



## High-Voltage Coaxial Plug-In Switch Card

- ◆ **Coaxial Interface**
- ◆ **50  $\Omega$  and 75  $\Omega$  Versions**
- ◆ **Ideal for Power Supply Transient Testing**
- ◆ **High-Frequency**
- ◆ **High-Voltage**
- ◆ **High-Density**

Racal Instruments 1260-152HV/172HV is a high-voltage, high-frequency, coaxial switch card for use in either the Adapt-a-Switch™ 1260-100, VXI carrier, or the 1256, GPIB/RS-232 Switching Mainframe. Its high-density coaxial interface allows for high-frequency signal applications, while simultaneously ensuring safety in a high-voltage environment by isolating the center conductor from the return signal..

The 1260-152HV/172HV is ideal for measuring transient voltages or for applications that require both high-frequency and high-voltage switching, such as power supply transient testing. With a -3 dB bandwidth of 700 MHz, it is capable of switching up to 500 V. This switch card is comprised of 20 discrete 1x1 SPST relays and 2 discrete 1x2 SPDT relays.

All relays on the 1260-152HV/172HV are electromechanical, making inputs/outputs interchangeable to meet test requirements. Each switch card includes coaxial connector shells; however, the connector pins must be purchased separately. Cables supplied with the coaxial pins at both ends (tested up to 1 GHz) are optional and may be ordered in 2, 6, or 12-foot lengths. By cutting the cable in half, the user can support 2 channels per cable and alleviate the need for a special crimp tool. Refer to ordering information on the second page of this data sheet.

When used with the Adapt-a-Switch™ carrier, the 1260-152HV/172HV requires an Option 01T to communicate with the switch cards *and* to provide both message-based operation for ease of use and register-based operation for maximum speed. When used with the 1256 Switching Mainframe, no controller is required, and message-based operation is available.

The Adapt-a-Switch™ line includes drivers for LabWindows/CVI and LabView for VXI applications. It also includes VXIplug&play compliant support for WIN95/98/NT/2000 platforms.

# 1260-152HV/172HV PRODUCT SPECIFICATIONS

## INPUT

### Maximum Switching Voltage

AC: 500 VAC peak  
DC: 500 VDC

### Switching Current

AC: 0.50 AAC peak  
DC: 0.50 A

### Switching Power

AC: 10 VA  
DC: 10 W

### Power Requirements

+5 VDC 150 mA + 25 mA per energized relay (0.8 A Max.)

## DC PERFORMANCE

### Path Resistance

< 1  $\Omega$

### Isolation

> 35 dB to 100 MHz  
> 18 dB to 350 MHz

## AC PERFORMANCE

### Characteristic Impedance

1260-152HV: 50  $\Omega$   
1260-172HV: 75  $\Omega$

### Bandwidth (-3 dB)

700 MHz

## Insertion Loss

300 KHz: < 0.2 dB  
100 MHz: < 0.5 dB  
350 MHz: <1.5 dB

## VSWR

1260-152HV:  
1.3:1 max 100 MHz  
1.9:1 max 350 MHz  
1260-172HV:  
1.2:1 max 100 MHz  
1.4:1 max 350 MHz

## Crosstalk

< -45 dB to 100 MHz  
< -25 dB to 350 MHz

## Capacitance

Channel-Ground: < 60 pF  
Open-Channel: < 5 pF

## Insulation Resistance

> 10<sup>9</sup>  $\Omega$  at 500 V

## Relay Settling Time

< 5 ms

## ENVIRONMENTAL DATA

### Cooling

See 1260-100 cooling data

### Temperature

Operating: 0° C to +55° C  
Non-operating: -40° C to +75° C

### Relative Humidity

85%  $\pm$  5% non-condensing at < 30° C

## Altitude

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

## EMC

### Emissions

EN61326, Class A, Table 3

### Immunity

EN61326, Class A, Table 1

### Safety

CE, EN61010-1

## RELIABILITY

### Shock

30 g, 11 ms, 1/2 sine wave

### Vibration

0.013 in. (pk-pk), 5-55 Hz

### MTBF

300,000 hrs. (MIL-HDBK-217E)

## MECHANICAL

### Bench Handling

4-inch drop at 45°

### Weight

8 oz. (0.23 kg)

### Dimensions

4.5" H X 0.75" W X 9.5" D

**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.

## ORDERING INFORMATION

### MODEL/DESCRIPTION

Racal Instruments 1260-152HV High-Frequency, High-Voltage Coaxial Switch Module, 50  $\Omega$   
Racal Instruments 1260-172HV, High-Frequency, High-Voltage Coaxial Switch Module, 75  $\Omega$   
26-Pin Housing  
HV Coaxial Mating Pin  
Single Coaxial Cable w/HV pins, 50  $\Omega$ , 2 ft.  
Single Coaxial Cable w/HV pins, 50  $\Omega$ , 6 ft.  
Single Coaxial Cable w/HV pins, 50  $\Omega$ , 12 ft.  
Single Coaxial Cable w/HV pins, 75  $\Omega$ , 2 ft.  
Single Coaxial Cable w/HV pins, 75  $\Omega$ , 6 ft.  
Single Coaxial Cable w/HV pins, 75  $\Omega$ , 12 ft.

### PART NUMBER

407742-001  
407742-002  
602221-126  
602221-903  
407746-001  
407746-003  
407746-006  
407747-003  
407747-003  
407747-006

**Note:** The 1260-152HV/172HV is supplied with one set of mating backshells. Coaxial pins or cables must be ordered separately.

The EADS North America Defense Test and Services 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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