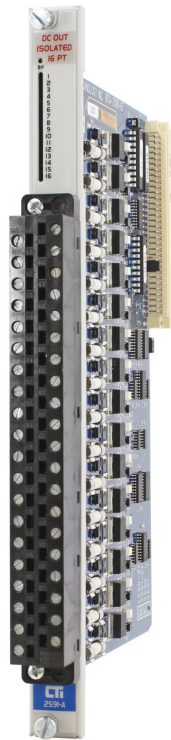


2591-A 16-Point Isolated Discrete Output Module

Classic



Description

The 2591-A 16-point Isolated Discrete Output Module provides sixteen discrete isolated outputs from the CTI 2500 Series® or Simatic® 505 I/O base. The module uses solid-state output circuits to switch on or off external devices such as pilot lamps, motor starters, or solenoids. The 2591-A is designed to switch externally supplied 11 to 146 VDC. The internal logic signals are isolated from the external outputs to 1500VDC.

Features

- CTI 2500 Series® or Simatic® 505 I/O base format
- 1.5 Amps per output (no derating)
- Isolated 1500 VDC channel-to-channel
- Blown fuse reporting (per channel) to the PLC
- Blown fuse indicator
- Logs in as a 16Y or 16X/16Y (jumper selectable)
- Individual fuse for each output channel
- Single-wide module

Specifications

Outputs: 16

Logon: 16Y or 16Y/16X (Jumper Selectable)

Isolation:

1500 VDC channel-to-channel

1500 VDC channel-to-backplane

Blown fuse reporting per channel:

Reported to the PLC as an X input (jumper selectable)

Output voltage: 11 to 146 VDC

Output source current per circuit: 1.5 A max

"ON" state voltage drop: 0.3V @ 2.0 Amps

"OFF" state leakage: 135uA max @ 125VDC

Turn ON time: 1.5msec nominal

Turn OFF time: 7.2msec nominal

Maximum surge current: 3 A for 15 seconds

Total module output current: 24 Amps

Connector: Removable 40 Pin Connector
(ordered separately CTI Part # 2500-40F)

Wire gauge: 14 to 22 AWG

Backplane power: 2.5 watts max

Module size: Single wide

- ⚠ Fuses:** 16, 1.6 Amp, 250V
LITTELFUSE 021501.6HXP or
SCHURTER, INC. 0034.2518 or
CTI Part Number #80-79 (Field Replaceable)
Shipping Weight: 1.5 lbs (0.68Kg)

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.

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2591-A 16-Point Isolated Discrete Output Module

Module Configuration

The 2591-A is capable of logging in as a 16Y or a 16X/16Y. Changing the addressing of the module is done by moving a jumper located near the rear backplane connector as shown in Figure 2 below. In Figure 2, the 2591-A module is inserted in slot 1 in the I/O base 0. Data appears as 16 "Y" locations starting at "Y1". **The 2591-A ships with a login of 16Y.** In this configuration blown fuse reporting is disabled. By moving the jumper to the REPORTS 16X INPUTS the module logs in as a 16X/16Y. The X addresses are used to report the Blown Fuse Indication and the 16Y addresses are used as any other normal output would be used.

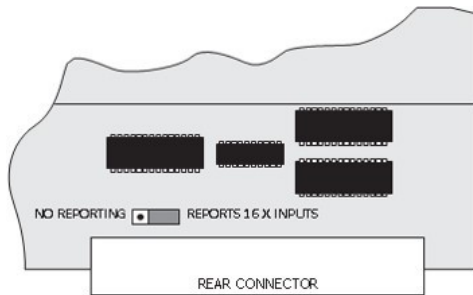


Figure 2. 2591-A Blown Fuse Reporting Selection

2591-A I/O Configuration Chart with Blown Fuse Disabled

In the example in Figure 3 is an I/O Configuration Chart showing a 2591-A plugged in the first slot with Blown Fuse Reporting Disabled. The Y addresses are the outputs under PLC ladder logic control.

I/O MODULE DEFINITION FOR CHANNEL ... 1 BASE.....00							
NUMBER OF BIT AND WORD I/O							
I/O	SLOT	ADDRESS	X	Y	WX	WY	SPECIAL FUNCTION
	01	.....0001	.....00	16	.....00	.....00	.....NO
	02	.....0000	.....00	.....00	.....00	.....00	.....NO
	15	.....0000	.....00	.....00	.....00	.....00	.....NO
	16	.....0000	.....00	.....00	.....00	.....00	.....NO

Figure 3. I/O Configuration Chart without Blown Fuse Reporting

2591-A I/O Configuration Chart with Blown Fuse Reporting Enabled

In the example in Figure 4 is an I/O Configuration Chart showing a 2591-A plugged in the first slot with Blown Fuse Reporting Enabled. X1-X16 are the Blown Fuse Reporting inputs and Y17-Y32 are the outputs under PLC ladder logic control.

I/O MODULE DEFINITION FOR CHANNEL ... 1 BASE.....00							
NUMBER OF BIT AND WORD I/O							
I/O	SLOT	ADDRESS	X	Y	WX	WY	SPECIAL FUNCTION
	01	.....0001	.....16		16	.....00	.....NO
	02	.....0000	.....00	.....00	.....00	.....00	.....NO
	15	.....0000	.....00	.....00	.....00	.....00	.....NO
	16	.....0000	.....00	.....00	.....00	.....00	.....NO

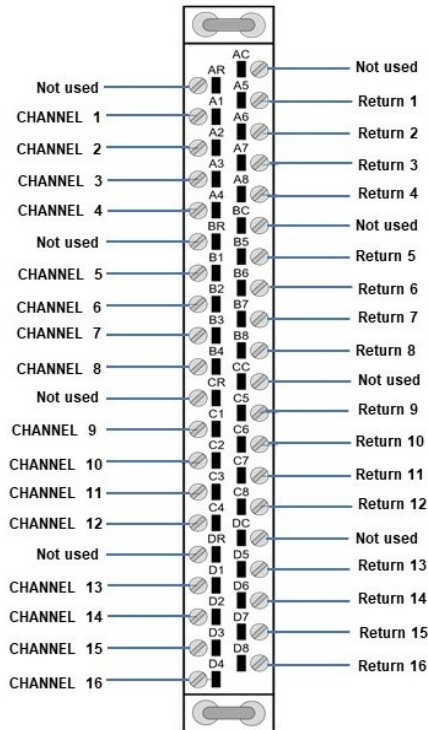
Figure 4. I/O Configuration Chart with Blown Fuse Reporting

Note:1 In both examples, only one address is needed to log in the module. The PLC will automatically assign the first 16 locations as inputs (X) and the next 16 locations as outputs (Y).

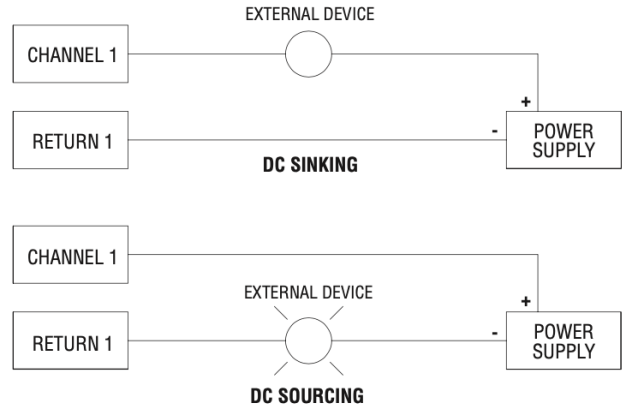
Note2: If the line is blank or erroneous, re-check the module to ensure that it is firmly seated in the slot. Generate the PLC I/O configuration chart again. If the line is incorrect, contact your distributor or CTI for support.

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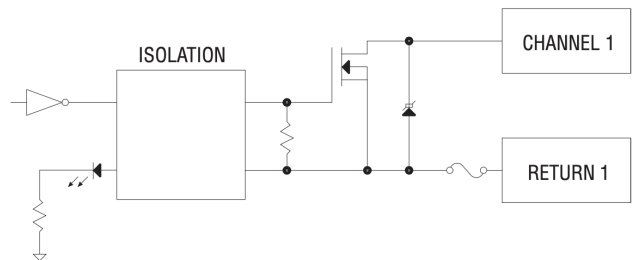
2591-A 16-Point Isolated Discrete Output Module



2591-A Wiring Diagram



2591-A Typical External Wiring Application



2591-A Typical Internal Circuit



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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