



Racal Instruments™

OBSOLETE

1260-64A/B/C

18 GHz Microwave Switch Module

The Racal Instruments™ 1260-64 is a double-slot, C-size VXIbus module with up to four SP6T, 50 Ω coaxial switches. It is optimized for high-performance, high-density, low-noise switching of signals up to 18 GHz.

Key Features

- Up to four SP6T, 50 Ω coaxial switches
- DC to 18 GHz frequency range
- SMA front panel connections
- 32 SPST relays to drive external devices
- Terminated versions available
- Ideal for switching cellular, PCS, and military communications signals

Product Information

The 1260-64 is ideal for switching signals used in modern communications systems, including Cellular, PCS, and Satcom applications. It is also ideal for ATE systems designed for testing Military telecommunications, surveillance, and related equipment.

User connections are made directly to the relay SMA connectors at the front panel, eliminating cumulative losses and induced noise. A specially designed, deep-slotted socket (1/4" drive) is also available to connect/disconnect the SMA interface connectors quickly and easily.

Microwave switch relay coil currents are monitored to provide additional assurance of proper relay operation. Operating life for the relay is 1,000,000 cycles minimum.

The 1260-64 also contains 32 SPST relays in groups of 16 to drive external devices. These relays utilize the internal supplies (+5 V, +12 V, +24 V) or an external supply to drive any device.

Terminated switch versions, designated with an "S", are available for applications requiring switches that self-terminate to 50 Ω . The 1260-64T is available in two

configurations with 3 or 4 SP6T (single-pole six-throw) terminated relays. Other configurations are possible by special order; contact the factory for a quote.

The 1260-64 requires a Racal Instruments™ Option 01T to communicate with the switch cards. This option additionally provides message-based operation for ease-of-use and register-based operation for maximum speeds. Racal Instruments 1260 line includes drivers for LabWindows™/CVI and LabVIEW™ for VXI applications. It also includes VXIplug&play compliant support for frameworks based on Microsoft Win32® application programming interface.

Astronics
TEST SYSTEMS

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

- 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-4	4-8	8-12	12-18
Insertion Loss (Max dB)	0.3	0.35	0.4	0.5
Isolation (Min dB)	75	70	65	60
VSWR (Max)	1.2:1	1.3:1	1.4:1	1.5:1

Switching Sequence

- Break Before Make

Operating Mode

- Normally Open

32-Channel DC Performance

(Unterminated Only)

Maximum Switchable Voltage (Terminal-Terminal or Terminal-Chassis)

- From external supply: 30 VDC

Number of Banks

- 2

Number of Switches

- 16, 1-wire per bank

Maximum Switchable Current (DC or AC_{rms})

- Per Bank: 4 A
- Per Switch: 0.5 A

Maximum Switchable Power

- Per Module: 30 WDC, 62.5 VA
- Operating Mode: Normally open

Power Requirements

- +5 VDC at 2.8 A w/Option 01T
- +5 VDC at 0.4 A w/o Option 01T
- +12 VDC at 320 mA per energized relay

Interface

Front Panel I/O Interface Connector

- SMA male (not supplied)
- 50-pin mating connector kit is included for SPST relays

Environmental

Temperature

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

Relative Humidity

- 95% \pm 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 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

- Electrical: 1,000,000 operations at full rated load

MTBF (MIL-STD-211 FN2, includes relays)

- 91,942 hrs

MTTR

- <5 min

Mechanical

Weight

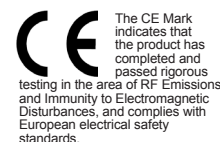
- 5.0 lbs (2.25 kg) w/o Option 01T
- 5.28 lbs (2.38 kg) w/ Option 01T

Dimensions

- C-size, Double-slot VXIbus module

Cooling

- Without Option 01T
 - Airflow: 1.0 l/s
 - Backpressure: 0.05 mm H₂O
- With Option 01T
 - Airflow: 2.0 l/s
 - Backpressure: 0.2 mm H₂O



Ordering Information

Note: Compatible smart controller: A smart card must be installed in the left-most slot of a set of 1260-xx series switch cards. Two 1260 series smart cards exist:

- Option 01: Native command set. Not compatible with this 1260-xx series switch card and cannot be used.
- Option 01T: SCPI command set. Compatible with this 1260-xx series switch card and must be used in the chain.

407089 : Racal Instruments™ 1260-64A

Four SP6T Microwave Switches, 18 GHz

407089-001 : Racal Instruments™ 1260-64B

Two SP6T Microwave Switches, 18 GHz

407089-002 : Racal Instruments™ 1260-64C

One SP6T Microwave Switch, 18 GHz

Ordering Information

continued

407089-S-1423 : Racal Instruments™ 1260-64S-1423

Four SP6T Microwave Switches, 18 GHz, Terminated

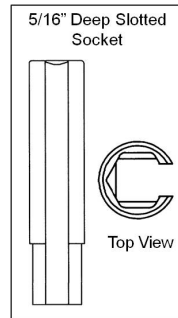
407089-S-1459 : Racal Instruments™ 1260-64S-1459

Three SP6T Microwave Switches, 18 GHz, Terminated

Options and Accessories:

OPT-405108-001 : Racal Instruments™ Option 01T, Message-Based and Register-Based Switch Controller (Installed)

456890 : 5/16" Deep Slotted Socket for 1/4" ratchet;
to service SMA cables (see illustration)



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