5.10 Digital Input 24V IOTA Models CC-TDIL01, CC-TDIL11

The Series C Digital Input 24V IOTA board is represented by the following information and graphics.

To access the parts information for the:

- module
- IOTA
- terminal plug-in assembly, and
- fuses

associated with this board and module, refer to Digital Input 24V in the Recommended Spare Parts section.

5.10.1 Field wiring and module protection - Digital Input 24V module (CC-TDIL01, CC-TDIL11)

Field wiring is protected by an internal protection circuit which:

- Allows for internal or external DI sense power (field selectable using jumper block TB3)
- Permits short circuit protection of input for field short circuits. Protection suitable for Division 2 non-incendive / Zone 2 non-arcing.
- Allows each signal to be shorted in the field with no damage to module or board. Other channels on the same IOM are not affected.
- Field drive current is limited. Short circuit of input allowed.

Series C 24V Digital Input 9 inch, non-redundant IOTA is displayed.

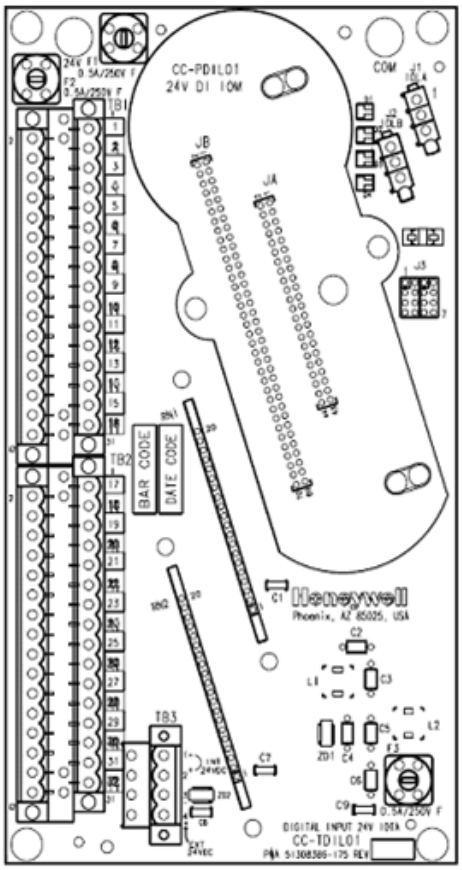


Figure 42: Series C 24V Digital Input 9 inch, non-redundant IOTA

To properly wire your module to the Series C Digital Input IOTA board with terminal blocks 1 (TB1), 2 (TB2), and 3 (TB3), use the following table.

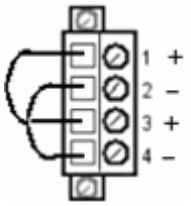
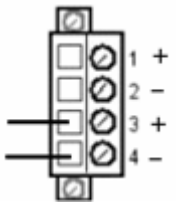
Table 46: DI 9 inch, non-redundant - terminal block 1

Terminal block 1		
Channel	**Return screw**	**Power screw**
Channel 1	2	1
Channel 2	4	3
Channel 3	6	5
Channel 4	8	7
Channel 5	10	9
Channel 6	12	11
Channel 7	14	13
Channel 8	16	15
Channel 9	18	17
Channel 10	20	19
Channel 11	22	21
Channel 12	24	23
Channel 13	26	25
Channel 14	28	27
Channel 15	30	29
Channel 16	32	31

Table 47: DI 9 inch, non-redundant - terminal block 2

Terminal block 2		
Channel	**Return screw**	**Power screw**
Channel 17	2	1
Channel 18	4	3
Channel 19	6	5
Channel 20	8	7
Channel 21	10	9
Channel 22	12	11
Channel 23	14	13
Channel 24	16	15
Channel 25	18	17
Channel 26	20	19
Channel 27	22	21
Channel 28	24	23
Channel 29	26	25
Channel 30	28	27
Channel 31	30	29
Channel 32	32	31

Table 48: DI 9 inch, non-redundant - terminal block 3

Terminal block 3	
Internal	Used with Honeywell's 24v power supply
Screw 1 - internal 24V	
Screw 2 - internal return	
Screw 3 - external 24V	
Screw 4 - external return	
External	Used with customer's 24v power supply
Screw 1 - internal 24V	
Screw 2 - internal return	
Screw 3 - external 24V	
Screw 4 - external return	

Series C 24V Digital Input 9 inch, non-redundant IOTA and field wiring connection is displayed.

Tip
Optional open-wire detection can be instituted by attaching a 22k ohm resistor in the field wiring.

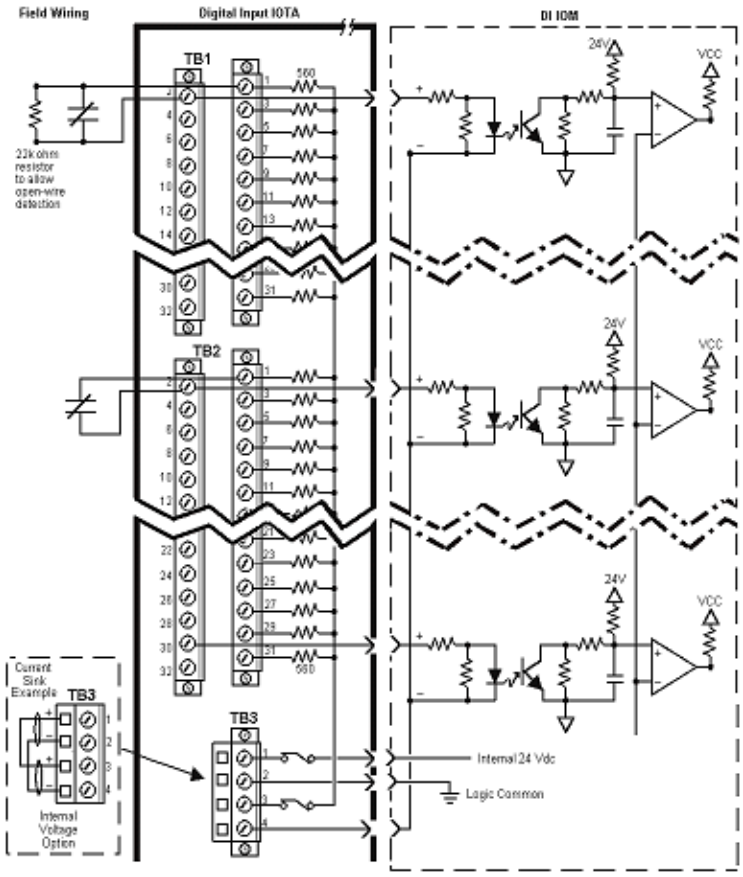


Figure 43: Series C 24V Digital Input 9 inch, non-redundant IOTA and field wiring connection

Series C 24V Digital Input 12 inch, redundant IOTA is displayed.

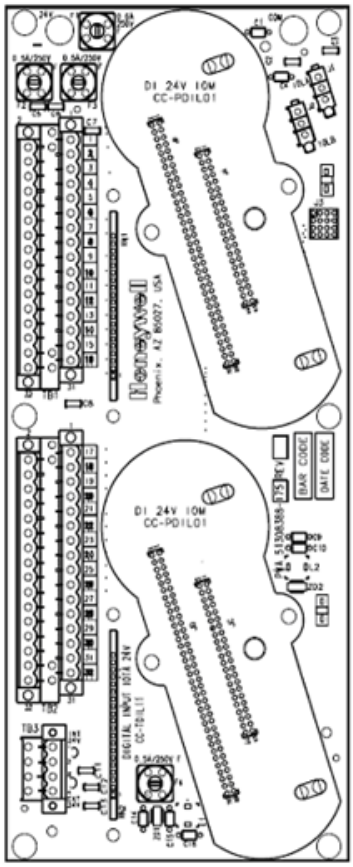


Figure 44: Series C 24V Digital Input 12 inch, redundant IOTA

5.10.2 Using DI 24V module (CC-TDIL01, CC-TDIL11) channels to report system alarms

You must include digital input channels in the control strategy to generate and report alarms based on their PVs. A typical strategy consists of a Control Module that contains the DI channel blocks where each PV (output) is connected to a PVFL input of a FLAGARRAY block configured for alarming.

The normal condition of the alarm input is ON.

Refer to the Control Building Guide for the following topics

- Creating and saving a control module
- Creating an instance of a basic function block
- Configuring alarms

Prerequisites

- You have installed and configured Series C 24V digital input I/O modules and associated IOTAs.
- You have alarm cables 51202343-001 (12-foot long) to connect power supply alarm contacts to 24V dc digital inputs on the IOM.

To connect the Power System alarm cable for RAM Charger Assembly 51199932-100

1. Plug the connection end of the alarm cable into the alarm connection on top of the power supply.
2. Connect the twisted pair wires to the terminal block 1 on the DI 24V IOTA in the following configuration. The associated alarm pins are also displayed.