



Racal Instruments™

1260-39

Multi-Purpose Switch Module

The Racal Instruments™ 1260-39 is a high-density, multi-purpose switch module. The combination of relay, multiplexer, and matrix switch functions, in addition to multiple user-defined configurations, offers a single-module solution for low-to-medium switch count applications.

Key Features

- Five switch configurations in a C-size, single-slot, VXIbus module
- 48 SPST, 50 MHz, 2 A general purpose relays
- 6 (1X2), 50 MHz, 2 A, 1-wire multiplexers
- 3 (1X4), 40 MHz, 2 A, 1-wire multiplexers
- 5 (2X8), 40 MHz, 2 A, 1-wire matrices
- 5 DPST, 10 A power relays

Product Information

The SPST relays provide the necessary bandwidth and current/voltage switch capability to make it the ideal general-purpose switch. Each channel is software configurable to operate as SPST, 2PST, 3PST, etc., without the use of hardware jumpers.

The 1x2 and 1x4 multiplexers can be externally configured to provide up to six 1x4s or two 1x12s. Each matrix directs two inputs to any of eight outputs. All switches are electromechanical relays; therefore, the inputs and outputs are interchangeable.

The Racal Instruments™ Option 01T interface controls the 1260-39, using both register-based and message-based operation. Refer to the applicable Option 01T data sheet for specifications and product features such as include, exclude, and scan lists, relay coil-current monitoring, and user-defined path names and reset states.

The Racal Instruments™ Adapt-A-Switch® Series includes *VXIplug&play* support for frameworks based on Microsoft Win32® application programming interface, including drivers for LabWindows™/CVI and LabVIEW™.

Specifications

Note: The Astronics Test Systems policy is one of continuous development and improvement. Consequently, the equipment may vary in detail from the description and specifications in this publication.

Input

(SPST, Multiplexers & Matrices)

Maximum Switching Voltage

- 250 VAC, 220 VDC

Maximum Switching Current

- 2 AAC, 2 ADC

Maximum Switching Power

- 125 VA, 60 W

DC Performance

(SPST, Multiplexers & Matrices)

Path Resistance

- <0.5 Ω

Insulation Resistance

- $10^9 \Omega$

Thermal EMF

- <20 μ V

Input (DPST)

Maximum Switching Voltage

- 220 VAC, 220 VDC

Maximum Switching Current

- 10 AAC, 10 ADC

Maximum Switching Power

- 2000 VA, 150 W

DC Performance (DPST)

Path Resistance

- <0.1 Ω

Insulation Resistance

- $10^9 \Omega$

Thermal EMF

- <20 μ V

AC Performance (Into 50 Ω)

(SPST, Multiplexers & Matrices)

Bandwidth (-3 dB)

- SPST, 1x2: >50 MHz
- 1x4, 2x8: >40 MHz

Insertion Loss (dB)

- 1 MHz: <0.2
- 10 MHz: <0.3
- 30 MHz: <0.5

Isolation

- >45 dB to 10 MHz

Crosstalk (dB)

- 1 MHz: <-70
- 10 MHz: <-50
- 30 MHz: <-20

Capacitance

- Closed Channel Hi-Lo: <5 pF
- Open Channel Hi-Lo: <50 pF

Interface

Peak and Dynamic Current

	I_{PM}	I_{DM}
+24 V	6 mA*	0 mA
+5 V	400 mA	75 mA
+5 V (w/Opt 01T)	2.4 A	575 mA

* per energized relay

Environmental

Temperature

- Operating: 0° C to 55° C
- Storage: -40° C to 71° C

Relative Humidity (non-condensing)

- 11° C to 30° C: 95% \pm 5%
- 31° C to 40° C: 75% \pm 5%
- 41° C to 55° C: 45% \pm 5%

Altitude

- Operating: 10,000 ft
- Storage: 15,000 ft

Shock

- 30 g, 11 ms, 1/2 sine wave

Vibration (non-operating)

- 0.013 in: (pk-pk), 5 to 55 Hz

Bench Handling

- 4-inch drop at 45°

Emissions

- EN55011A with limits in accordance with EN50081-1

Immunity

- IEC801-2, 3, 4 with limits in accordance with EN50082-1

Safety

- EN61010-1

Switching Time

- <10 ms (includes settling time)

Rated Switch Operations

- Mechanical: 100,000,000 operations
- Electrical: 100,000 operation at full rated load

MTBF (MIL-STD-217E)

- 243,515 hrs

Mechanical

Weight

- Without Opt 01T: 3.2 lbs (1.45 kg)
- With Opt 01T: 3.5 lbs (1.60 kg)

Dimensions

- C-size, Single-slot VXIbus Module

Cooling Requirements

- Without Opt 01T
 - Airflow: 2.0 l/s
 - Backpressure: 0.10 mm H₂O
- With Opt 01T
 - Airflow: 2.5 l/s
 - Backpressure: 0.15 mm H₂O



Ordering Information

Note: Compatible smart controllers: A smart card must be installed in the left-most slot of a set of 1260-xx series switch cards. There are two options:

- Option 01: Native command set. For use in previously designed switching systems that used the Option 01.
- Option 01T: SCPI command set. For use in new systems and previously designed systems that used the Option 01T.

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Multi-Purpose Switch Card

Options:

OPT-401901-005 : Racal Instruments™ Option 01, Smart Control Module installed (manual must be ordered separately; see below)

404820-005 : Racal Instruments™ Option 01, Smart Control Module (not installed) with manual

OPT-405108-001 : Racal Instruments™ Option 01T Smart Control Module installed (manual must be ordered separately; see below)

407531-001 : Racal Instruments™ Option 01T Smart Control Module (not installed) with manual



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