

### High-Performance SP4T Microwave Switch Plug-In Model 1260-164A/B



- ◆ **SP4T Configuration**
- ◆ **2-Slot Plug-In**
- ◆ **DC to 18 GHz Frequency Range**
- ◆ **MTTR Under Five Minutes**
- ◆ **High-Quality Narda Switches**
- ◆ **Self-Cleaning Switches for High Repeatability and Accurate System Calibration**
- ◆ **Ideal for Switching Cellular, PCS, and Military Communications Signals**

The Model 1260-164A/B is a 2-slot microwave switch plug-in for use in either the 1260-100 VXI Carrier or the Model 1256 GPIB/RS-232 Switching Mainframe. It's optimized for high-performance, high-density, microwave switching applications. The 1260-164A/B uses high-quality sealed Narda switches for the ultimate in signal integrity.

The 1260-164A/B provides highly reliable and repeatable operation over a specified lifetime of >1,000,000 operations. Narda's specialized microwave switch design includes a self-cleaning wiper, which cleans the contacts every time the switch closes, ensuring specification accuracy over the lifetime of the switch.

The 1260-164A/B is ideal for switching signals used in modern communications systems including Cellular, PCS, and Satcom applications. It is also appropriate for ATE systems designed for testing military telecommunications, surveillance, and related equipment.

User connections are made 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 (1/4" drive) is available to connect/disconnect the SMA interface connectors quickly and easily.

Should switch replacement become required, they are easily removed and replaced in under five minutes. This maximizes system uptime and readily facilitates field upgrades.

The 1260-164A/B is available in two standard configurations: one or two switches. Other configurations are possible; contact the factory for availability.

When used with the 1260-100 Adapt-a-Switch<sup>®</sup> carrier, the 1260-164A/B requires an Option 01T to communicate with the switch plug-ins. This option additionally provides message-based operation for ease-of-use and register-based operation for maximum speeds. When used with the 1256 mainframe, no additional controller is required.

Racal Instruments' Adapt-a-Switch line includes drivers for LabWindows/CVI and LabVIEW for VXI applications. It also includes VXI *plug&play*-compliant support for WIN95/98/NT/2000 platforms. For the latest driver updates, please refer to [www.racalstruments.com](http://www.racalstruments.com).

# MODEL 1260-164A/B SPECIFICATIONS

## MICROWAVE PERFORMANCE

**Frequency Range**  
DC to 18 GHz

**Impedance**  
50 Ω

**Maximum Power**  
100 MHz: 490 W  
1 GHz: 180 W  
10 GHz: 60 W  
18 GHz: 50 W

Frequency Range (GHz)	DC-3	3-8	8-12.4	12.4-18
Insertion Loss (MAX dB)	0.15	0.25	0.24	0.45
Isolation (MIN dB)	85	75	65	65
VSWR (MAX)	1.15:1	1.25:1	1.35:1	1.45:1

**Switching Sequence**  
Break Before Make

**Operating Mode**  
Normally Open

## VXIBUS INTERFACE DATA

**Cooling (1260-100 Adapt-a-Switch Carrier)**  
Airflow: 3.0 liters/sec  
Backpressure: 0.5 mm H<sub>2</sub>O

**Power Requirements**  
+5 VDC  
1260-164A: 1.00 A max  
1260-164B: 1.95 A max

## ENVIRONMENTAL DATA

**Temperature**  
Operating: 0° C to 60° C  
Storage: -40° C to 75° C

**Relative Humidity**  
95% ±5% non-condensing at <30° 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) 5-55 Hz

**Bench Handling**  
4-inch drop at 45°

**EMC Emissions**  
EN61326, Class A, Table 3

**Immunity**  
EN61326, Class A, Table 1

**Safety**  
CE, EN61010-1

## RELIABILITY

**Switching Time**  
<15 ms (includes settling time)

**Rated Switch Operations**  
Electrical: 1,000,000 operations at full rated load

**MTBF (MIL-HBK-217E, excluding switches)**  
1260-164A: 860,000 hrs.  
1260-164B: 560,000 hrs.

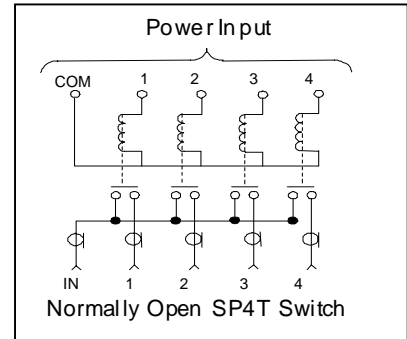
**MTTR**  
<5 min.

## MECHANICAL

**Weight**  
1260-164A: 5.8 oz. (160 g)  
1260-164B: 8.0 oz. (230 g)

**Dimensions**  
4.5" H x 1.5" W x 9.5" D (Dual-Slot Plug-In)

**Front Panel I/O Interface Connector**  
SMA male (not supplied)



ORDERING INFORMATION		
Model	Description	Part Number
1260-164A	One SP4T Microwave Switch, 18 GHz	407778-001
1260-164B	Two SP4T Microwave Switches, 18 GHz	407778-002
310295	Spare SP4T Microwave Switch	310295
456890	Deep Slotted Socket, 5 /16"	456890

For the latest driver updates, please refer to [www.racalstruments.com](http://www.racalstruments.com).

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

The Racal Instruments policy is one of continuous development; consequently, the equipment may vary in detail from the description and specification in this publication.

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