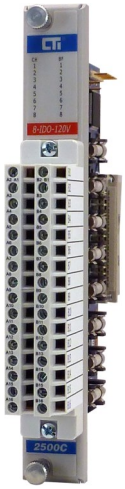
2500 Series™ Compact System

2500C-8-IDO-24V Discrete Output Module



DESCRIPTION

The 2500C-8-IDO-24V Module outputs a wide range of DC voltage signals. It is designed to provide 8 solid state output circuits to switch on or off external devices such as pilot lamps, motor starters or solenoids using an externally supplied 24VDC. Front panel LEDs provide visual indication for output and fuse status.

FEATURES

- Single wide module
- 8 channels isolated channel to channel
- Each channel is individually fused
- Sourcing or sinking Outputs
- Channel On/Off Status Indication
- Blown fuse indication and reporting for each channel
- Uses CTI's 2500C-32F Connector
- Module supports hot swap

Input Specifications	
Inputs per module	8
Module Logon	8X /8Y
Output Voltage Range	11 to 30VDC
Maximum Output current	2 A @ 40ºC 1A @ 60ºC
Maximum Surge Current	5A for 15 sec
"ON" State Voltage Drop	83mV @ 1.0 Amp
"OFF" State Leakage Current	.05 µA
Turn ON Time	0.5 mS (nominal)
Turn OFF Time	10 mS (nominal)
Fusing	Each Channel is individually fused
Fuses: ⚠ 2 Field Replaceable Fuses	2.5 amp, 250V Type Littlefuse #021602.5HXP Bussman GDA-2.5A

Module Size	Single wide module
Connector	2500C-32F
Backplane Power (MAX)	1.175 watt Max
Input ESD Protection	IEC-1000-4-2 Level 4
Isolation	1500 VDC Channel to Backplane 1000 VDC Channel to Channel
Shipping Dimensions and Weight	223.84mm x 109.86mm x 34.93mm, 0.234kg
Operating Temperature Range	0ºC to 60ºC (32ºF to 140ºF)
Storage Temperature Range	-40ºC to 85ºC (-40ºF to 185ºF)
Relative Humidity	5% to 95% (non-condensing)
Agency Approvals Pending	UL, ULC, UL Class 1, Div 2, CE

Additional Product Information:

On CTI's Website you will find links to the 2500 Series Std Environmental Specifications and the UL Agency Certificates of Compliance .

2500C-8-IDO-24V Default Shipment Settings	
Operation Mode	NA
Logon	8X /8Y
Output Range	11-30VDC

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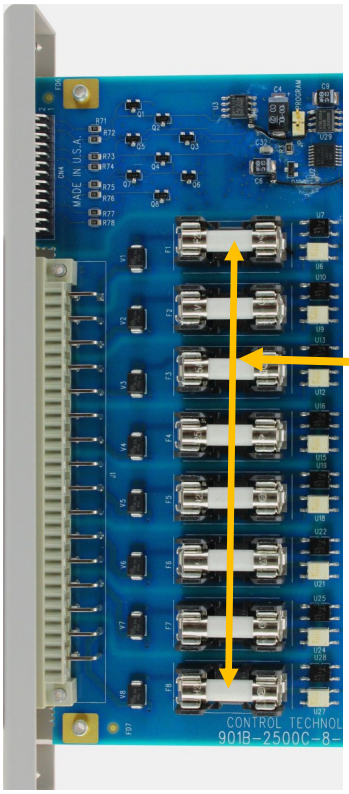
Front Panel



Channel 1 thru 8 Fuses

Note: All 8 Channels are individually fused.

⚠ Blown Fuse Operation Overview..

Blown Fuse detection works when the Output Channel is wired and the output is turned on. If the fuse is blown the LED will turn ON and the associated X address will equal 1. If the Output Channel is turned off the LED indicator will turn OFF and the associated Blown Fuse Bit will equal 0 . The module does not Latch the Blown Fuse Input so the user application should trap for the reported Blown Fuse Bit while the Output is turned ON. This will allow logging and notification of the blown fuse event to your HMI stations and other reporting devices. Blown Fuse reporting on this module is for each channel.

Channel ON/OFF Status LED
LED is illuminated BLUE when the output is turned ON.

Blown Fuse LED
The Blown Fuse LED is illuminated when the Module detects a Blown Fuse.

2500C-8-IDO-24V PLC Log on 8X/8Y							
Blown Fuse Reporting 8X Blown Fuse = 1							
CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8
X1	X2	X3	X4	X5	X6	X7	X8
Output Channel 8Y OFF = 0 ON = 1							
Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16

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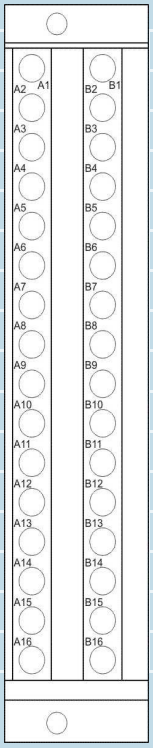
Channel 1	Return	A1	B1	24V	Channel 1
	Unused	A2	B2	Unused	
Channel 2	Return	A3	B3	24V	Channel 2
	Unused	A4	B4	Unused	
Channel 3	Return	A5	B5	24V	Channel 3
	Unused	A6	B6	Unused	
Channel 4	Return	A7	B7	24V	Channel 4
	Unused	A8	B8	Unused	
Channel 5	Return	A9	B9	24V	Channel 5
	Unused	A10	B10	Unused	
Channel 6	Return	A11	B11	24V	Channel 6
	Unused	A12	B12	Unused	
Channel 7	Return	A13	B13	24V	Channel 7
	Unused	A14	B14	Unused	
Channel 8	Return	A15	B15	24V	Channel 8
	Unused	A16	B16	Unused	

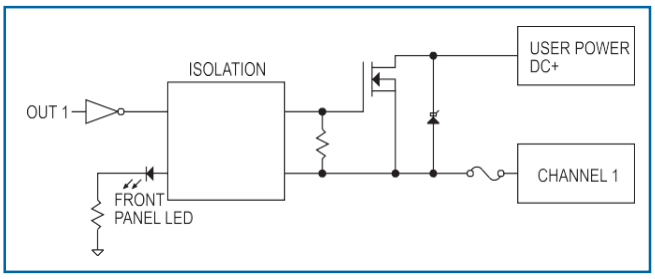


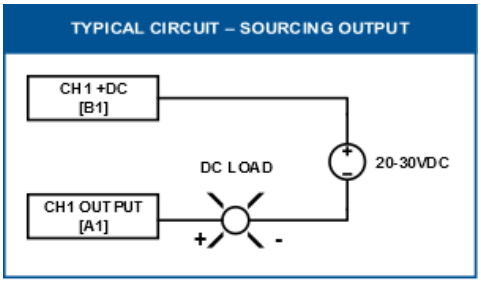
2500C-8-IDO-24V Wiring Connector

Note:
The 2500C-8-DO-24V Discrete Output Modules use CTI Wiring Connector 2500C-32F. Please see the wiring connector specification table below. This connector is ordered separately from the module.

2500C-32F Specifications	
Connector Style	Removable
Number of Wiring Connections	32 point
Wire Gauge Use Copper Conductors Only	14 to 22AWG
Screw Torque Value	5.22 lb-in
Current Rating	6A @ 300VAC
Insulation Stripping Length	0.24" 6mm

Connector Material	
Body:	Polycarbonate UL 94V0
Screw :	M3 Zinc plated Steel
Cage Clamp	Nickel Plated Brass
Socket Contact Spring:	Tin Plated Bronze
Retaining Screw:	M3 Zinc Plated Steel





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CAUTION – Non-Hazardous Areas/Hazardous Areas

WARNING – EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE WHILE CIRCUIT IS LIVE UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS.	AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS RETIRER NI REMPLACER PENDANT QUE LE CIRCUIT EST SOUS TENSION À MOINS QUE L'EMPLACEMENT NE SOIT EXEMPT DE CONCENTRATIONS INFLAMMABLES.
WARNING – EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE FUSE WHEN ENERGIZED.	AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS RETIRER NI REMPLACER UN FUSIBLE SI L'APPAREILLAGE EST SOUS TENSION.

Turn off power to the system before replacing fuses either in power supplies or IO modules. Refer to Product Bulletin or Installation and Operation Guide for specific information on the correct fuse for replacement. If there are any questions please contact CTI support. Fuses should only be replaced by qualified technicians.

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Physical Installation

Physical Installation Picture

Remove AC power from the rack. Align the circuit board with the card guide and backplane connector. Slide the controller into the rack until the connector seats. Use the thumbscrews to secure the controller in the rack. Once the module is secured to the rack you may install the wiring connector.

CAUTION REGARDING HOT SWAPPING:

The 2500C-8-ID0-24V is designed to allow "hot-swapping" the module under power in the event that a replacement is needed. However, you must be aware that hot-swapping does not meet UL Safety requirements and is not recommended. If you must "hot-swap" the module, use the following procedure:

- Make sure all field devices connected to the module are placed into a "safe" state
- Remove the I/O connector from the front of the module
- Loosen the module retaining screws and remove it from the base
- Ensure the jumper configuration of the replacement module matches the one just removed
- Install the replacement module and tighten the retaining screws. The replacement module must be the same model number as the one removed.
- Reattach the I/O connector to the module
- Ensure the replacement module and all other components are operating properly
- Remove the field devices from "safe" state
- Return to NORMAL RUN mode

You are responsible for any results in your application control. DO NOT ATTEMPT TO HOT-SWAP A MODULE IN A HAZARDOUS LOCATION!

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