

5.12. Digital Input 24VDC – CC-PDIL01

Function

The Digital Input 24VDC accepts 24VDC signals as discrete inputs.

Notable Features

- Extensive internal diagnostics for data integrity
- Open wire detection
- Optional redundancy
- Internal or external field power selection
- On board excitation power (no need for marshalling power)
- Supplies Non-incendive field power
- Direct / Reverse Input Indication
- Galvanic isolation

Open-wire Bad PV Detection

This Series C IO function will be able to detect and annunciate Open field wire. In addition, a seemingly-valid PV from a channel diagnosed as having a Open-wire will provide a status of “invalid” (thus preventing incorrect control action).

Detail Specifications - DI 24VDC

Parameter	Specification		
Input / Output Model	CC-PDIL01 - 24Volt Digital Input		
IOTA Models	CC-TDIL01	Non Redundant	9"
	CC-TDIL11	Redundant	12"
	CC-GDIL11	Redundant	12"
	CC-GDIL21	Non Redundant	6"
	CC-GDIL01	Redundant for exp.	12"
	CC-SDXX01	GI-IS I/O Expander	12"
Input Channels	32		
Galvanic Isolation (any input terminal voltage referenced to common)	1500 VAC RMS or ± 1500 VDC		
Isolation Technique	Optical (in IOM)		
DI Power Voltage Range	18 to 30 VDC		
ON Sense Voltage/Current	13 VDC (min) or 3 mA (min)		
OFF Sense Voltage/Current	5 VDC (max) or 1.2 mA (max)		
Input Impedance	4.2 K Ω		
Absolute Delay Across Input Filter and Isolation	5 ms $\pm$ 20%		
Field Resistance for Guaranteed ON Condition	300 Ω max @ 15 VDC		
Field Resistance for Guaranteed OFF Condition	30 K Ω min @ 30 VDC		

DI Function Matrix

			Function						
IOM	NR IOTA	Red IOTA	24V	HV	SOE	Fast Scan	Open Wire	Isolation	IS
CC-PDIL01	CC-TDIL01	CC-TDIL11	◆			◆	◆	1500V	
CC-PDIL51	CC-TDIL51	CC-TDIL61	◆			◆		1000V	
CC-PDIS01	CC-TDIL01	CC-TDIL11	◆		◆	◆	◆	1500V	
CC-PDIL01	CC-GDIL21	CC-GDIL11	◆			◆	◆	Inf.	◆
CC-PDIH01	CC-TDI110	CC-TDI120		110V			◆	1500V	
CC-PDIH01	CC-TDI220	CC-TDI230		220V			◆	1500V	
CC-PUIO31	CC-TUIO31	CC-TUIO41	◆		◆	◆	◆	None	

DO Function Matrix

				Function					
IOM	NR IOTA	Red IOTA	Support IOTA	Open Wire Det	Short Prot.	Output Type	Out. I	Isolation	IS
CC-PDOB01	CC-TDOB01	CC-TDOB11		◆	◆	Source	0.5A	1500V	
CC-PDOB01	CC-TDOR01	CC-TDOR11	CC-SDOR01	◆		Dry Contact	3A	Inf.	
CC-PDOB01	----	CC-GDOL11	CC-SDXX01	◆	◆	Source	48ma	Inf.	◆
CC-PDOD51	CC-TDOD51	CC-TDOD61		◆	◆	Sink	0.1A	1000V	
CC-PUIO31	CC-TUIO31	CC-TUIO41	◆	◆	◆	Source	0.5A	None	