LOW COST SOLUTIONS FROM THE SWITCHING SPECIALISTS.

- MATRICES
- MULTIPLEXERS
- POWER RELAYS
- COAXIAL MATRICES
- CUSTOM MODULES.

2555 Baird Road, Penfield, New York 14526

FOR TECHNICAL ASSISTANCE or a FULL PRODUCT CATALOG,
CONTACT
1-800-346-3117 or www.cytec-ate.com or sales@cytec-ate.com

Member of the ASSLING SYSTEMS

Full Assortment of

C Size VXI Switch Modules

B Size Modules and

VME Modules also available

FOR TECHNICAL ASSISTANCE or a FULL PRODUCT CATALOG,
CONTACT
1-800-346-3117 or www.cytec-ate.com or sales@cytec-ate.com

Member of the ASSLING SYSTEMS

Full Assortment of

C Size VXI Switch Modules

B Size Modules and

VME Modules also available
CY SERIES
VXI C-SIZE SWITCH MODULES

The CY Series are low cost C-Size VXI Bus Switch Modules that utilize both Message and Register based operation. Available modules include Multiplexers, Matrices, Microwave Switches, Individual Form A and Form C Relays, Driver Modules, 50 Ohm Coaxial, Solid State and ECL Matrices.

FEATURES INCLUDE:
- FULL FIVE YEAR WARRANTY
- STATUS of individual relays monitored at the relay drives.
- HIGH RELIABILITY Type S Standard and Type M Mercury Wetted Reed Relays with a guaranteed life of 100 million operations.
- LOW THERMAL Relays with offsets less than 1 μvolt.
- MICROWAVE Switches with a Bandpass of DC to 18 GHz; 26 GHz optionally available.
- HIGH FREQUENCY 50 ohm impedance 8x8 Coaxial Matrix with 200 MHz bandpass.
- HIGH POWER Switch Modules with 32 Form C Armature Relays with 150 W or 2000 VA rating.
- MULTIPLEXERS with up to 128 switch points.
- HIGH DENSITY BIDIRECTIONAL MATRICES up to 16x8 or 62x2 configurations.
- "K" MODULES with 64 individual Form A or Form C relays.
- SOLID STATE 48x48 Matrices.
- ECL 16x16 Differential Pair Matrix.
- BUFFER Amplifier Modules with unity gain for impedance matching.
- DIFFERENTIAL INSTRUMENTATION Amplifiers with preset gains.
- DRIVER MODULES with individual current sourcing or sinking drives.

SOFTWARE
Drivers and/or sample programs are available in the most common programming languages. Please consult our expert Sales Engineers.

GENERAL SPECIFICATIONS
VXI Revision 1.4
Logical Address Per DIP Switch Setting
Radiated Emissions Per VXI Specification
Conducted Emissions Per VXI Specification

ENVIRONMENTAL
Operating Temperature 0° to 55°C
Storage Temperature -25° to 80°C
Humidity Less than 95% RH no condensation to 30°C
Cooling <10°C rise w/air flow 1.5 L/sec & dP = 0.04 mm H₂O

WARRANTY
CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Reed relays are guaranteed for 100 million operations when used within their published specifications. However, Microwave switches are warranted for 1 year.

FOR TECHNICAL ASSISTANCE CONTACT 1-800-346-3117 or WWW.CYTEC-ATE.COM
**CY SERIES RELAY SPECIFICATIONS**

- **Type S** - Standard Dry Reed Relays.
- **Type M** - Mercury Wetted Reed Relays.
- **Type LT** - Low Thermal Reed Relays.
- **Type P** - Armature Power Relays.
- **Type A** - Instrumentation Level Signal Armature Relays.

Relays have the following guaranteed lifetimes when operated within the specified operating parameters.

<table>
<thead>
<tr>
<th>Relay Type</th>
<th>S</th>
<th>M</th>
<th>LT</th>
<th>P</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Life - Mechanical</td>
<td>10^6</td>
<td>10^6</td>
<td>10^7</td>
<td>10^7</td>
<td>10^7</td>
</tr>
<tr>
<td>Min. Life - Full Load*</td>
<td>10^6</td>
<td>10^6</td>
<td>10^7</td>
<td>2x10^5</td>
<td>2x10^5</td>
</tr>
<tr>
<td>Contact Rating VA</td>
<td>10</td>
<td>50</td>
<td>10</td>
<td>2000</td>
<td>30</td>
</tr>
<tr>
<td>Switch Voltage</td>
<td>200V</td>
<td>500V</td>
<td>100V</td>
<td>380V</td>
<td>110V</td>
</tr>
<tr>
<td>Max. Switch Current</td>
<td>0.5A</td>
<td>2.0A</td>
<td>0.2A</td>
<td>8A</td>
<td>1.0A</td>
</tr>
<tr>
<td>Max. Carry Current</td>
<td>1.0A</td>
<td>2.0A</td>
<td>1.0A</td>
<td>10A</td>
<td>1.0A</td>
</tr>
<tr>
<td>Breakdown Voltage</td>
<td>400V</td>
<td>1000V</td>
<td>200V</td>
<td>1000V</td>
<td>750V</td>
</tr>
<tr>
<td>DC Isolation - Ohms</td>
<td>10^11</td>
<td>10^11</td>
<td>10^12</td>
<td>10^6</td>
<td>10^9</td>
</tr>
</tbody>
</table>

*Load is purely resistive

**CY SERIES RELAY SPECIFICATIONS**

**CY SERIES MODEL OVERVIEW**

CYTEC currently offers the following Models/Configurations:

**Relay Modules** (Note: All Relay Modules are bidirectional.)

- **CY/128** - These are built with 64 two-pole reed relays. Internal Pin Jumpers permit a variety of user-defined configurations, ranging from eight individual 8x1 two-pole multiplexers to one 128x1 single pole mux.
- **CY/8x8** - This 8 Input/8 Output Matrix Switch Module is available with either single or two pole reed relays.
- **CY/16x8** - This is a 16 Input/8 Output Matrix that is built with Type A armature relays and is used for switching instrumentation level signals.
- **CY/64x2** - This holds 128 single pole reed relays arranged as eight individual 8x2 matrices. Many other configurations are possible, including the "standard" 64x2.
- **CY/64K** - This provides 64 individual Form A (NO) Reed Relays.
- **CY/64KC** - This supplies 64 separate Form C (NO/COM/NC) Type A Instrumentation Armature Relays.
- **CY/32KCP** - This is built with 32 Individual Form C Type P Power Relays for high power/current applications.
- **CY/CX** - This is a 50 ohm impedance 8x8 matrix which is designed to switch RF signals. Bandpass (-3dB) is 200 MHz.
- **CY/G and CY/M** - These switch microwave signals (DC-18 GHz). These one, two or three slots modules are built to the user's specifications and hold the CXR/1G and CXM Series Switch Modules.

**Solid State Modules**

- **CY/48x48** - This 48x48 single pole matrix designed to switch ±5 volt signals. Bandpass is DC to 1 MHz, and path on resistance is 60 ohms.
- **CY/16x16ECL** - This provides a 16x16 nonblocking matrix for switching Differential ECL up to 1.2GBPS.
- **CY/IO-48** - This holds 48 unity gain impedance matching buffer amplifiers.
- **CY/INST-48** - This holds 48 precision differential input op amps. These have high input and low output impedances and make an ideal buffer into the CY/48x48 Solid State VXI Matrix.

**MICROWAVE RELAYS**

These CY/G and CY/M Modules are available as individual relays or as multiplexers or wired in a variety of different configurations including matrices. Please contact our Sales Department for information.

**AD DATA SWITCH MODULES**

CYTEC Corp is offering support, repair, service and replacement of AD Data VXI Modules.

- **230114-111** - Single pole, Standard Reed Relays. 64 SPST Switches; 64 Discrete Switches, 0.5 amp.
- **230114-112** - Single pole, Mercury Relays, 64 SPST Switches; 64 Discrete Switches, 2.0 amp.
- **230115-111** - Single pole, Standard Reed Relays, 64x1 Multiplexer Switch 0.5 amp.
- **230115-112** - Single pole, Mercury Relays, 64x1 Multiplexer Switch 2.0 amp.
- **230115-121** - Double pole, Standard Reed Relays, 64x1 Multiplexer Switch 0.5 amp.
- **230115-122** - Double pole, Mercury Relays, 64x1 Multiplexer Switch 2.0 amp.
- **230115-123** - Double pole, Low Thermal Relays, 64x1 Multiplexer Switch.
- **230116-111** - Single pole, Standard Reed Relays, 16x4 Matrix Switch 0.5 amp.
- **230116-112** - Single pole, Mercury Relays, 16x4 Matrix Switch 2.0 amp.
- **230116-121** - Double pole, Standard Reed Relays, 16x4 Matrix Switch 0.5 amp.
- **230116-122** - Double pole, Mercury Relays, 16x4 Matrix Switch 2.0 amp.
- **230126-123** - Double pole, Low Thermal Relays, 16x4 Matrix Switch 2.0 amp.
- **230126-122** - Double pole, Mercury Relays, 16x4 Matrix Switch 0.5 amp.
- **230117-111** - Single pole, Standard Reed Relays, Registered based 96 (1x1) Switch Module 0.5 amp.
- **230117-112** - Single pole, Mercury Relays, Registered based 96 (1x1) Switch Module 2.0 amp.
- **230118-111** - Single pole, Standard Reed Relays, Registered based 24 (4x1x1) Switch Module 0.5 amp.
- **230118-112** - Single pole, Mercury Relays, Registered based 24 (4x1x1) Switch Module 2.0 amp.
- **230119-111** - Single pole, Standard Reed Relays, 6 (1x4) Coaxial 1 Gigahertz Switch Module.
- **230119-112** - Single pole, Mercury Relays, 6 (1x4) Coaxial 1 Gigahertz Switch Module.
- **230120-111** - Single pole, Armature Relays, 20 SPST Switches; 20 SPST or 10 DPST 10 amp, Register-based Power Switch Module.
- **230120-112** - Double pole, Armature Relays, 20 SPST or 10 DPST 10 amp, Register-based Power Switch Module.
- **230115-121** - Double pole, Standard Reed Relays, Registered based 12 (4x1) and 48(1x1) Switch Module 0.5 amp.
- **230115-122** - Single pole, Mercury Relays, Registered based ARINC 608A 2 (4x1x1) and 48(1x1) Form A 2A Switch Module.
- **230131-123** - Double pole, Low Thermal Relays, Registered based ARINC 608A 2 (16x4) 4 wire/channel Form A Bus Matrix Input Switch Module.
The CY/128 is a bidirectional reed relay multiplexer and is used in general purpose switching applications. The module is designed with flexibility in mind, and a variety of different configurations are available. This allows the users to choose the configuration which most closely matches their requirements. All CYTEC VXI Modules use both Message and Register based operation.

**Detailed Description**
The CY/128 Multiplexer holds eight individual 8x1 two-pole multiplexers and four single pole submultiplexer relays. Pin jumpers can be installed to interconnect the individual multiplexers, allowing the following configurations to be created:

- Eight - 8x1 Two-Pole Multiplexers
- Four - 16x1 Two-Pole Multiplexers
- Two - 32x1 Two-Pole Multiplexers
- One - 64x1 Two-Pole Multiplexer
- One - 128x1 Single Wire Multiplexer using two Submultiplexer Relays
- Two - 64x1 Single Wire Muxes using four Submux Relays
- One - 32x1 Four Wire Multiplexer
- One - 16x1 Eight Wire Multiplexer
- One - 8x1 Sixteen Wire Multiplexer

Any number of relays can be energized at one time, and the status of all relays may be read at any time.

**Available Models**
- CY/128-S with Type S Standard Dry Reed Relays
- CY/128-M with Type M Mercury Wetted Reed Relays
- CY/128-LT with Low Thermal Offset Relays

**Connectors**
- Two 64 Pin Headers (128 Individual "Inputs")
- One 20 Pin Header (Eight Multiplexer and four Submux "Outputs")

**General Specifications**
- **Power**
  - +5 Volts: less than 1.0 Amp
  - +12 Volts: 20 mA per energized relay
- **Bandpass (8x1)**
  - DC to 80 MHz (-3dB)
- **Insertion Loss**
  - less than 0.2dB at 10 MHz
- **Isolation/Crosstalk**
  - 100 kHz - 80dB
  - 1 MHz - 60dB
  - 10 MHz - 40dB
- **DC Isolation**
  - Greater than 10¹⁰ ohms

**Reed Relay Specifications**
- **Type S** - Standard Dry Reed Relays.
- **Type M** - Mercury Wetted Reed Relays.
- **Type LT** - Low Thermal Reed Relays.

**Contact Rating**
- Type S: 10VA
- Type M: 50VA
- Type LT: 10VA

**Max. Switch Voltage**
- Type S: 200V
- Type M: 500V
- Type LT: 100V

**Max. Switch Current**
- Type S: 0.5A
- Type M: 2.0A
- Type LT: 0.2A

**Breakdown Voltage**
- Type S: 400V
- Type M: 1000V
- Type LT: 200V

**Operate Time, less than**
- Type S: 1ms
- Type M: 2ms
- Type LT: 1ms

**DC Isolation - Ohms**
- Type S: 10¹¹
- Type M: 10¹¹
- Type LT: 10¹²

**Warranty**
CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Reed relays are guaranteed for 100 million operations when used within their published specifications.
The CY/64x2 is a bidirectional reed relay matrix and is designed for general purpose switching applications. The module can be configured in a variety of different ways. The users can specify the configuration which most closely matches their requirements. All CYTEC VXI Modules use both Message and Register based operation.

**Detailed Description**

The CY/64x2 Matrix contains 128 single pole reed relays arranged as eight banks of 8x2 matrices. These banks may be used individually or combined via internal pin jumpers to form larger Nx2 matrices. External wiring added by the user provides many other configurations, such as two 16x4 matrices or a single 32x4. Any number of relays may be closed simultaneously, and the status of all relays may be read at any time.

**Available Models**

- CY/64x2-S with Type S Standard Dry Reed Relays.
- CY/64x2-M with Type M Mercury Weed Reed Relays.

**Relay Specifications**

<table>
<thead>
<tr>
<th></th>
<th>Type S</th>
<th>Type M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Rating</td>
<td>10VA</td>
<td>50VA</td>
</tr>
<tr>
<td>Max. Switch Voltage</td>
<td>200V</td>
<td>500V</td>
</tr>
<tr>
<td>Max. Switch Current</td>
<td>0.5A</td>
<td>2.0A</td>
</tr>
<tr>
<td>Max. Carry Current</td>
<td>1.0A</td>
<td>2.0A</td>
</tr>
<tr>
<td>Breakdown Voltage</td>
<td>400V</td>
<td>1000V</td>
</tr>
<tr>
<td>Operate Time, less than</td>
<td>1ms</td>
<td>2ms</td>
</tr>
<tr>
<td>DC Isolation - Ohms</td>
<td>$10^{12}$</td>
<td>$10^{12}$</td>
</tr>
</tbody>
</table>

**Connectors**

- Two 34 Pin Headers (128 Individual "Inputs")
- One 20 Pin Header (16 total "Outputs" - one from each of eight 8x2 matrices.)

**Specifications**

- **Power**: +5 Volts, less than 1.2 Amp
- **Bandpass**: +12 Volts, 25 mA per relay
- **DC to 50 MHz (-3dB)**
- **Isolation/Crosstalk**: One 8x2 Bank
- **ISOlatation/Crosstalk**: <50 dB at 10 MHz

**Warranty**

CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Reed relays are guaranteed for 100 million operations when used within their published specifications.

Member of the VXI Plug and Play Alliance.
Each of these VXI Switch Modules provides 64 individual switch points. The CY/64K supplies 64 Form A reed relays, while the CY/64KC furnishes 64 Form C general purpose armature relays. Any number or relays may be closed simultaneously and relay status may be read at any time. All CYTEC products utilize both Register and Message based operation.

**DETAILED DESCRIPTION**
- **CY/64K** holds 64 separate single pole Form C Type S Standard or Type M Mercury reed relays. Each contact set is individually wired to 34 pin front panel connectors.
- **CY/64KC** is built with 64 individual high sensitivity, low thermal offset single pole Form C Type A armature relays for switching instrumentation level signals. The Normally Open, Normally Closed and Common contacts of all relays are wired out to 50 pin header connectors. Thermal Offsets are less than five microvolts.

**AVAILABLE MODELS**
- **CY/64K-S** - Form A Type S Standard Reed Relays
- **CY/64K-M** - Form A Type M Mercury Reed Relays
- **CY/64KC** - Form C Type A Armature Relays

**CONNECTORS**
- **CY/64K** - Four 34 Pin Header Connectors
- **CY/64KC** - Four 50 Pin Header Connectors

**SPECIFICATIONS**
- **POWER**
  - CY64/K: +5 Volts, less than 1.2 Amp
  - CY64/KC: +12V, 15 mA per energ. relay
  - CY64/KC: +12V, 20 mA per energ. relay
- **BANDPASS**: DC to 40 MHz (-3dB)
- **INSERTION LOSS**: less than 0.1 dB at 1 MHz
- **ISOLATION/CROSSTALK**: less than -40 dB at 1 MHz

**RELAY SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>Type S</th>
<th>Type M</th>
<th>Type A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Rating</td>
<td>10VA</td>
<td>50VA</td>
<td>30VA</td>
</tr>
<tr>
<td>Max. Switch Voltage</td>
<td>200V</td>
<td>500V</td>
<td>110V</td>
</tr>
<tr>
<td>Max. Switch Current</td>
<td>0.5A</td>
<td>2.0A</td>
<td>1.0A</td>
</tr>
<tr>
<td>Max. Carry Current</td>
<td>1.0A</td>
<td>2.0A</td>
<td>1.0A</td>
</tr>
<tr>
<td>Breakdown Voltage</td>
<td>0.5A</td>
<td>2.0A</td>
<td>1.0A</td>
</tr>
<tr>
<td>Operate Time, less than</td>
<td>1ms</td>
<td>2ms</td>
<td>3ms</td>
</tr>
<tr>
<td>Lifetime, Mechanical</td>
<td>10⁸</td>
<td>10⁸</td>
<td>10⁸</td>
</tr>
<tr>
<td>Lifetime, Full Load</td>
<td>10⁸</td>
<td>10⁸</td>
<td>2x10⁵</td>
</tr>
</tbody>
</table>

**WARRANTY**
CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Reed relays are guaranteed for 100 million operations when used within their published specifications.
CY/64DRV RELAY/SOLENOID DRIVER MODULE
CY/32KCP FORM C POWER SWITCH MODULE

CYTEC's CY/64DRV VXI C-Size Driver Module is built with 64 individually addressable current sourcing or sinking drives and is designed to power external loads such as relays or solenoids. The CY/32KCP has 32 Form C Power Relays that can switch up to 8 A of current and 150 watts DC or 2000 watts AC.

**CY/64 DRV C-SIZE DRIVER MODULE**
This module has 64 individually controlled drives and is built with either current sourcing or sinking ICs. These modules are typically used to drive solenoids or relays located external to the VXI Module. Each drive channel is an open collector and has integral diode suppression. The drives can be wired to the VXI Chassis’ internal power supply busses or to an external source. The CY/64DRV is configured via an internal DIP Switch to furnish one of eight different operational modes, supplying either 64 randomly controllable drives, one of four different multiplexing modes or one of three different group switch types. The use of any mode is determined by the switching application. Drive status (on/off) can be verified by the controlling computer at any time.

**AVAILABLE MODELS**
- CY/64DRV-SNK 64 Channel Current Sinking Driver
- CY/64DRV-SRC 64 Channel Current Sourcing Driver

**CONNECTORS**
- Internal 14 Pin Headers - wired out to external loads

**CY/64DRV SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Power Source</th>
<th>Sink</th>
</tr>
</thead>
<tbody>
<tr>
<td>+5 Volts, 2.1 A Max.</td>
<td>80 VDC</td>
</tr>
<tr>
<td>+12 Volts, 0.2A Max.</td>
<td>50 VDC</td>
</tr>
<tr>
<td>(not including relay driver)</td>
<td></td>
</tr>
</tbody>
</table>

- Drive Power
  - Max. Voltage: 350 mA
  - Max. Current per Driver: 1 Amp
  - Max. Current per IC Package: 1 Amp

**CY/32KCP POWER SWITCH MODULE**
This module is built with 32 individually controllable Form C Armature type Power Relays. The Normally Open, Normally Closed and Common contacts of each relay are individually wired out to three separate pins on a "D" style connector as shown below. Any number of relays may be closed simultaneously, and the status of all relays may be read at any time by the controlling computer.

25 Pin D sub Connector

**AVAILABLE MODELS**
- CY/32KCP- 32 Form C Power Relays Switch Module

**CONNECTORS**
- Four 25 Pin D subs

**CY/32KCP SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Power</th>
<th>+5 V, 1.2 Amp. Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+12 V, 25 mA per ener. relay</td>
</tr>
</tbody>
</table>

**TYPE P RELAY RATINGS**

<table>
<thead>
<tr>
<th>Switching Power</th>
<th>2000VA, 150W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching Voltage</td>
<td>380VAC</td>
</tr>
<tr>
<td>Switching Current</td>
<td>8 Amp.</td>
</tr>
<tr>
<td>Breakdown Voltage</td>
<td>1200 VRMS</td>
</tr>
<tr>
<td>Operate Time</td>
<td>10 mSec. Max.</td>
</tr>
<tr>
<td>Mechanical Life</td>
<td>10⁷ Operations</td>
</tr>
</tbody>
</table>

**WARRANTY**
CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years.

Member of the VXI Plug and Play Alliance.

FOR TECHNICAL ASSISTANCE CONTACT 1-800-346-3117 or WWW.CYTEC-ATE.COM
The CY/CX Module is a high frequency 50 ohm impedance coaxial matrix with bandpass of DC to 200 MHz. The matrix is bidirectional and non-blocking, switching any one input to one output with coaxial dry reed relays which are rated at 10VA. Standard input and output connectors are SMA with SMBs optionally available.

**MATRIX CONFIGURATIONS**

The basic module has two separate 8x4 matrices which can be supplied as either one 8x8 or one 16x4 matrix.

**CY/CX-2(8x4)** - This has two individual 8x4 matrices as shown in Fig. 1. Each matrix has a bandpass from DC to 200 MHz (-3dB) with crosstalk of -40dB at 100 MHz.

**CY/CX-8x8** - The two 8x4 matrices are interconnected by isolation relays shown in Fig. 1 to form an 8x8 matrix. The relays also serve to reduce stub length and maintain bandpass from DC to 170 MHz with crosstalk of -40dB at 100 MHz.

**CY/CX-16x4** - The two 8x4 matrices are interconnected by additional isolation relays to form a 16x4 matrix. The relays also serve to reduce stub length and maintain bandpass from DC to 170 MHz with crosstalk of -40dB at 100 MHz.

**REED RELAY SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Type S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Rating</td>
<td>10VA</td>
</tr>
<tr>
<td>Maximum Switching Voltage</td>
<td>200V</td>
</tr>
<tr>
<td>Maximum Switching Current</td>
<td>0.5A</td>
</tr>
<tr>
<td>Breakdown Voltage</td>
<td>400V</td>
</tr>
<tr>
<td>Operate Time, less than</td>
<td>1ms</td>
</tr>
<tr>
<td>DC Isolation - ohm</td>
<td>$10^{12}$</td>
</tr>
<tr>
<td>Capacitance across reeds</td>
<td>0.1pF</td>
</tr>
</tbody>
</table>

**GENERAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Power</th>
<th>+5 Volts</th>
<th>less than 1.2 Amp</th>
</tr>
</thead>
<tbody>
<tr>
<td>+12 Volts</td>
<td>20 mA per energized relay</td>
<td></td>
</tr>
</tbody>
</table>

**WARRANTY**

CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Reed relays are guaranteed for 100 million operations when used within their published specifications.

FOR TECHNICAL ASSISTANCE CONTACT 1-800-346-3117 or WWW.CYTEC-ATE.COM
The CY/8x8 is a general purpose, bidirectional reed relay matrix. It is a true non-blocking matrix, and each input can be connected to one, many or all outputs concurrently. All CYTEC VXI Modules utilize both Message and Register based operation.

**DETAILED DESCRIPTION**

The CY/8x8 supplies two individual 8x4 matrices. These can be interconnect externally by the user to provide one 8x8 or one 16x4 matrix. This VXI Switch Module is built with 64 Reed Relays and is available in either single or two pole versions, and with Type S Standard or Type M Mercury reeds. It is also available as a two pole matrix with Type LT Low Thermal reeds. Any number of relays can be energized concurrently, and the status of all relays may be read at any time.

**AVAILABLE MODELS**

- **CY/8x8-1S** - Single Pole Type S Standard Reed Relays
- **CY/8x8-1M** - Single Pole Type M Mercury Wetted Reeds
- **CY/8x8-2S** - Two Pole Type S Standard Reeds
- **CY/8x8-2M** - Two Pole Type M Mercury Wetted Reeds
- **CY/8x8-LT** - Two Pole Low Thermal Reed Relays

**CONNECTORS**

- Three 34 Pin Headers

**REED RELAY SPECIFICATIONS**

- **Type S** - Standard Dry Reed Relays.
- **Type M** - Mercury Wetted Reed Relays.*
- **Type LT** - Low Thermal Reed Relays.

<table>
<thead>
<tr>
<th>Type</th>
<th>Contact Rating</th>
<th>Max. Switch Voltage</th>
<th>Max. Switch Current</th>
<th>Breakdown Voltage</th>
<th>Operate Time, less than</th>
<th>DC Isolation - Ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type S</td>
<td>10VA</td>
<td>200V</td>
<td>0.5A</td>
<td>400V</td>
<td>1ms</td>
<td>10^11</td>
</tr>
<tr>
<td>Type M</td>
<td>50VA</td>
<td>500V</td>
<td>2.0A</td>
<td>1000V</td>
<td>2ms</td>
<td>10^11</td>
</tr>
<tr>
<td>Type LT</td>
<td>10VA</td>
<td>100V</td>
<td>0.2A</td>
<td>200V</td>
<td>1ms</td>
<td>10^12</td>
</tr>
</tbody>
</table>

* Must be operated in vertical position

**GENERAL SPECIFICATIONS**

- **Power**
  - +5 Volts: less than 1.0 Amp
  - +12 Volts: 20 mA per energized relay
- **Bandpass**: DC to 80 MHz (-3dB)
- **Insertion Loss**: less than 0.2 dB at 10 MHz
- **Isolation/Crosstalk**:
  - 100 kHz - 80 dB
  - 1 MHz - 60 dB
  - 10 MHz - 40 dB
- **DC Isolation**: Greater than 10^10 ohms

**WARRANTY**

CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Reed relays are guaranteed for 100 million operations when used within their published specifications.
The CY/16x8 is a two pole, bidirectional armature relay matrix that is used to switch instrumentation level signals. It is a true non-blocking unit, and each input can simultaneously be connected to one, many or all outputs. All CYTEC VXI Switch Modules utilize both Message and Register based operation.

**DETAILED DESCRIPTION**
The CY/16x8 is built with 128 two pole Type A Armature Relays and is designed to be used for switching instrumentation level signals. The relays are organized as sixteen rows in the Y direction and eight columns in the X direction. All switching paths are two wires with integral grounds located between all path pairs. Status checking of any input reports all connected outputs, and any number of relays can be energized at one time.

**CONNECTORS**
- Three 20 Pin Headers

**TYPE A ARMATURE RELAY SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Type A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Rating</td>
<td>30W, 62.5VA</td>
</tr>
<tr>
<td>Maximum Switched Voltage</td>
<td>110VDC, 125VAC</td>
</tr>
<tr>
<td>Maximum Switched Current</td>
<td>1.0A</td>
</tr>
<tr>
<td>Breakdown Voltage</td>
<td>750Vrms</td>
</tr>
<tr>
<td>Operate Time</td>
<td>2msec</td>
</tr>
<tr>
<td>Release Time</td>
<td>1msec</td>
</tr>
<tr>
<td>Lifetime, Resistive Load</td>
<td>10⁸ Operations</td>
</tr>
<tr>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td>1A, 30VDC</td>
<td>2x10⁶ Operations</td>
</tr>
<tr>
<td>0.5A, 125VAC</td>
<td>10⁶ Operations</td>
</tr>
<tr>
<td>Contact Resistance</td>
<td>50 milliohm max.</td>
</tr>
<tr>
<td>DC Isolation - Ohms</td>
<td>10³</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power +5 Volts</td>
<td>less than 1.2 Amp</td>
</tr>
<tr>
<td>+12 Volts</td>
<td>25 mA per energ. relay</td>
</tr>
<tr>
<td>Bandpass</td>
<td>DC to 50 MHz (-3dB)</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>less than 0.2dB at 10 MHz</td>
</tr>
<tr>
<td>Isolation/Crosstalk</td>
<td>less than -50dB at 10 MHz</td>
</tr>
</tbody>
</table>

**WARRANTY**
CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years.

For technical assistance contact 1-800-346-3117 or www.cytec-ate.com
The CY/G and CY/M Series of Microwave Switch Modules have user defined configurations and are used to switch RF Signals. Bandpasses of approximately 1.0, 18 and 26 GHz can be provided, and characteristic impedances of either 50 or 75 ohms are available.

**MICROWAVE SWITCH MODULES**

These Modules are one or two slot wide C-Size VXI Switch Modules which are built in accordance with the end user's needs. Two basic series are available: The CY/G Switch Modules that furnish a bandpass of about 1 GHz, and the CY/M Switch Modules that typically have a bandpass of 18 GHz, with 26 GHz optionally available.

**CY/G 1 GHZ VXI SWITCH MODULES**
The CY/G VXI Switch Modules are assembled using the CXR/2x1-1G, CXR/4x1-1G, CXR/8x1-1G, and CXR/4x2-1G Gigahertz Switch Cards. These cards provide a bandpass of approximately DC to 1 Gigahertz. Multiple cards can be placed in one VXI module, with the number of cards typically limited only by the available VXI panel area.

**CY/M 18 OR 26 GHZ VXI SWITCH MODULES**
The CY/M VXI Switch Modules are used for switching microwave signals. These are one or two slots wide and are built with either the CXM/2x1 A/B Switches or the CXM/Nx1 Rotary Microwave Switches. A bandpass of DC to 18 GHz is standard, with DC to 26 GHz optionally available. As an example, six CXM/6x1 Switches can be fitted into a single two-slot VXI Switch Module.

**AVAILABLE MODELS**
- CY/G One Gigahertz VXI Switch Modules
- CY/M Microwave VXI Switch Modules

**CONNECTORS**
- SMA recommended because of limited panel space.
- Consult factory for other options.

**PRICING:**
These Modules are designed so that they can be assembled using a selection of Microwave relays to meet the customer's specification. Call our Technical Sales for pricing of your specific requirement.

**SPECIFICATIONS**
- Power
  - +5 Volts, 2.1 A Max.
  - +12 Volts, 0.2A Max.
- Relay Drive Power
  Dependent on type of Microwave relays required.

**WARRANTY**
CYTEC Corp. warrants that all products are free from defects in workmanship and materials for a period of 5 years. Microwave relays are warranted for one year.

**FOR TECHNICAL ASSISTANCE CONTACT 1-800-346-3117 or WWW.CYTEC-ATEC.COM**