

4600 SERIES

VERY HIGH DENSITY SWITCHING MATRICES

CYTEC's new 4600 Series are economical, high density, passive, bidirectional switch matrices. Each chassis holds up to 2048 two pole Type A relays, and a modular design allows great flexibility in creating different switching topologies. For example, the following single chassis configurations are all possible: 64x32 two pole matrix, 32x32 four pole matrix, 32x8 eight pole matrix or 32x8 sixteen pole matrix. Several independent matrices, such as a four separate 32x16 two pole matrices, can be provided in one chassis as well. Please contact CYTEC directly to discuss configuration options. Computerized control is via combined RS232/IEEE488, with 10BaseT Ethernet and Manual Controls optionally available.

4600 CHASSIS

The 4600 chassis are standard 19" rack mounting units and are built as either Mainframe or Expansion Chassis. From 128 to 2048 individual switch points are furnished. Input and output signal connectors are standard IDC Headers and are accessed from the chassis rear.

4600 MAINFRAME

The standard mainframe is built with power supplies, a Control Module and, optionally, a Manual Control. The system is completed by adding as required from one to sixteen of the 4600/8(2x8) Switch Modules shown on this bulletin's second page.

4600-E EXPANSION CHASSIS

The expansion chassis is identical to the mainframe in size and function. The expansion chassis, however, is built without a dedicated control module, manual control or power supplies. Instead, it is designed to be both powered and controlled by one of CYTEC's MESA Control Chassis detailed in the **MESA Bulletin**. Ribbon Expansion Cables connect the expansion chassis to the MESA.

CUSTOM CHASSIS

Custom configurations are available upon request. Most custom systems wire out the rear panel Input/Output connections to a required connector type that is different from the standard headers. This wiring is priced on the basis of labor and materials.

WARRANTY

CYTEC Corp. warrants that all products are free from defects in Material or Workmanship for a period of 5 years and that all switches are guaranteed for their rated operations as shown on the second page.



4600 Series Matrix w/one Switch Module Installed

CONTROL MODULES

IF-5 IEEE488/RS232 CONTROL MODULE

This module provides remote control via both RS232 Serial and IEEE488 Talk/Listen interfaces as detailed in Applications Bulletin AP-5.

IF-6 LAN INTERFACE

This optional module allows control over a 10BaseT Ethernet Local Area Network via TCP/IP protocols as described in Applications Bulletin AP-5.

MANUAL CONTROL

MC-2 WITH LCD DISPLAY

This local control supplies a front panel Keypad and LCD Display that lets the operator control any switch and verify switch status.

VMCS

This Virtual Manual Control Software allows a remote operator using a PC to view matrix Status and control switches using a full Graphical User Interface.

CONTACT 1-800-346-3117 OR WWW.CYTEC-ATE.COM FOR TECHNICAL ASSISTANCE

4600 SERIES MAINFRAME

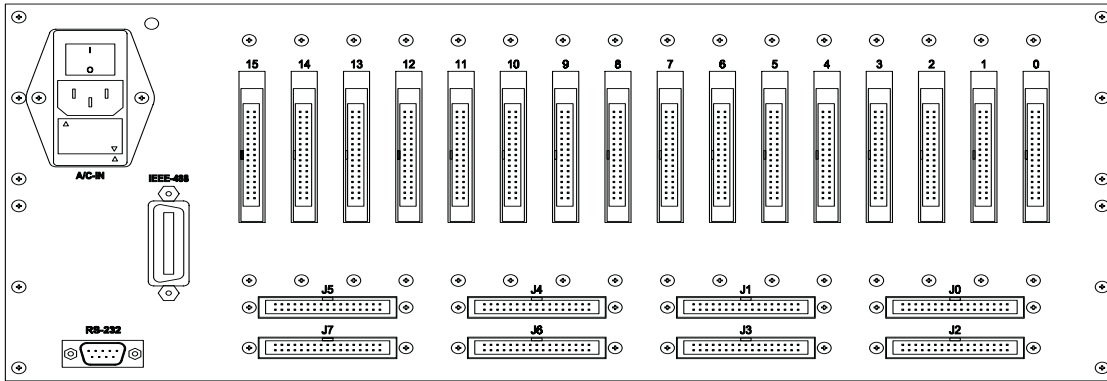


Fig. 1 4600 Mainframe Rear View

STANDARD MATRIX CONFIGURATIONS

One of several different possible matrix configurations can be supplied by jumpering the 4600/8(8x2) Switch Modules and/or the Chassis Motherboard as shown in Fig. 2. The matrix is passive and bidirectional, and any input can be routed to any output without interrupting previously connect I/O paths.

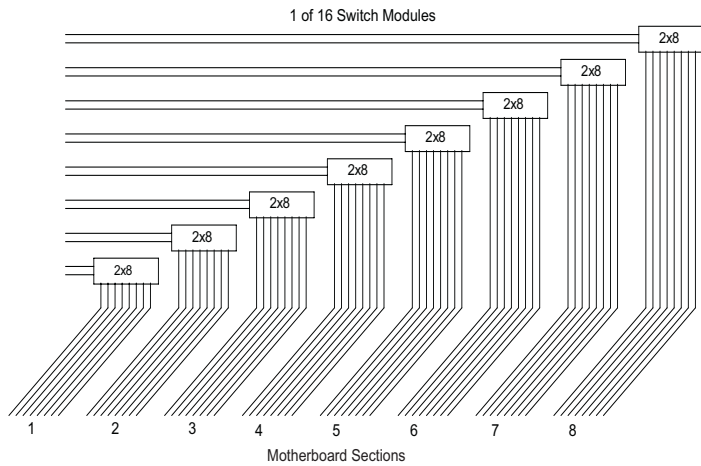


Fig. 2 Matrix Configuration Options

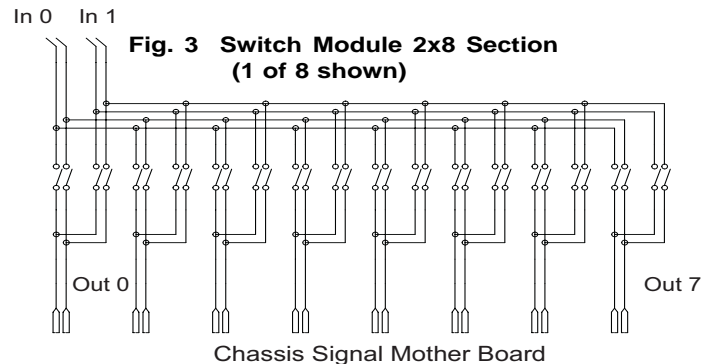
Each Switch Module is eight individual (8x1) two pole matrices. The Chassis Motherboard has eight, 8 pair trace sections. Presuming a full chassis holding 16 switch modules, any one the following configurations is possible:

Config.#	Jumpers	Jumpered Sect.	Matrix Size
1	None	None	8(32x8)
2	Motherboard	1,5-2,6-3,7-4,8	4(64x8)
3	Motherboard	1,3,5,7 - 2,4,6,8	2(128x8)
4	Motherboard	1,2,3,4,5,6,7,8	256x8
5	Module	1,2-3,4-5,6-7,8	4(32x16)
6	Module	1,2,3,4 - 5,6,7,8	2(32x32)
7	Module	1,2,3,4,5,6,7,8	32x64
8	#6 + Drives	1,5-2,6-3,7-4,6	4 wire 32x32
9	#3 + Drives	1,2-3,4-5,6-7,8	4 wire 128x8
10	#2 & 5 + Drives	1,3-2,4-5,7-6,8	4 wire 64x16
11	#2 + Drives	1,2,3,4 - 5,6,7,8	8 wire 64x8
12	#5 + Drives	1,3,5,7 - 2,4,6,8	8 wire 32x16
13	#1 + Drives	1,2,3,4,5,6,7,8	16 wire 32x8

4600 SERIES SWITCH MODULES



Each Switch Module is assembled with a total of 128 two pole **Type A** relays. The module's basic configuration arranges the relays as eight separate 2x8 two pole matrices. However, individual 2x8's may be interconnected via built-in jumpers to furnish many different configurations as required. For example, jumpering all eight 2x8's creates a 2x64 two pole switch module, and installing the maximum of 16 switch modules into one chassis (with a standard motherboard) results in a 32x64 two pole matrix.



TYPE A RELAY SPECIFICATIONS

Contact Rating	30 VA
Switching Voltage	110 VDC
Switching Current	1.0 A
Carrying Current	1.0 A
Breakdown Voltage	750 VDC
Operate Time MSec	3
Lifetime (mechanical)	100 million cycles

GENERAL SPECIFICATIONS

Dimensions - 19" rack mounting, 7.0" high and 21" deep
Weight - less than 40 lbs. fully loaded with 16 switch modules
AC Mains - 115 VAC or 230 VAC, 47-400 Hz, 100 Watts
Operating Temperature - 0 to 50 deg. C.
Storage Temperatures - -25 to 65 deg. C.
Bandpass (-3 dB) - DC to 20 MHz for 32x64 two pole matrix