ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Pickering 10-110 DPDT* at our website: ***Click HERE***

10-110/115/120/125
General Purpose Reed Relay Module

- 8 General Purpose Reed Relays Per Module
- Very Wide Range: SPDT, DPST, DPDT and 4PST Switching Configurations
- Uses High Reliability Pickering Ruthenium Reed Relays For Maximum Performance
- Screened Versions Available
- Choice of Connectors: D-Type or Screw Terminal Block
- Switch up to 200Volts DC, 2Amps With 50W Max Power
- Front Panel Status LEDs



Models 10-110/115/120/125 are general purpose reed relay switching modules, available in a very wide choice of switch types with Changeover and Normally Open contact configurations. Suitable for the construction of switching networks, for slaving up to larger switches or for operating external devices.

For applications requiring screened relays please look at our 10-120 and 10-125 range of shielded reed relay modules which are suitable for the construction of low noise & crosstalk switching networks.

All modules are available with D-Type connectors, other connector types (including terminal block) are available to order.

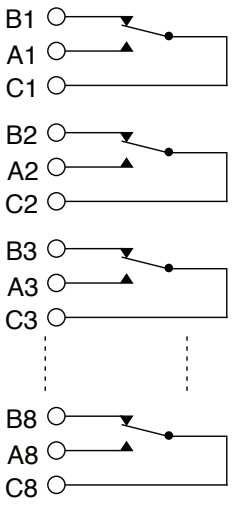
Range Description

10-110 8 x Changeover Reed Relay Module. With SPDT or DPDT configurations.

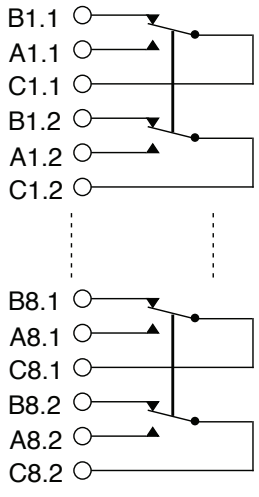
10-115 8 x Normally Open Reed Relay Module. With SPST, DPST or 4PST configurations.

10-120 8 x Shielded Changeover Reed Relay Module. SPDT configuration.

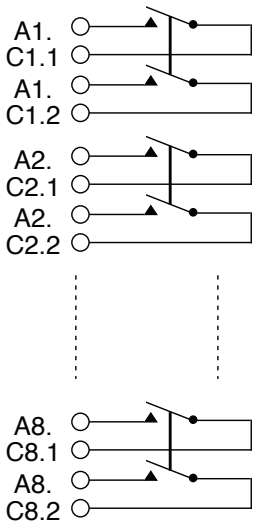
10-125 8 x Shielded Normally Open Reed Relay Module. With SPST or DPST configurations.



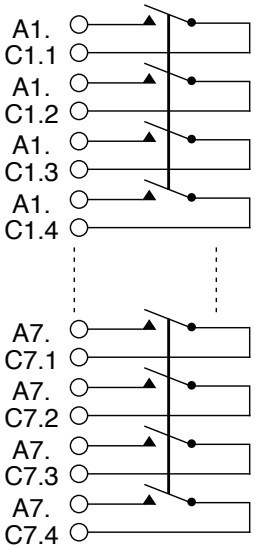
8 x SPDT Reed Relay
(Model 10-110-001)



8 x DPDT Reed Relay
(Model 10-110-002)

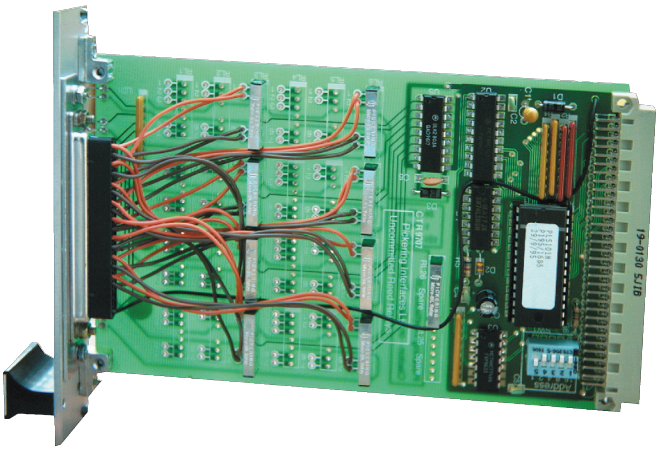


8 x DPST Reed Relay
(Model 10-115-002)



7 x 4PST Reed Relay
(Model 10-115-004)

ISSUE 3, JUN 2006



PCB Layout for the 10-115 Reed Relay Module

Reed Switch Types

The module is available with Ruthenium reed switches which are the most popular and economical type for general purpose switching (including low level signals). Mercury wetted switches may be available to special order. They are more expensive but exhibit extended life with lower contact resistance and excellent contact resistance stability.

Programming

The 10-110/115/120/125 module is simple to program either by single bit or by word (8 bits).

ARESET a	Clear all outputs on module a
CLOSE a,b	Set bit number b on module a
DELAY t	Force a minimum delay of t milliseconds between two instructions
OPEN a,b	Clear bit number b on module a
RESET	Clear all bits/switches on all modules
VIEW? a[,b]	View status of module a, can be viewed at any time either as a word or by bit b as a logical value (1 or 0)
WRITE a,w	Send word w to module a

Notes

All reed relay switching modules have the facility for a built–in limiting resistor on each switch. This can be very useful in preventing high current in-rushes which may result in damage to the reed switch. These links are normally shorted, however when ordering you may specify limiting resistors if you wish.

Mercury wetted reed relay modules must always be mounted to within 30° of vertical.

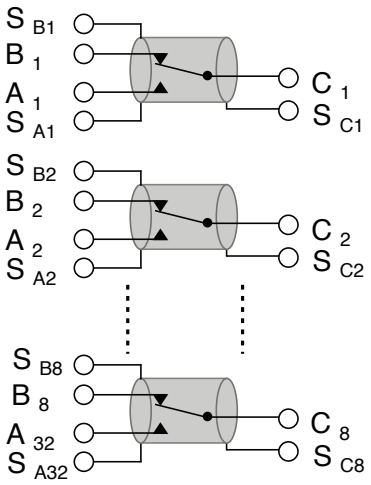
A Spare Reed Relay is built onto the circuit board to facilitate easy maintenance with minimum downtime.

Connectors

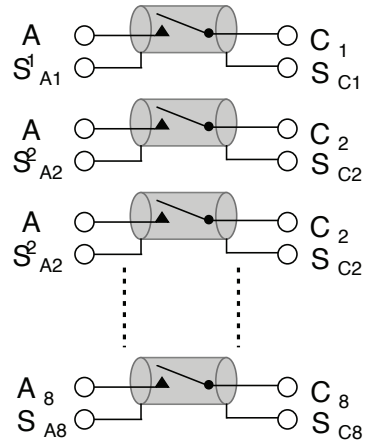
Connections to all modules are made via front panel mounted D-type male connectors (37 way or high density 62 way). A Terminal Block is available for some versions (only suitable for voltages < 40VDC). These have either 32 or 64 connections.

Width and Dimensions

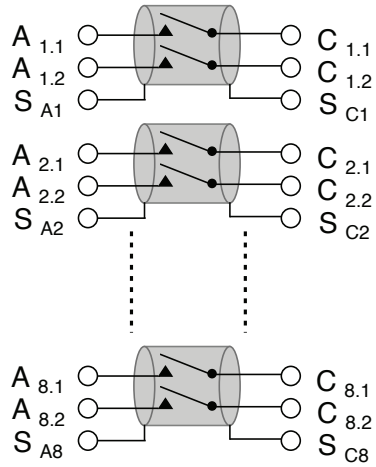
The General Purpose Reed Relay Module conforms to the 3U height (128mm) Eurocard standard and is housed in a 160mm deep screened plug-in module. Panel width for all versions with standard connectors is 1.2 Inches.



8 x Shielded SPDT Reed Relay (Model 10-120-001)



8 x Shielded SPST Reed Relay (Model 10-125-021)



8 x Shielded DPST Reed Relay (Model 10-125-022)

Changeover Relay Switching Specification (10-110 and 10-120 Models)

Switch Type:	Ruthenium	Mercury wet‡
Max Standoff Voltage:	200V†	200V†
Max Power:	3W	28W
Max Switch Current:	0.25A	1.0A
Max Carry Current:	1.2A	1.5A
Contact Resistance		
On:	200mΩ	200mΩ
Off:	>10^9Ω	>10^9Ω
Differential Thermal Offset:	<5µV	<10µV
Capacitance:		
Open Switch:	<6pF	<6pF
Switch-Switch:	<3pF	<3pF
Bandwidth (50Ω):	>15MHz	>15MHz
Max Operate Time:	1.5ms	3.0ms
Max Release Time:	0.75ms	1.5ms
Expected Life		
Low power load:	>$1x10^8$	>$1x10^9$
Full power load:	>$5x10^6$	>$1x10^8$

† Higher voltage standoffs are available.

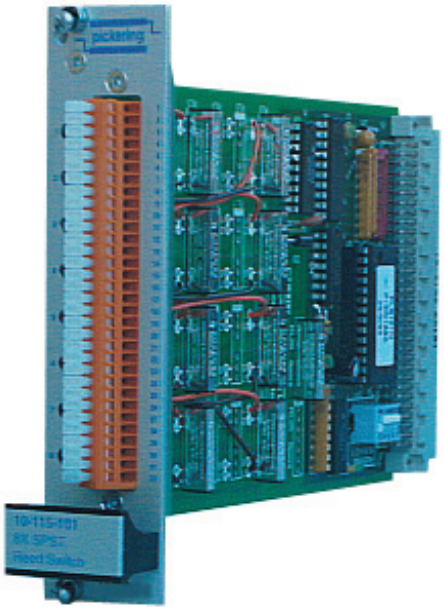
‡ Mercury wet versions may be available to special order.

SPST, DPST, 4PST Relay Switching Specification (10-115 and 10-125 Models)

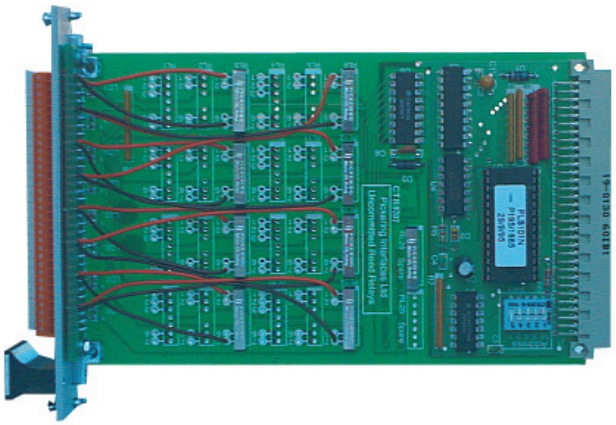
Switch Type:	Ruthenium	Mercury wet‡
Max Standoff Voltage:	200V†	200V†
Max Power:	20W	50W
Max Switch Current:	0.5A	2.0A
Max Carry Current:	1.0A	4.0A
Contact Resistance		
On:	200mΩ	200mΩ
Off:	>10^9Ω	>10^9Ω
Differential Thermal Offset:	<5µV	<10µV
Capacitance:		
Open Switch:	<6pF	<6pF
Switch-Switch:	<3pF	<3pF
Bandwidth (50Ω):	>15MHz	>15MHz
Max Operate Time:	1.5ms	3.0ms
Max Release Time:	0.75ms	1.5ms
Expected Life		
Low power load:	>$1x10^8$	>$1x10^9$
Full power load:	>$1x10^6$	>$1x10^8$

† Higher voltage standoffs are available.

‡ Mercury wet versions may be available to special order.



10-115 Reed Relay Module Terminal Block Version



PCB Layout for 10-115 Terminal Block Version

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to 55°C
Humidity:	Up to 95% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 95% non-condensing
Altitude:	15000m

Product Order Codes

Changeover:	
8xSPDT 1x37-way D-type, Ruthenium Reed	**10-110-001**
8xDPDT 2x62-way D-type, Ruthenium Reed	**10-110-002**
Normally Open:	
8xDPST 2x37-way D-type, Ruthenium Reed	**10-115-022**
7x4PST 4x62-way D-type, Ruthenium Reed	**10-115-024**
Shielded Changeover:	
7xSPDT 1x37-way D-type, Ruthenium Reed	**10-120-001**
Shielded Normally Open:	
8xSPST 1x37-way D-type, Ruthenium Reed	**10-125-021**
8xDPST 2x62-way D-type, Ruthenium Reed	**10-125-022**
Alternative Connectors:	
Terminal Block (Wago type)	**-T**
Other connectors are available to order, e.g. BNC	

Mercury Wetted Reed versions may be available to special order.

Mating Connectors & Cabling

37-way D-type socket with crimp pins	**10-960-037**
62-way D-type socket with crimp pins	**10-960-062**

Latest Details

Please refer to our Web Site for Latest Product Details.
www.pickeringtest.com

© Copyright (2006) Pickering Interfaces. All Rights Reserved
Pickering Interfaces maintains a commitment to continuous product development, consequently we reserve the right to vary from the description given in this data sheet.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP