

# Racal Instruments™

# 1260-160B/E

## High-Performance Microwave SPDT Switch Plug-In

The Racal Instruments™ 1260-160B/E is a 1- or 2-slot microwave switch plug-in. It can be used in either the Racal Instruments™ 1260-100 Adapt-a-Switch™ VXI carrier or the Racal Instruments™ 1256 GPIB/RS-232 switching mainframe.

### Key Features

- DC to 18 GHz frequency range
- 1- and 2-slot plug-ins
- **Extremely long-life switches: five million operations**
- **MTTR of five minutes**
- **Ideal for switching cellular, PCS, and military communications signals**

### Product Information

The 1260-160B/E is optimized for high-performance, high-density microwave switching applications. The 1260-160B/E uses high-quality, long-life Aromat switches for the ultimate in signal integrity. These switches are highly reliable with a minimum specified lifetime of 5,000,000 operations.

The 1260-160B/E is ideally suited for switching signals in modern communications systems, including Cellular, PCS, and Satcom applications. It additionally operates superbly in automatic test equipment systems designed for the testing of military telecommunications, surveillance, and related equipment.

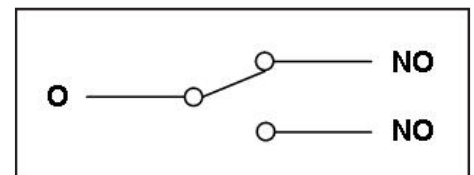
The 1260-160B/E is designed in two standard configurations, with either two or five SPDT switches. The 1260-160B occupies one slot, and the 1260-160E occupies two slots. A 26.5 GHz frequency range version and other configurations are possible; contact the factory for availability.

Users make connections directly to the switch SMA connectors at the front panel of the plug-in, eliminating cumulative losses and induced noise. A specially-designed, deep-slotted socket for use with a 1/4"

socket drive is available to connect/disconnect the SMA interface connectors quickly and easily.

When used with the 1260-100 Adapt-a-Switch™ carrier, the 1260-160B/E requires a Racal Instruments™ Option 01T to communicate with the switch plug-ins and to provide message-based operation for both ease of use and register-based operation for maximum speeds. When used with the 1256 mainframe, no additional controller is required.

Our Adapt-a-Switch™ line provides VXI *plug&play* support for frameworks based on Microsoft Win32® application programming interface, including drivers for LabWindows™/CVI and LabVIEW™.



2 or 5 independent switches; 1 channel shown

## 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.

### Microwave Performance

#### Frequency Range

- Standard: DC to 18 GHz
- Optional: DC to 26.5 GHz

#### Impedance

- 50 Ω

Frequency Range (GHz)	DC-4	4-8	8-12.4	12.4-18
RF Input Power <sup>1</sup> (CW)	120	80	60	50
Insertion Loss (max dB)	0.2	0.3	0.4	0.5
Isolation (min dB)	80	70	65	60
VSWR (max)	1.15:1	1.25:1	1.35:1	1.5:1

<sup>1</sup> Input power specified under following conditions: System VSWR 1.1 max (When VSWR 1.5, input power x 0.95); No contact switching; Ambient temperature 40° C

### Interface

#### Front Panel I/O Interface Connector

- SMA male (not supplied)

### Power Requirements

- +5 VDC
- 1260-160B: 0.42 A max
- 1260-160E: 0.94 A max

### Environmental

#### Temperature

- Operating: -20° C to 60° C
- Storage: -40° C to 75° C

#### Relative Humidity

- 95% ±5% non-condensing at 30° C
- 75% ±5% above 30° C
- 45% ±5% above 40° C

#### Altitude

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

#### Shock

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

#### Vibration

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

#### Bench Handling

- 4-inch drop at 45°

#### Emissions

- EN61326, Class A, Table 3

#### Immunity

- EN61326, Class A, Table 1

#### Safety

- CE, EN61010-1

#### Switching Time

- <15 ms (includes settling time)

### Rated Switch Operations (min)

- Mechanical: 5,000,000 operations at 180 cpm per position
- Electrical: 5,000,000 operations at 18 GHz, VSWR 1.2 max

### MTBF (MIL-HBK-217E, excluding switches)

- 860,000 hrs

### MTTR

- <~5 min

### Mechanical

#### Weight

- 1260-160B: 6.1 oz. (173 g)
- 1260-160E: 11.3 oz. (320 g)

#### Dimensions

- 4.5" H x 0.75" W x 9.5" D (Single-Slot Plug-In)
- 4.5" H x 1.5" W x 9.5" D (Dual-Slot Plug-In)

### Cooling (1260-100 Adapt-A-Switch® Carrier)

- Airflow: 3.0 l/s
- Backpressure: 0.5 mm H<sub>2</sub>O



The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions and Immunity to Electromagnetic Disturbances, and complies with European electrical safety standards.

## Ordering Information

Note: When the 1260-160B/E is used in a VXI mainframe other than a 1256, a Racal Instruments™ Option 01T Smart Control Module must be installed in the mainframe's left-most slot.

### 407766-003 : Racal Instruments™ 1260-160B

Two SPDT Microwave Switches, 18 GHz

### 407766-005 : Racal Instruments™ 1260-160E

Five SPDT Microwave Switches, 18 GHz

### Accessories:

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

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



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