



## VXIbus 2x2 Optical Switch Module

- ◆ **Ideal for SONET Testing**
- ◆ **High Repeatability for Accurate Testing**
- ◆ **Modular VXIbus Architecture**
- ◆ **Quick Delivery from Stock**
- ◆ **Optional Overnight Depot Spares**
- ◆ **Special Configurations Readily Available**

Racal Instruments™ 1260-822 optical switch modules bring the advantages of the modular VXIbus architecture to optical systems test. Modules can quickly and easily be removed and replaced for maximum system uptime. In addition, we offer overnight depot spares contracts to free you from stocking spares.

These optical switch modules are ideal for SONET test, fiber-optic component test, and fiber network monitoring. They are commonly used in terminal equipment and transceiver testing to simulate loopback and bypass conditions.

The 1260-822 optical switch module uses 2x2 prism switches to provide channel selection from two input fibers to two output fibers using a moving prism between fixed collimator pairs. Its 2x2 topology can be used to insert or bypass signal paths (see diagram on following page).

This implementation provides very fast switching speeds with ultra-low insertion loss and repeatable switch paths, facilitating the construction of highly accurate optical test systems. These switches are optically passive, and operate independently of data rate, data format, and optical signal direction.

An Option 01T is required to communicate with 1260 series modules, and provides message-based operation for ease of use and register-based operation for maximum speed. The Option 01T mounts on the leftmost 1260 series module and does not consume any VXI slots. The Option 01T provides a single point of software control for the switching system with advanced features such as include, exclude, scan, relay monitoring, user defined path names, and reset states.

The 1260 series line includes *VXI plug&play* support of Win95/NT frameworks including drivers for LabWindows/CVI and LabView. Please refer to the Option 01T data sheet for additional product features and specifications.

# 1260-822 PRODUCT SPECIFICATIONS

## PERFORMANCE

### Optical Fiber Type

9/125 $\mu$ m

(Other fiber types available upon request)

### Wavelength Range

1290-1570nm

### Insertion Loss (See note 2)

<1.9dB maximum, 1.1dB typical

### Back Reflection (See note 2)

<55dB minimum

### Polarization Dependent Loss

(See note 3)

0.1dB max. (with connectors)

0.05dB max (switch only)

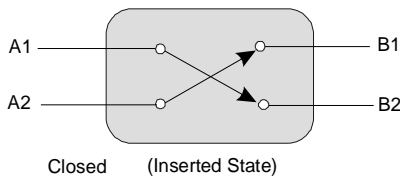
### Repeatability (See note 4)

$\pm$  0.01dB maximum

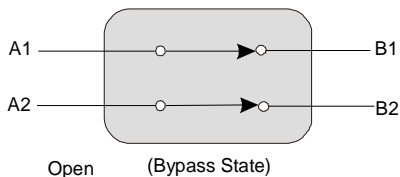
$\pm$  0.005dB typical

### Isolation

80dB maximum



Closed (Inserted State)



Open (Bypass State)

SWITCH n (n=0 to 3)

## 1260-822 Block Diagram

## INTERFACE DATA

### Cooling Requirements

0.14 liter/sec @ 0.008mm H<sub>2</sub>O

0.58 liter/sec @ 0.035mm H<sub>2</sub>O w/Option 01T

### Power Requirements

+5VDC @ 0.31A

+5VDC @ 1.31A w/Option 01T

## ENVIRONMENTAL DATA

### Temperature

Operating: 0°C to 50°C

Storage: -40°C to 71°C

### Relative Humidity

90% RH non-condensing at <30°C for 5 days

### Altitude

0.013" <sub>Pk-Pk</sub>, 5-55Hz

### Shock

30g, 11 ms, ½ sine wave

### Vibration

0.013inch <sub>Pk-Pk</sub>, 5-55Hz

### Bench Handling

4 in. drop at 45°

## EMC

### Emissions

EN55011A with limits in accordance with EN50081-1

### Immunity

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

### Safety

EN61010-1

## RELIABILITY

### Switching Time

15msec maximum

### Rated Switch Operations

>10<sup>7</sup> operations minimum

### MTBF

>100,000hrs.

## MECHANICAL

### Weight

3.30lbs (1.50kg)

3.355lbs (1.61kg) w/Option 01T

### Dimensions

Single-slot, C-size, VXIbus module


### Front Panel Interface Connector

FC/SPC

(Other style interface connectors available upon request)

### Notes:

1. Unless indicated all specifications are referenced with connectors.
2. Measured at 23°C  $\pm$ 5°C.
3. Drift of any channel to a reference channel at  $\pm$ 3°C temperature deviation over 7 day period.
4. Measured at 1550nm.
5. 50 cycles measured at constant temperature after 1 hour warm-up.

 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 1260-822B, Dual 2X2 Optical Switch

Racal Instruments 1260-822D, Quad 2X2 Optical Switch

Additional User Manual

### PART NUMBER

407709-002

407709-004

980673-060

\*One Option 01T must be ordered with switch system. Please specify the card on which Option 01T will be installed

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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