

2596 8/16-point VDC Discrete Output Module

Classic



Specifications

Outputs per Module: 8 or 16

Logon: 8Y or 16Y (Jumper Selectable)

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:

32 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: <20mA

Turn On Time: 1 mSec (nominal)

Turn Off Time: 3 mSec (nominal)

⚠ Fuses: 16, 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: 1.2 Watts max.

Module Size: Single-wide

Shipping Weight: 1.5 lb. (0.68 Kg)

Description

The 2596 8/16-Point DC Discrete Output Module provides eight or sixteen 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 is designed to switch externally supplied 11-125 VDC.

Features

- 8 or 16 DC output points
- Replaces Siemens® 505-4508, 4516, 4708, 4716
- 3000 VDC group-to-group isolation
- 2100 VDC channel-to-backplane isolation
- Isolation in groups of four (16pt. login) or in groups of two (8pt. login)
- Wide 11-125 VDC output range
- 2.0 Amps per output
- 32 Amps total module output
- Individually sourcing fused outputs

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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Login 8/16 Point Configuration Explanation

The 2596 was designed to be primarily a 16pt module, and utilizes a PCB that could also perform as a 32pt. module. Hence, the PCB printing for the channels may not all line up with the 2596 channels. See the chart below for the proper channel configuration. Also, in order to provide maximum flexibility for the user, the module may also be configured as an 8 point module. Some details are listed below to help the user better understand the jumper settings and labeling discrepancies for the 8 and 16 point settings.

8 Point Mode: Move jumper in “Login” box to location JP3 to choose 8pt mode. Ensure the Isolation jumpers J2, 4, 5, & 6 are in ‘8 Common’ positions to correspond to the Siemens® counterpart 8 point modules (2 inputs/common). Also, note that many of the printed channels (CH 1-CH 32) on the PC board are no longer valid, nor are the front panel connector labels. (You may find it helpful to utilize the appropriate 8 pt. connector labels shipped with the product.) If 8 Point is enabled, the following table’s 8pt. row is the new correlation of PC board printing and front panel label’s LED area printing. For example, in 8 Point Login Configuration, the board marking for channel 10 (CH 10) would be the input channel 6. Likewise, the PC board marking for CH 13 would correlate to input channel 7.

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
16 pt:	1	2	3	4	-	-	-	-	5	6	7	8	-	-	-	-	9	10	11	12	-	-	-	-	13	14	15	16	-	-	-	-
8 pt:	1	2	-	-	-	-	-	-	3	4	-	-	-	-	-	-	5	6	-	-	-	-	-	-	7	8	-	-	-	-	-	

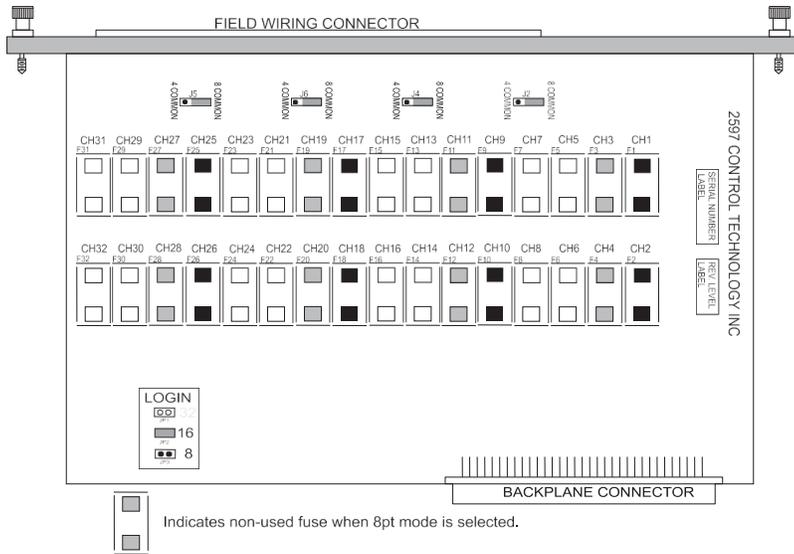


Figure 1. Jumper and Fuse Configuration
(also see chart on back page for actual channel correlations)

Jumper Configuration	
Jumper	Selection
J2, J4, J5 & J6	8 per Common
JP2 & JP3	JP2 - 16pt mode

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. Remove the module from the 505 base before changing LOGIN jumper JP2 and JP3 settings.

Grouping Configuration

The 2596 is shipped to allow four channels to be grouped 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 come set in the “8 Common” selection from the factory and should not be altered for proper module operation. This setting allows for 4 points per common operation.

For example, Channels 1-4 will share a common user power and Channels 5-8 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 1-4 could be 12VDC outputs and Channels 5-8 could be 24VDC outputs.

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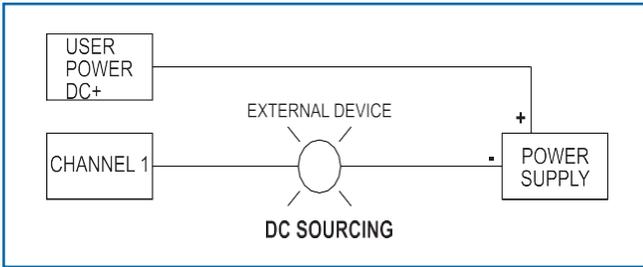


Figure 2. Typical External Wiring Diagram

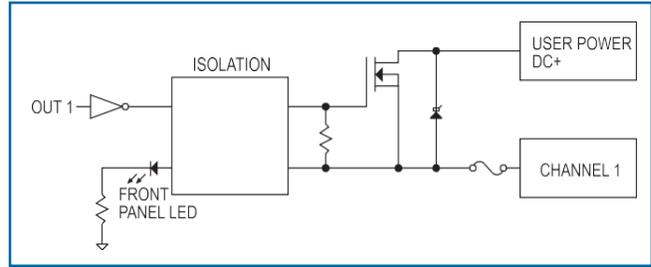
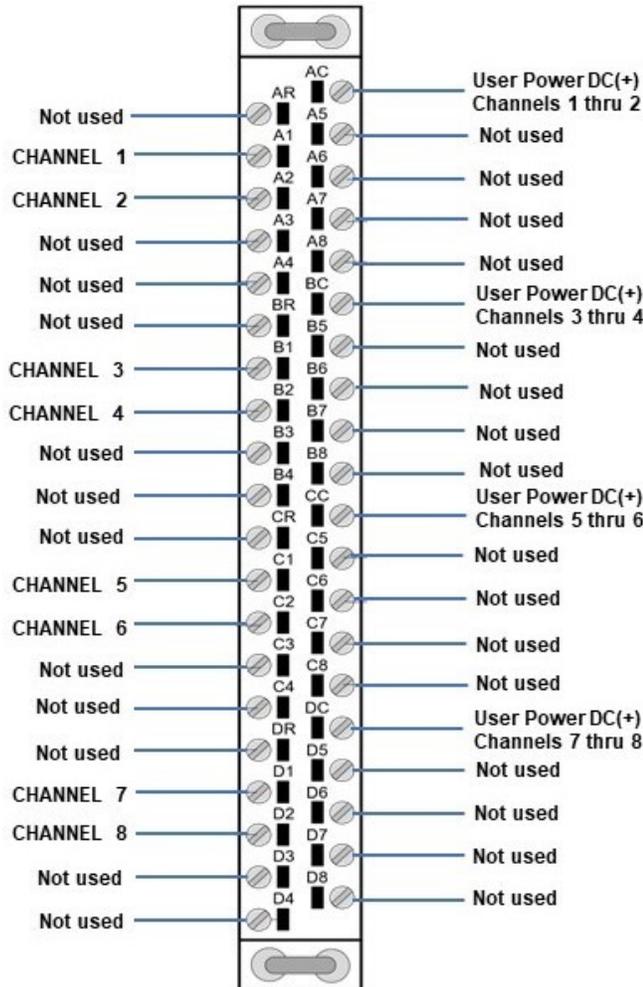
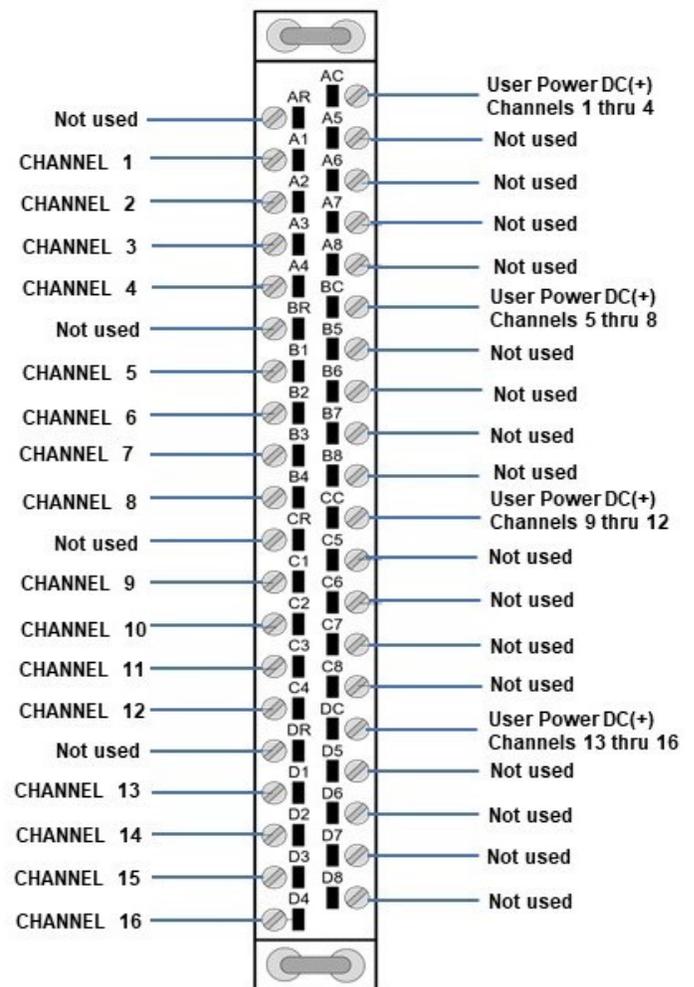


Figure 3. Typical Internal Circuit

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



8 PT Login Selection Jumper in 8 Common Position



16 PT Login Selection Jumper in 8 Common Position

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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.