

- Model 10-320: 7 High Voltage SPST Reed Relays
- Model 10-325: 8 Channel High Voltage Multiplexer
- Switch up to 1.5kVolts DC or 1.5kVolts AC Peak, 10W max Power
- 3000V DC/AC Peak Isolation
- Front Panel Status LEDs



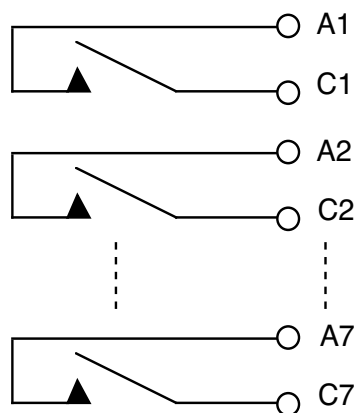
***Please contact Pickering for alternative PXI/LXI/USB solutions**

The 10-320/325 Range of High Voltage Switching Modules will Switch up to 1500V with Isolation to 3000V. Two module types are available: 7 x Normally Open Reed Relays and an 8 Channel Multiplexer which is suitable for constructing larger multiplexer systems.

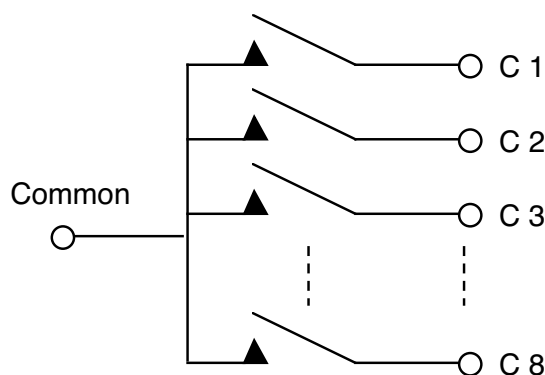
10-320/325 high voltage switching modules are available in both SPST Relay or Multiplexer versions. These units are designed for both "hot" switching (close switch after load applied) and "cold" switching (close switch before EHT load applied) high voltage applications, giving reliable switching with no disruption to internal logic.

Dry reed switches are used in both modules, these provide high reliability with very long life.

Applications for the 10-320/325 series modules include: circuit board isolation testing, capacitor leakage, relay testing, semiconductor breakdown monitoring and cable harness insulation testing.



Model 10-320: 7 x SPST High Voltage Reed Relays



Model 10-325: 8-Channel High Voltage Multiplexer

ISSUE 3.4 JUL 2019

Relay Type

The module is fitted with High Voltage Reed Relays.

All reed relays are manufactured by our sister company Pickering Electronics: pickeringrelay.com

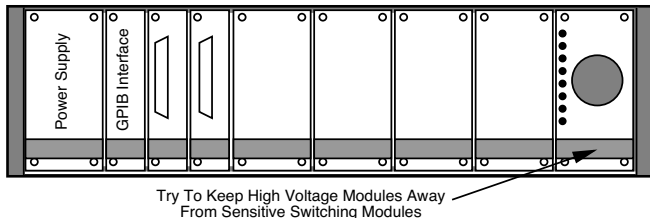
Programming

The High Voltage Reed Relay module is simple to program either by single relay or by byte pattern (8 relays simultaneously):

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

RFI Suppression

All 10-320/325 modules have extensive built-in RFI suppression, this will greatly increase switching life and eliminate potential problems due to high voltage transients upsetting either System 10 or more importantly your IEEE-488 Bus network. Please note, it is good practice to keep high voltage switching modules away from more sensitive switching units to minimise any crosstalk.



Switching Specification

Relay Type:	High Voltage Reed
Max Standoff Voltage:	3000V DC 3000V AC peak
Max Switching Voltage:	1500V DC 1500V AC peak
Max Power:	10W
Max Switch Current:	0.5A
Max Carry Current:	0.5A
Max Switch Current at Max Volts:	<5mA
Contact Resistance On:	3Ω
Contact Resistance Off:	>1x10 ¹¹ Ω
Bandwidth:	250kHz
Max Switch Operate Time:	1.0ms
Max Switch Release Time:	1.0ms
Expected Life - low power load:	>1x10 ⁸ operations
Expected Life - Full power load:	>5x10 ⁵ operations

Mechanical Characteristics

All modules conform to the 3U height (128mm) Eurocard standard and are 160mm deep. Front panel width is 2.4 inches.

Connectors

Connections are made via a front panel mounted 15-pin male high voltage connector with one pin used for an earth shield.

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

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2010, EMC Immunity EN61326-1:2013, Emissions EN55011:2009+A1:2010.

Product Order Codes

High Voltage SPST Reed Relay Switching Module	
7xSPST Dry Reed Switch	10-320-001
High Voltage Multiplexer Module	
8-Channel MUX, Dry Reed Switch	10-325-001

Mating Connectors & Cabling

Mating High Voltage 15-Pin Socket	10-966-001
-----------------------------------	------------

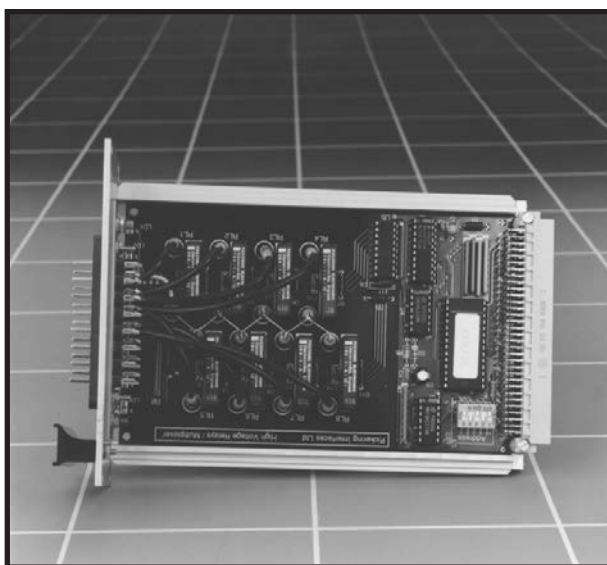
Product Customization

Pickering System 10 modules are designed and manufactured on our own flexible manufacturing lines, giving complete product control and enabling simple customization to meet very specific requirements.

Customization can include:

- Alternative relay types
- Mixture of relay types
- Alternative number of relays
- Different performance specifications

All customized products are given a unique part number, fully documented and may be ordered at any time in the future. Please contact your local sales office to discuss.



Internal Construction of the 10-325-001 High Voltage Multiplexer Module (shields removed)