

Technical Information

Experion Series-C I/O Specification



EP03-490-520

Release 520

Dec 2021, Version 1.5

5.17. Digital Output – Relay IOTA – Uses CC-PDOB01 IOM

Function

The Digital Output Relay provides a dry contact for isolated low voltage / low current or high voltage / high current discrete output applications. Each relay supports a Form-A or Form-B output based on jumper configuration. The Relay IOTA uses the Digital Output 24V (DO24V) IOM with a special IOTA to support the Relay IOTA. All characteristics of the DO24V IOM are incorporated here.

Notable Features

- Galvanic isolation
- Socketed relays
- Isolated Dry Contact
- Jumper selection between NO and NC contacts
- Counter EMF Snubbing Circuit
- LED indication for each channel ON condition

Detail Specifications - Relay DO IOTA

Parameter	Specification		
Input / Output Model	CC-PDOB01 - 24Volt Field Isolated, Bussed output		
IOTA Model Numbers	CC-TDOR01	Non Redundant	6"
	CC-TDOR11	Redundant	12"
	CC-SDOR01	Relay Extension	12"
Output Channels	32 isolated Form A (SPST/NO) or Form B (SPST/NC) contacts (jumper selectable per output)		
Contact Type	AgSnO ₂		
Maximum Load Voltage	250 VAC (RMS)/125 VDC		
Maximum Steady State Load Current per Output	Current → Voltage 3 A → 125 / 250 VAC (resistive) 3 A → 30 VDC (resistive) 1 A → 48 VDC (resistive) 0.2 A → 125 VDC (resistive) 2 A → 125 / 250 VAC (inductive = 0.4 power factor) 1 A → 30 VAC (inductive L/R = 100 ms) 0.3 A → 48 VAC (inductive L/R = 100 ms) 0.1 A → 125 VAC (inductive L/R = 100 ms)		
Minimum Load Voltage	12 VDC		
Minimum Load Current	100mA		
Inrush Current (Max)	10A for 4s at a 10% duty cycle		
Isolation (Channel-to-channel, and channel-to-logic common)	1500 VAC RMS or ±1500 VDC		
Turn On Time	20 ms maximum		

Parameter	Specification
Turn Off Time	20 ms maximum
Contact Life	Mechanical : 5,000,000 cycles (@ 180 cycles/min) Electrical : 50,000 cycles @ 6 A (6 cycles/min)
Surge Absorber for Coil	120Ω + 0.033uF for each channel



EXPERION PKS

Series C I/O User's Guide

EPDOC-X126-en-A

November 2019

5.14 Digital Output Relay Module IOTA Models CC-TDOR01, CC-TDOR11

The Series C Digital Output IOTA board is represented by the following information and graphics.

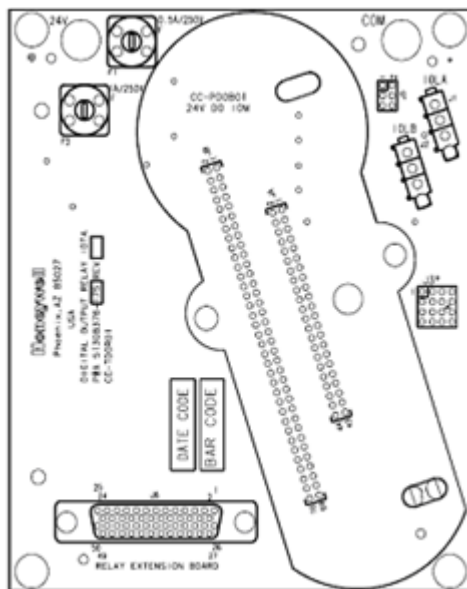
To access the parts information for the:

- module
- IOTA
- terminal plug-in assembly, jumper link, slim power relay and
- fuses

associated with this board and module, refer to Digital Output Relay in the Recommended Spare Parts section.

Series C Digital Output Relay non-redundant IOTA is displayed.

Figure 5.49 Series C Digital Output Relay, non-redundant IOTA



Series C Digital Output Relay redundant IOTA is displayed.

Part name		Part number	Description		
4-terminal plug-in assembly		51506269-204	1 per non-redundant IOTA		
			1 per redundant IOTA		
Fuses					
Description	Part number	Quantity	Reference designator	Function	
Fuse 10A Fast acting 5x20mm	51190582-310	1 per non-red. IOTA	F1	Fuse for field power if system power is connected through TB3	
		1 per red. IOTA	F1		
Fuse 5A Fast Acting 5x20mm	51190582-250	1 per non-red. IOTA	F2	Fuse for field power if system power is connected via TB3	
		1 per red. IOTA	F1		
Fuse 0.5A Fast acting 5x20mm	51190582-150	1 per non-red. IOTA	F2	Fuse for IOM kernel	
		2 per red. IOTA	F2,		
			F3	Bottom IOM kernel	
DIGITAL INPUT - HIGH VOLTAGE					
Series C DI-24 IOM		CC- DIHV01	Series C Digital Input High Voltage I/O Module		
IOTA					
120VAC DI	CC-TDI110	120VAC Digital Input, non-redundant, coated			
Non-Redundant. IOTA	51308394-175				
120VAC DI	CC-TDI120	120VAC Digital Input, redundant, coated			
Redundant. IOTA	51308396-175				
240VAC DI	CC-TDI220	240VAC Digital Input, non-redundant, coated			
Non Redundant IOTA	51308394-275				
240VAC DI	CC-TDI230	240VAC Digital Input, non-redundant, coated			
Redundant IOTA	51308396-275				
120VAC DI	CC-TDI151	120VAC Digital Input, non-redundant, coated			
Non Redundant IOTA	51307536-176				
Terminal plug-in assembly					
16-terminal plug-in assembly		51506273-216	2 per non-redundant IOTA		
			2 per redundant IOTA		
Fuse					
Description	Part number	Quantity	Reference designator	Function	
Fuse 0.5A Fast acting 5x20mm	51190582-150	1 per non-red. IOTA	F1	+24vdc power for IOM	
		2 per red. IOTA	F1	+24vdc power for top IOM	
			F2	+24vdc power for bottom IOM	
DIGITAL OUTPUT HIGH VOLTAGE RELAY					
Series C DO IOM		CC- PDOB01	Series C Digital Output Module		
DO Relay Extender		51308380	Series C Digital Output Relay Extender		
DO-HV Relay Non-Redundant. IOTA		CC- TDOR01	Digital Output High Voltage, relay, non-redundant, coated		
		51308376-175			
DO-HV Relay Redundant. IOTA		CC- TDOR11	Digital Output High Voltage, relay, redundant, coated		