

# iControl<sup>®</sup> 2 Opto-Input Interface Card Replacement

This instruction sheet is to help guide the procedure needed to replace the iControl<sup>®</sup> 2 opto-input interface card.



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.



**WARNING:** Shut off all power to the system before beginning any procedures.

## Removing Interface Card

1. See Figure 1. Disconnect the 25 conductor cable wiring at interface card. Also disconnect the “conveyor interlock” wiring from input 16 thru 19 of the interface card.
2. Disconnect the ribbon cable from the interface card and the computer. Discard the ribbon cable.
3. Remove the four screws (1) securing the interface card. Save the screws to install the new interface card.

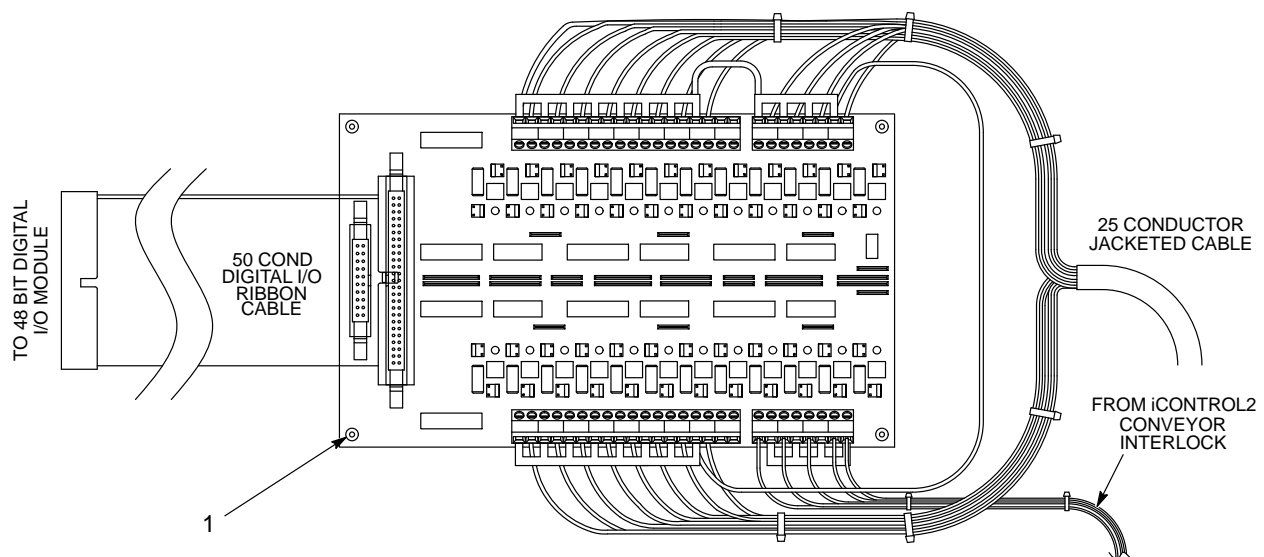


Figure 1 Old Interface Card with Wiring and Ribbon Cable Connections

## Installing New Interface Card

1. See Figure 2. Install the new interface card using the same four screws from the removal procedure.



**CAUTION:** Plugging in a ribbon cable the wrong way may damage the cable or circuit boards when power is applied. Reversing the ribbon cable polarity of the cable from the iControl computer to the interface card will cause catastrophic failure of the iControl unit. Make sure the cables are connected correctly. The ribbon cables are keyed so that they can only be plugged in one way.

2. The new ribbon cable has a red or blue tracer that designates the pin 1 side of the cable. Plug the cable into the interface card with the tracer aligned with pin 1 on the board. Pin 1 is designated by a 1 printed on the interface card and a square on the computer.

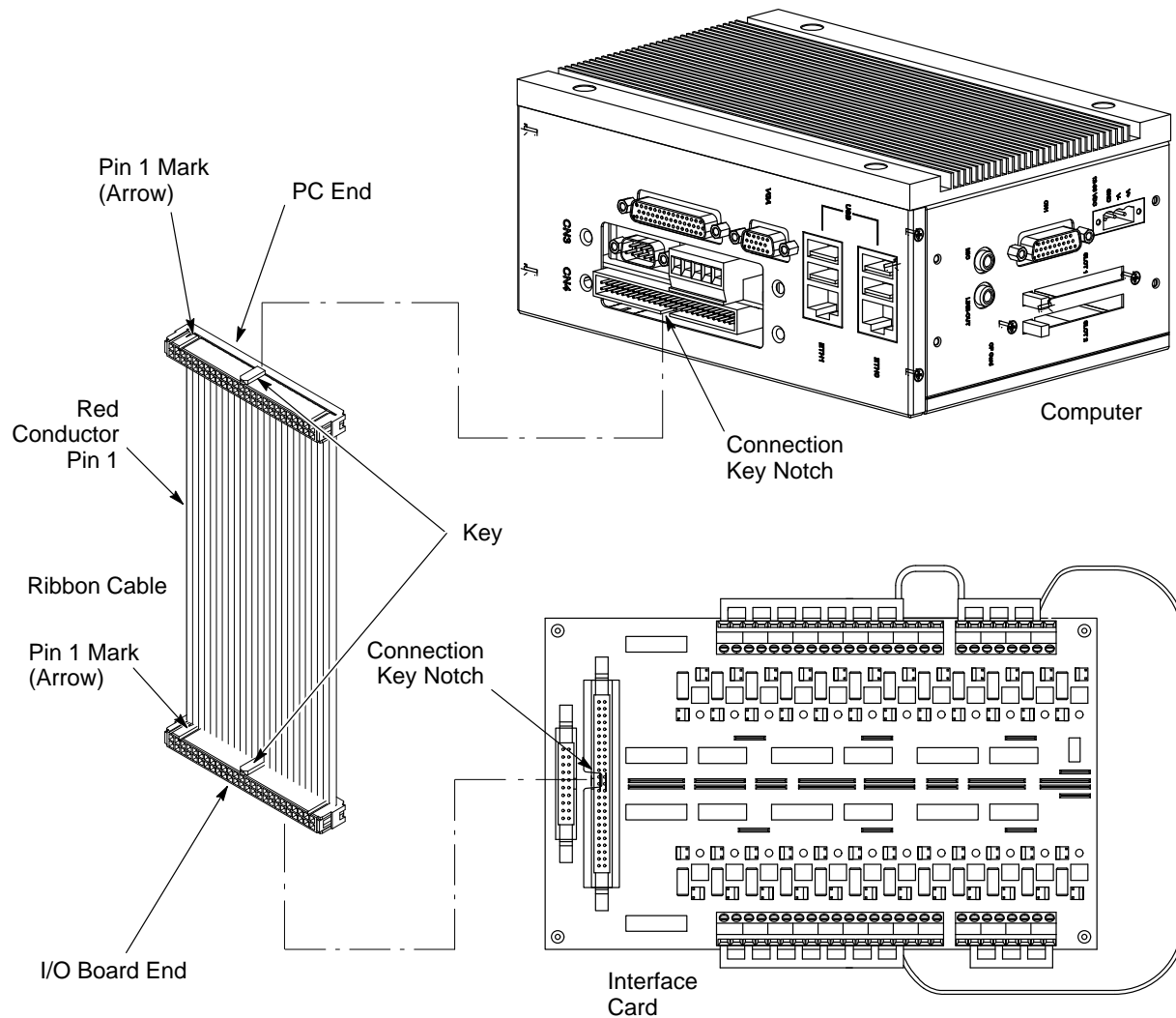


Figure 2 Computer and Interface Card Cable Connections

## Installing New Interface Card *(contd)*

- Refer to Table 1 with Figure 3 to complete wiring to the interface card. Reconnect the wires of the 25 conductor cable and Table 2 to connect internally to the iControl 2 for the "Conveyor Interlock".

Table 1 iControl Discrete Input Cable Color Code Assignments

| CABLE COLOR | INPUT BOARD TERMINAL | FIELD TERMINAL NUMBER | FUNCTION      | NOTE |
|-------------|----------------------|-----------------------|---------------|------|
| BLK         | 8 LO                 | 1                     | ZONE 1        |      |
| WHT         | 9 LO                 | 2                     | ZONE 2        |      |
| GRN         | 10 LO                | 3                     | ZONE 3        |      |
| ORG         | 11 LO                | 4                     | ZONE 4        |      |
| BLU         | 12 LO                | 5                     | ZONE 5        |      |
| WHT/BLK     | 13 LO                | 6                     | ZONE 6        |      |
| RED/BLK     | 14 LO                | 7                     | ZONE 7        |      |
| GRN/BLK     | 15 LO                | 8                     | ZONE 8        |      |
| ORG/BLK     | 20 LO                | 9                     | PART ID bit 1 |      |
| BLU/BLK     | 21 LO                | 10                    | PART ID bit 2 |      |
| BLK/WHT     | 22 LO                | 11                    | PART ID bit 3 |      |
| RED/WHT     | 23 LO                | 12                    | PART ID bit 4 |      |
| GRN/WHT     | 0 LO                 | 13                    | PART ID bit 5 |      |
| BLU/WHT     | 1 LO                 | 14                    | PART ID bit 6 |      |
| BLK/RED     | 2 LO                 | 15                    | PART ID bit 7 |      |
| WHT/RED     | 3 LO                 | 16                    | PART ID bit 8 |      |
| ORG/RED     | 4 LO                 | 17                    | TRIGGER BK 0  |      |
| BLU/RED     | 5 LO                 | 18                    | TRIGGER BK 1  |      |
| RED/GRN     | 6 LO                 | 19                    | TRIGGER SEL   |      |
| ORG/GRN     | 7 LO                 | 20                    | ENCODER A     |      |
| -----       | N/C                  | 21                    | ---           |      |
| -----       | N/C                  | 22                    | ---           |      |
| -----       | N/C                  | 23                    | ---           |      |
| RED         | 8 HI                 | 24                    | +24 Vdc       |      |
| BLK/WHT/RED | ---                  | ---                   | ---           |      |
| WHT/BLK/RED | ---                  | ---                   | ---           |      |
| RED/BLK/WHT | ---                  | ---                   | ---           |      |
| GRN/BLK/WHT | ---                  | ---                   | ---           |      |

Table 2 iControl Conveyor Interlock Color Code Assignments

| WIRE COLOR | INPUT BOARD TERMINAL | FUNCTION    |
|------------|----------------------|-------------|
| WHITE      | 16 HI                | LOCKOUT     |
| GREY       | 17 HI                | GUN PWR OK  |
| VIOLET     | 18 HI                | MANUAL MODE |
| BROWN      | 19 HI                | CONVEYOR    |
| BLACK      | 19 LO                | DCOM        |

## Installing New Interface Card *(contd)*

4. Use Figure 3 and 4 to configure jumpers and comb jumpers.

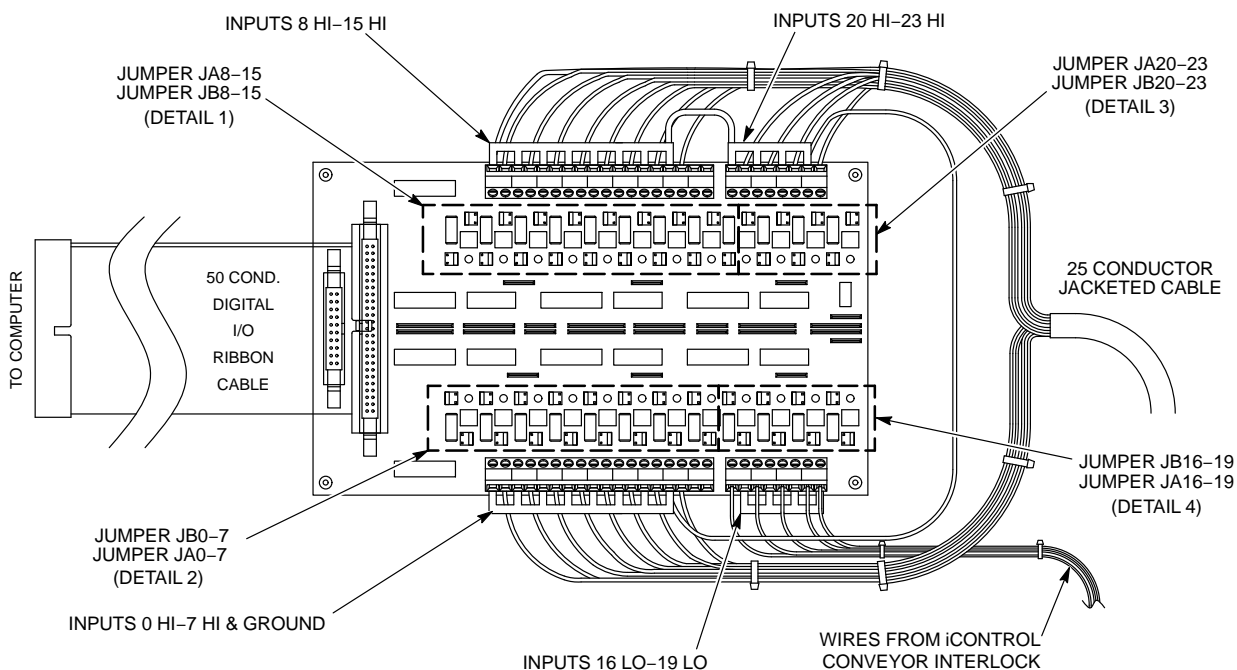


Figure 3 New Interface Card with Wiring and Ribbon Cable Connections

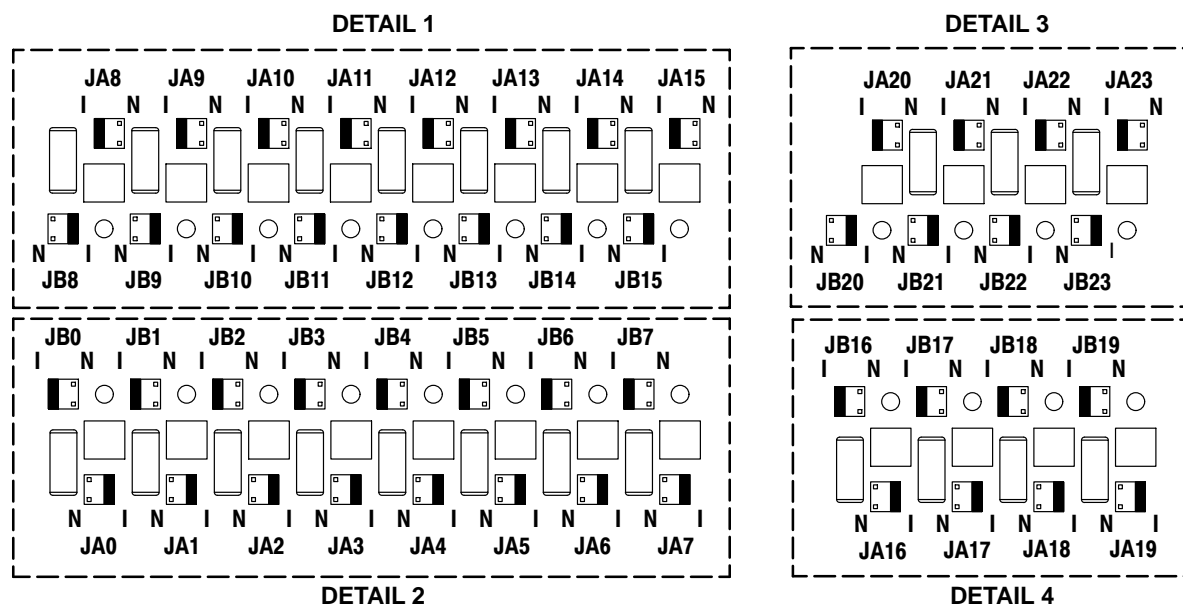


Figure 4 Jumper Detail

| Jumper                 | Position | Jumper                   | Position |
|------------------------|----------|--------------------------|----------|
| JA8 – JA15, JB8 – JB15 | I        | JA20 – JA23, JB20 – JB23 | I        |
| JB0 – JB7, JA0 – JA7   | I        | JB16 – JB19, JA16 – JA19 | I        |

## Configure iControl 2 to Digital Interface Card

Verify the new iControl 2 is properly configured for the new digital interface card, go to the *Gun Configuration* screen (see Figure 5) and select the digital input card for *PCLD782*.

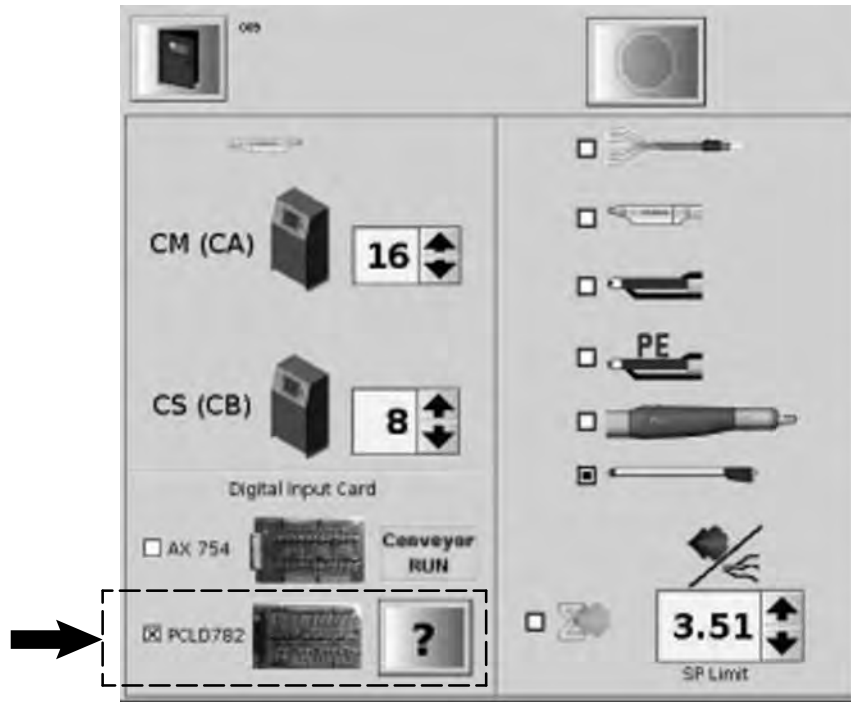


Figure 5 Gun Configuration Screen with Digital Input Card Selected

## Parts

To order parts, call the Nordson Finishing Customer Support Center at (800) 433-9319 or your local Nordson representative.

| Part    | Description   | Quantity | Note |
|---------|---|----------|------|
| 1610832 | KIT, 24 channel opto-input interface card, iControl 2 | 1        |      |
| 1107147 | • CABLE, ribbon, 20 in, iControl                      | 1        |      |
| -----   | • MODULE, 24 channel opto isolated DI                 | 1        |      |
| 1107146 | • JUMPER, com-style, 12 pole, 10 mm spacing           | 2        |      |

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