



## 2500C-8-RL-FC Relay Output Module



### DESCRIPTION

The 2500C-8-RL-FC Module provides 8 isolated form C relay outputs. This module is designed for high current application such as switching motor starters. Because this is a dry contact output there is no leakage current. Front panel LEDs provide visual indication for output and fuse status.

### FEATURES

- Single wide module
- 8 individually isolated channels
- Each channel is individually fused
- Form C relays
- No leakage current
- Channel On/Off Status Indication
- Blown fuse indication/reporting for each channel (See Blown Fuse Reporting Note 1)
- 24VDC User Supplied Power Monitored (See Note 2: 24VDC Power Monitoring)
- Uses CTI's 2500C-32F Connector

#### 2500C-8-RL-FC Default Shipment Settings

Operation Mode	NA
Logon CP Mode	8X /8Y
Signal Range	15 - 240VAC 15 - 30VDC

#### Output Specifications

Outputs per module	8
Module Logon CP Mode Default Shipping Configuration	8X /8Y
Module Logon C Mode	8Y
Output Voltage Range	15-240VAC 15-30VDC
Maximum Output current	Resistive: 15VAC - 240VAC: 4A Resistive: 15VDC - 30VDC: 4A Pilot Load/Inductive 1.5A @240VAC Pilot Load/Inductive: 1.5A @30VDC
Switching rate	0.5/ ops/sec (rated load)
Type of output	Form C individually fused
Contact Life	@full rated current, 4A = 400K cycles
User Power Supply (required)	⚠ 24VDC ±10% 70mA(all outputs ON)
User Power Supply Fusing	⚠ 1 Amp Littlefuse # 37011000410
Output Channel Fusing	8 fuses
Output Fuses: 8 Field Replaceable Fuses	5.0 amp, 250V Type Littlefuse #215005 Shurter Inc #0001.2511

Module Size	Single wide module
Connector	2500C-32F
Backplane Power (MAX)	1.22 watts
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	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

Note 1: Blown Fuse Reporting: Blown Fuse Reporting is valid for voltage ranges down to 35VDC. Below 35VAC/VDC the module will not be able to detect or report the Blown Fuse condition.

Note 2: The module monitors the User Supplied 24VDC used to power the relays. All 8 Blown Fuse Indicators will FLASH if there is no 24VDC present or if the fuse for the 24VDC Power is blown. All the 8X values for Blown Fuse Reporting will be TRUE to the User Application for monitoring and alarming.



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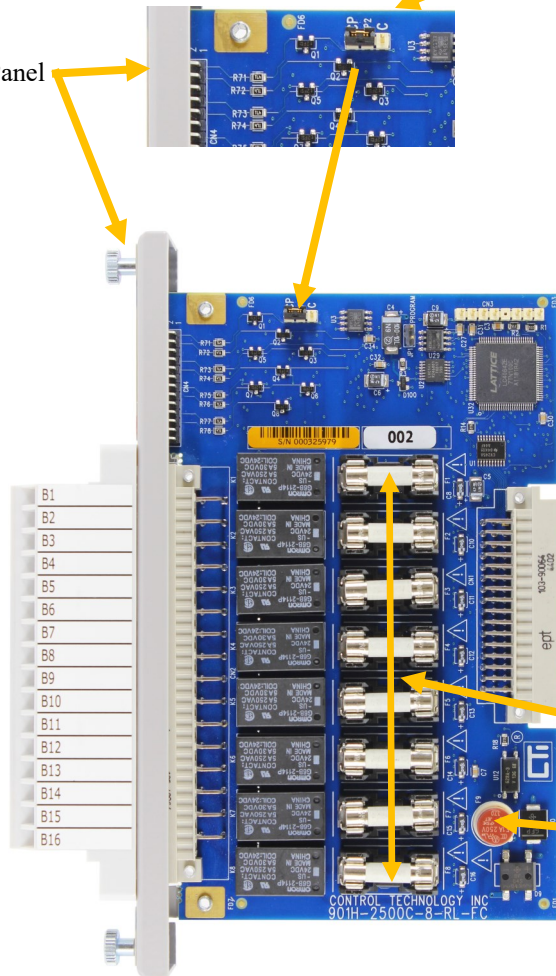
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## 2500C-8-RL-FC Discrete Output Module

Front Panel



Module Logon Selection Jumpers. CP or Classic Plus mode. CP or Classic Plus mode is the default shipping configuration. In CP mode the module logs in as a 8X/8Y for blown fuse reporting. In C or Classic Mode the module logs in as a 8Y and does not provide blown fuse reporting. This allows customers to modify the module logon based on their application requirements. JP2 is available only on 901C Rev boards or higher.

**Note:** All 8 Channels are individually fused. The module logs on as an 8x/8Y module. The x addresses are for the Blown Fuse Reporting.

### 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.

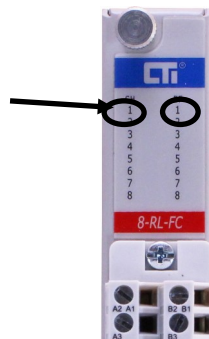
Channel 1 thru 8 Fuses



User Supplied 24VDC Power Supply Fuse  
1 Amp Littlefuse # 37011000410

Note: On REV 001 and above if this fuse is blown or if there is no 24VDC present on pins A14 and A16 all 8 Channel Blown Fuse Indicators will illuminate and flash. Also all 8 channel blown fuse reporting addresses will report a "1".

**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.



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## 2500C-8-RL-FC Discrete Output Module

### Note:

The 2500C-8-RL-FC Relay Output Module uses 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

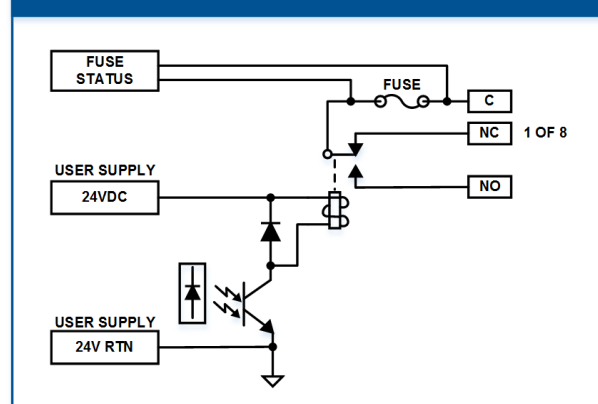
### Connector Material

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

Channel 1	NC	A1	B1	Common	Channel 1
Not used		A2	B2	NO	Channel 1
Channel 2	NC	A3	B3	Common	Channel 2
Not used		A4	B4	NO	Channel 2
Channel 3	NC	A5	B5	Common	Channel 3
Not used		A6	B6	NO	Channel 3
Channel 4	NC	A7	B7	Common	Channel 4
Not used		A8	B8	NO	Channel 4
Channel 5	NC	A9	B9	Common	Channel 5
Not used		A10	B10	NO	Channel 5
Channel 6	NC	A11	B11	Common	Channel 6
Not used		A12	B12	NO	Channel 6
Channel 7	NC	A13	B13	Common	Channel 7
User Supply	24V	A14	B14	NO	Channel 7
Channel 8	NC	A15	B15	Common	Channel 8
User Supply	Return	A16	B16	NO	Channel 8

2500C-8-RL-FC Wiring Connector

### TYPICAL INTERNAL CIRCUIT



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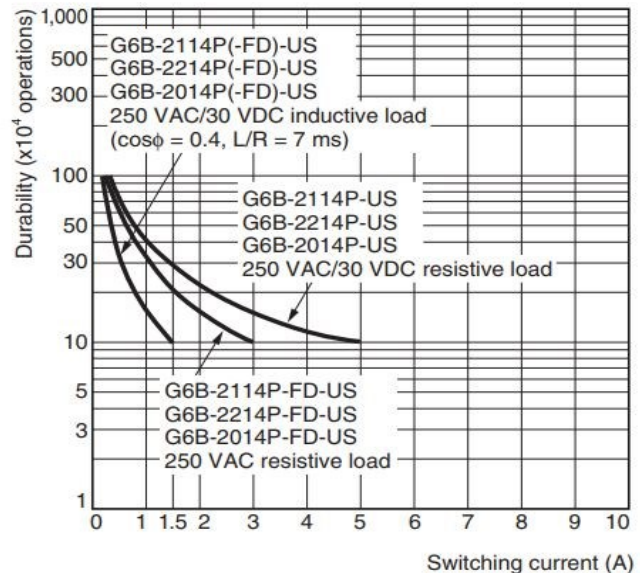
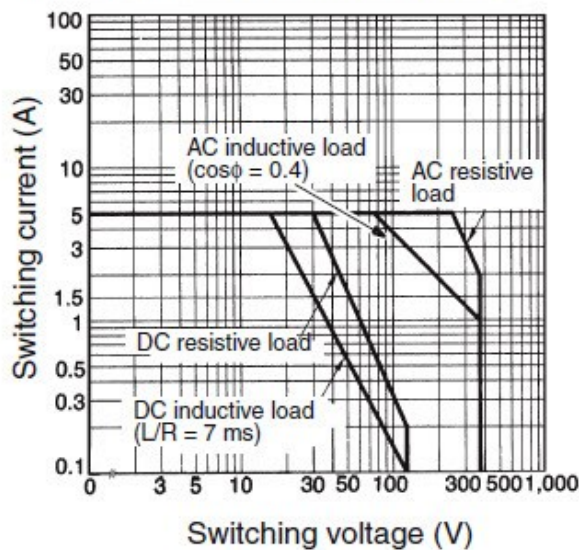


## 2500C-8-RL-FC Discrete Output Module

### Note:

The information below was obtained from the Relay Manufacturer for the relays (Part# G6B-2114P-US ) used in the 2500C-8-RL-FC Relay Output Module. The graphs below indicate the Maximum Switching Capacity and the Durability of the relays depending on the application Voltage and Current. If more information is needed please contact CTI Sales and Support.

### G6B-2114P-US, Maximum Switching Capacity



### 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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