2.8. Digital Output 24VDC

Function

The Digital Output bussed 24VDC (DO24V) module can switch reliable 24V digital output signals to control other process equipment as well as solenoid valves and interposing relays.

Notable Features

- Extensive internal diagnostics to ensure data integrity
- Optional redundancy
- Safe-state (FAILOPT) behaviors
- Latched, pulsed or pulse-width modulated output (per channel)
- Galvanic Isolation (System to Field only with external user supplied power)

Bussed 24VDC DO

The Digital Output Bussed 24VDC has provisions for both internal and external field power excitation. As a bussed output device, all of the outputs share a common return (ground). All outputs get their power from the same source, which can be either the system power supply or an externally connected 24V power supply. When selection is from an external source, outputs can be galvanically isolated from the Series 8 power system. A wiring option on the IOTA determines if outputs are referenced to the Series 8 system power or an external field power source.

Safe-state Behavior (FAILOPT)

Series 8 DO module will support FAILOPT parameter on a per channel basis. The output can be directed by configuration to either HOLD THE LAST VALUE, or SHED to a SAFE VALUE. The safe value can be configured by the user.

Detail Specifications – Digital Output 24VDC

Parameter	Specification		
Input / Output Model	8C-PDOD51 - 24Volt Digital Output , Field Isolated, Bussed output, Coated 8U-PDOD51 - 24Volt Digital Output , Field Isolated, Bussed output, Uncoated		
IOTA Model Numbers	8C-TDOD51	Non Redundant, Coated	9”
	8U-TDOD51	Non Redundant, Uncoated	9”
	8C-TDOD61	Redundant, Coated	12”
	8U-TDOD61	Redundant, Uncoated	12”
Output Channels	32		

Parameter	Specification
Output Type	SINK
Load Voltage	30 VDC Maximum
Load Current Short circuit protection for DO channel would be using series FUSEs in the output channel. One FUSE per Eight channels. Total FOUR (4) fuses for 32 channels on DO IOTA	0.1 A per channel (Max)
Galvanic Isolation	1000 VAC RMS for System – to – Field isolation for user supplied field Power only
On-State Voltage	Max 1 VDC (load current @ 0.1A max)
Off-State Voltage	24 V (typ),
Off-State Leak Current	100 µA (max)
Turn-On/Turn-Off Time	10 ms (max)
Gap (0 current) of Output to Field on Switchover	None (0ms) (applies to Redundancy only)