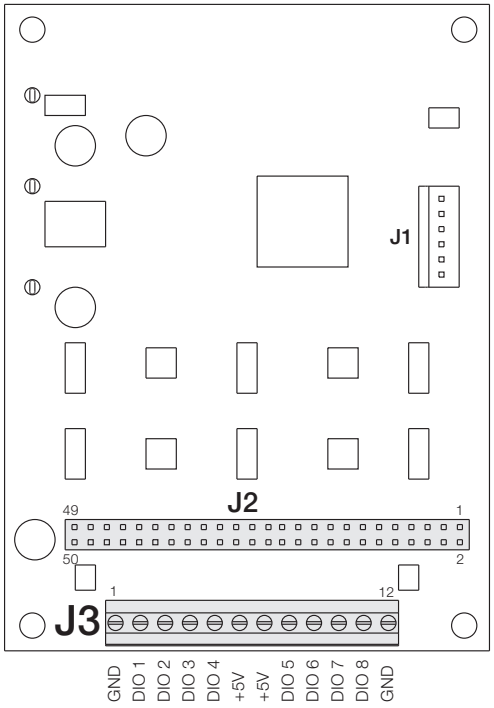

Figure 2. Digital I/O Expansion Card

Pin	Signal	Pin	Signal
1	DIO24	27	DIO11
3	DIO23	29	DIO10
5	DIO22	31	DIO9
7	DIO21	33	DIO8
9	DIO20	35	DIO7
11	DIO19	37	DIO6
13	DIO18	39	DIO5
15	DIO17	41	DIO4
17	DIO16	43	DIO3
19	DIO15	45	DIO2
21	DIO14	47	DIO1
23	DIO13	49	+5V
25	DIO12	even pins	GND

Table 1. J2 Ribbon Cable Connections

6. Ensure no excess cable is left inside the enclosure and tighten cord grips.
7. Reconnect power to the indicator.
8. Use the DIG I/O menu to configure digital I/O as necessary. See the *920i Installation Manual* (PN 67887), *820i Installation Manual* (PN 93018), or *720i Installation Manual* (PN 103121) for more information.

The indicator 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.

For the *920i*, a digital I/O expansion card installed at connector J5 on the CPU board is configured as slot 1; a card installed at connector J6 is configured as slot 2. A digital I/O card installed in the *720i* or *820i* is configured as slot 2.

Specifications

I/O Channels	Up to 24, 5V/TTL, each software configurable as input or output
Relay Supply Voltage	5 VDC, 1A maximum
Input Voltage	0–5.5V maximum
Digital Outputs	24mA balanced outputs with sink/source capability
Input Protection	8-screw terminal: 300W transient voltage suppression 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 Remaining I/O: 2KV HBM, 100V machine model
I/O Connection	50-pin ribbon connector, 8-screw terminal connector