4.4.7. Digital Input 24VDC

Function

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

Notable Features

- Extensive self-diagnostics for data integrity
- Optional redundancy
- Internal / External field power selection
- On board excitation power (no need for marshalling power)
- Direct / Reverse Input indication
- Galvanic isolation

Detailed Specification- Digital Input 24VDC (8C-PDILA1)

Parameter	Specification		
Input / Output Module	8C-PDILA1 - Digital Input 24VDC, Coated		
IOTA Modules	8C-TDILA1	Non Redundant, Coated	9”
	8C-TDILB1	Redundant, Coated	12”
Input Channels	32		
Galvanic Isolation (any input terminal voltage referenced to common) [1]	1000 VAC RMS or ±1500 VDC for System		
Isolation Technique	Optical (In IOM)		
Voltage Rating	24 VDC		
DI Power Voltage Range	18-30 VDC		
Module current rating	95 mA		
DI Power Voltage Range	18 to 30 VDC (For user supplied field power)		
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 KΩ		
Absolute Delay Across Input Filter and Isolation	5 ms ± 20%		
Field Resistance for Guaranteed ON Condition	300 Ω max @ 15 VDC		
Field Resistance for Guaranteed OFF Condition	30 KΩ min @ 30 VDC		
Module Removal and Insertion Under Power	Supported		
Note 1 – System to Field type isolation, option available only with external user supplied power			

4.4.8. Digital Input Sequence of Events

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
- Optional redundancy
- Internal or external field power selection
- On board excitation power (no need for marshalling power)
- Direct / Reverse Input Indication
- Galvanic isolation

Detailed Specification – Digital Input SOE (8C-PDISA1)

Parameter	Specification		
Input / Output Module	8C-PDISA1 - Digital Input Sequence of Events, Coated		
IOTA Modules	8C-TDILA1	Non Redundant, Coated	9”
	8C-TDILB1	Redundant, Coated.	12”
Input Channels	32		
Input Channel Scanning (PV)	Normal = 20ms ; Fast = 5ms		
Digital Input Resolution for Sequence of Events (SOE)	1ms		
Voltage Rating	24 VDC		
DI Power Voltage Range	18 to 30 VDC		
Module current rating	95 mA		
Galvanic Isolation (any input terminal voltage referenced to common)	1000 VAC RMS or ±1000 VDC		
Isolation Technique	Optical (in IOM)		
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 KΩ		
Absolute Delay Across Input Filter and Isolation	5 ms ± 20%		
Field Resistance for Guaranteed ON Condition	300 Ωmax @ 15 VDC		
Field Resistance for Guaranteed OFF Condition	30 KΩmin @ 30 VDC		
Module Removal and Insertion under power	Supported		

4.4.9. Digital Input Pulse Accumulation

Function

The Digital Input Pulse Accumulation accepts 24VDC signals as discrete inputs. The first 16 channels can be configured either as Digital Input or Pulse accumulation to support Pulse Accumulation and frequency measurement on per channel basis.

Notable Features

- Extensive internal diagnostics for data integrity
- Optional redundancy
- Internal / External field power selection
- Galvanic isolation
- Support Pulse Accumulation & frequency measurement
- Support mix of per channel Pulse accumulation and DI

Detailed Specification – Digital Input Pulse Accumulation (8C-PDIPA1)

Parameter	Specification		
Input / Output Module	8C-PDIPA1 - 24VDC Digital Input Pulse Accumulation, Coated		
IOTA Modules	8C-TDILA1	Non Redundant, Coated	9”
	8C-TDILB1	Redundant, Coated	12”
Input Channels [1]	32		
Galvanic Isolation (any input terminal voltage referenced to common) [2]	1000 VAC RMS		
Isolation Technique	Optical (In IOM)		
Voltage Rating	24 VDC		
DI Power Voltage Range	18 to 30 VDC (For user supplied field power)		
Module current rating	105 mA		
Signal Type (Pulse Accumulation)	Accumulation Type (0-1KHz, for minimum 30% DUTY CYCLE devices)		
Minimum Pulse Width	300 uSec		
Individual Channel SCAN Time	300 uSec		
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 KΩ		
Absolute Delay Across Input Filter and Isolation	5 ms ± 20%		
Module Removal and Insertion Under Power	Supported		
Note 1 – Channels 1-16 can support Pulse accumulation on per channel basis and Channels 17-32 can be configured as DI Note 2 – System to Field type isolation, option available only with external user supplied power			