



## 2500C-16-DI-24V Discrete Input Module



### DESCRIPTION

The 2500C-16-DI-24V Module accepts a wide range of voltage signals. It is designed to accept both AC and DC voltage allowing the user to pick and choose ranges on a single module. Motor centers, optical sensors, limit switches and utility control are excellent examples of applications for this product

### FEATURES

- Single wide module
- 16 Channels Isolated in groups of 8 inputs
- Supports AC or DC voltage inputs
- Sourcing or sinking Inputs
- Channel On/Off Status Indication
- Uses CTI's 2500C-32F Connector

Input Specifications	
Inputs per module	16
Module Logon	16X
Signal Range	10 to 30VAC/VDC
Input current	VAC 1.4 - 9.3mA VDC 2.9 - 9.3mA

Operating Characteristics for Typical Input	
AC Voltage Input	Turn ON Time: 3.7mS Turn OFF Time: 15.0mS
DC Voltage Input	Turn ON Time: 3.14mS Turn OFF Time: 13.7mS

Module Size	Single wide module
Connector	2500C-32F
Backplane Power (MAX)	0.067 watts No inputs ON 1.188 All inputs ON
Input ESD Protection	IEC 1000-4-2 LEVEL 4
Isolation Isolated in groups of 8	1500 VDC Channel to Backplane 1000 VDC Group to Group
Shipping Dimensions and Weight	223.84mm x 109.86mm x 34.93mm, 0.234kg
Operating Temperature Range	0°C to 60°C (32°F to 140°F)
Storage Temperature Range	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	5% to 95% (non-condensing)
Agency Approvals Pending	UL, ULC, UL Class 1, Div 2, CE

#### 2500-16-DI-24V Default Shipment Settings

Operation Mode	NA
Logon	16X
Signal Range	10 - 30 VAC\VDC



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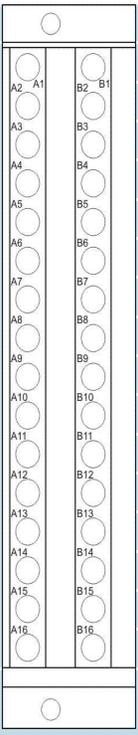
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See Note 1 below		See Note 2 Below			
Channel 1 to 8 Return	A1	B1	24V	Channel 1	
Channel 2	A2	B2	24V	Channel 2	
Channel 3	A3	B3	24V	Channel 3	
Channel 4	A4	B4	24V	Channel 4	
Channel 5	A5	B5	24V	Channel 5	
Channel 6	A6	B6	24V	Channel 6	
Channel 7	A7	B7	24V	Channel 7	
Channel 8	A8	B8	24V	Channel 8	
Channel 9 to 16 Return	A9	B9	24V	Channel 9	
Channel 10	A10	B10	24V	Channel 10	
Channel 11	A11	B11	24V	Channel 11	
Channel 12	A12	B12	24V	Channel 12	
Channel 13	A13	B13	24V	Channel 13	
Channel 14	A14	B14	24V	Channel 14	
Channel 15	A15	B15	24V	Channel 15	
Channel 16	A16	B16	24V	Channel 16	



**2500C-16-DI-24V Wiring Connector**

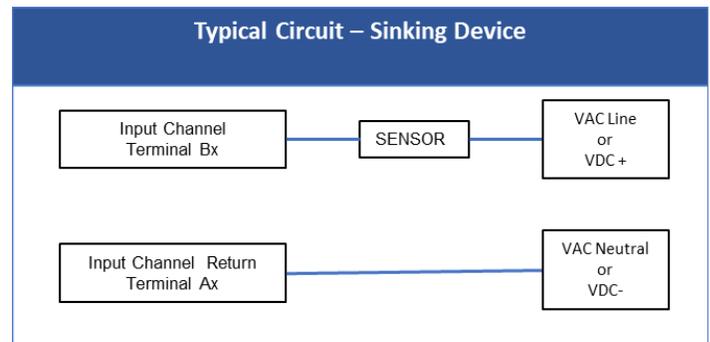
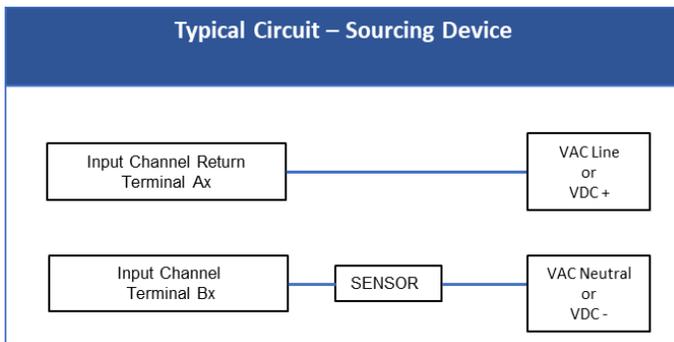
**Note:**

The 2500C-16-DI-24V Discrete Input 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

**Note 1:** The 2500C-16-DI-24V is divided into two groups of 8 channels. Group A consists of Channels 1 thru 8 and Group B consists of Channels 9 thru 16. The input signal return for Group A can be connected at one channel, such as Channel 1 Return connection A1, or on all 1 thru 8 channels. Group B input signal return can be connected to one channel, such as Channel 9 Return connection A9, or to all 9 thru 16 channels. On the module's printed circuit board the channels for each group's return signal are tied together. This allows for a flexible wiring configuration.

**Note 2:** The 24V input is divided into 2 groups consisting of Group A for Channels 1 thru 8 and Group B for Channels 9 thru 16. Each Input Channel requires the 24V connection but the Return for each group only needs to be connected once.



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## 2500C-16-DI-24V Discrete Input Module

### 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-16-DI-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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