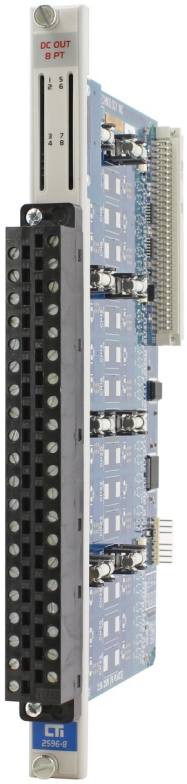
2500 Series® PLC System
Product Bulletin

# 2596-8 8-point DC Discrete Output Module

Classic



## Specifications

**Outputs per Module:** 8
**Logon:** 8Y
**Isolation:**
2100 VDC channel-to-backplane
3000 VDC group-to-group
**Output Voltage:** 11 VDC to 125 VDC
**Output Source Current per Circuit:**
2.0 Amps max., 1 mA min.
**Total Module Output Current:**
16 Amps max. from 0° to 60°C
**Maximum Surge Current:** 3 Amps for 15 Sec
**"ON" State Voltage Drop:** 0.5V @ 1.0 Amp
**"OFF" State Leakage Current:** <20µA
**Turn On Time:** 1 mSec (nominal)
**Turn Off Time:** 3 mSec (nominal)

⚠ **Fuses:** 8, 2.5 amp, 250V,
Type: Littlefuse #21602.5,
Bussman GDA-2.5 (Field replaceable)
**Connector:** Removable 40 Pin Connector
(ordered separately CTI Part # 2500-40F)
**Wire Gauge:** 14 - 22 AWG
**Backplane Power:** 1.0 Watts max.
**Module Size:** Single-wide
**Shipping Weight:** 1.5 lb. (0.68 Kg)

## Description

The 2596-8 8 Point DC Discrete Output Module provides eight sourcing fused outputs from the CTI 2500 Series® or Simatic® 505 I/O base. The module utilizes solid-state output circuits to switch on or off external devices such as pilot lamps, motor starters, or solenoids. The 2596-8 is designed to switch externally supplied 11-125 VDC.

### Features

- 8 DC output points
- Replaces Siemens® 505-4508, -4708
- 3000 VDC group-to-group isolation
- 2100 VDC channel-to-backplane isolation
- Isolation in groups of two
- Wide 11-125 VDC output range
- 2.0 Amps per output
- 16 Amps total module output
- Individually sourcing fused outputs
- Single-wide module

### 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.**

Control Technology Inc.
5734 Middlebrook Pike, Knoxville, TN 37921-5962
Phone: +1.865.584.0440 Fax: +1.865.584.5720
www.controltechnology.com

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

# 2596-8 8-point DC Discrete Output Module

### Login 8/16 Point Configuration Explanation

The 2596-8 was designed using a PCB that could also perform as a 16 or 32pt module. Hence, the PCB printing for channels do not line up with actual 2596-8 channels. See the chart below for the proper correlation of channels. For example, if the module reported channel 4 was blown, then the user would replace the fuse marked ‘CH10’ on the PCB.

| Mode | Channel/Fuse Labeling | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CH # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 8 pt: | 1 | 2 | - | - | - | - | - | - | 3 | 4 | - | - | - | - | - | - | 5 | 6 | - | - | - | - | - | - | 7 | 8 | - | - | - | - | - | - |

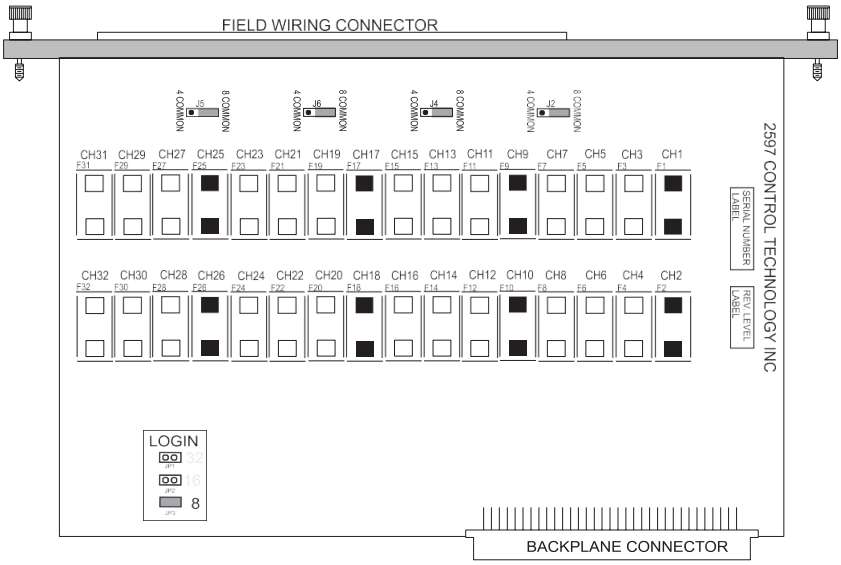



**Figure 1. Jumper and Fuse Configuration**

*(also see chart on back page for actual channel correlations)*

*Note: The LOGIN jumpers are not needed for configuration and there are none shipped with the module.*

| Jumper Configuration | |
|---|---|
| Jumper | Selection |
| J2, J4, J5 & J6 | 8 per Common |

### Standard Shipping Configuration

***WARNING:***
***Do not alter ‘8 COMMON’ jumper J2, J4, J5, and J6 settings. The module is configured as needed for proper wiring compatibility with its Siemens® counterpart.***

### Grouping Configuration

The 2596-8, two channles are grouped together and share a common field user power, thereby allowing a different user power supply voltage to be used by each grouping. Jumpers J2, J4, J5, and J6 are set in the “8 Common” selection from the factory and, for proper module operation, should not be altered. This setting allows for 2 points per common operation.

For example, Channels 1-2 will share a common user power and Channels 3-4 will share another common user power. In this example each group of four channels is isolated from the other group of four channels. Because each group of four is isolated, the user may also change the supply voltage for each group. So, in this example, Channels 1-2 could be 24VDC outputs and Channels 3-4 could be 60VDC outputs.



25 October 2021

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

# 2596-8 8-point DC Discrete Output Module

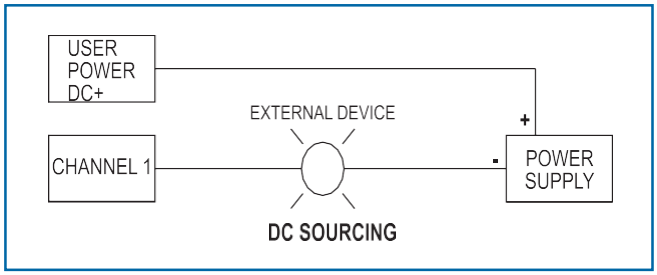



**Figure 2. Typical External Wiring Diagram**

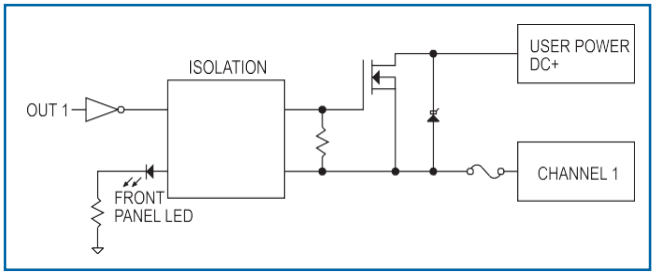
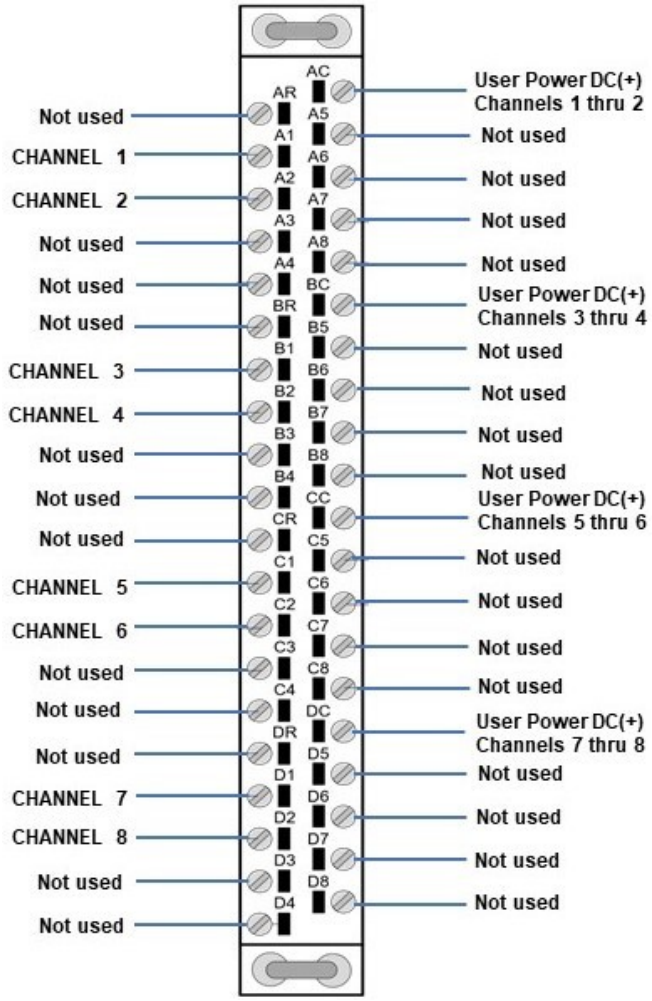



**Figure 3. Typical Internal Circuit**

**Note: The 2596-8 uses the 2500-40F removable wiring connector. This connector is ordered separately.**




**2596-8 2 Outputs Per Common Wiring Connector Diagram**

 25 October 2021

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

# 2596-8 8-point DC Discrete Output Module

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 ENER-GIZED. | 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.