

## 5.14. Digital Input Sequence of Events – CC-PDIS01

### Function

The Digital Input Sequence of Events (DISOE) accepts 24VDC discrete signals as discrete inputs. The inputs can be time tagged to support 1ms resolution Sequence of Events.

### Notable Features

- Three modes of operation:
  - Normal (20ms PV scan)
  - Sequence of Events (1ms resolution SOE, 20ms PV scan)
  - Low Latency (5ms PV scan)
  - Extensive internal diagnostics for data integrity
  - Open Wire Detection (in Normal mode only)
- 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 an open field wire. In addition, a seemingly valid PV from a channel diagnosed as having an open wire will provide a status of “invalid” (thus preventing incorrect control action).

### Detail Specifications - DISOE

Parameter	Specification		
Input / Output Model	CC-PDIS01 - Digital Input Sequence of Events		
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		
Input Channel Scanning (PV)	Normal = 20ms ; Fast = 5ms		
Digital Input Resolution for Sequence of Events (SOE)	1ms		
Galvanic Isolation (any input terminal voltage referenced to common)	1500 VAC RMS or $\pm 1500$ 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 $\Omega$		
Absolute Delay Across Input Filter and Isolation	5 ms $\pm$ 20%		

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Field Resistance for Guaranteed ON Condition	300 $\Omega$ max @ 15 VDC
Field Resistance for Guaranteed OFF Condition	30 K $\Omega$ min @ 30 VDC