

7999-4

- Ideal for PRODUCTION TEST
- Minimize wiring
- Improve signal integrity
- Save rack space
- Increase cost efficiency

Ordering Information

7999-4 Microwave SPDT RS-232 Switch

This product is available with an Extended Warranty.

Accessories Supplied

AC/DC power adapter (100–120VAC/220–240VAV, 50 or 60Hz) with line cord, user and service manual.

7999-5

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Ordering Information

7999-5 16-Channel RS-232 Relay Controller

This product is available with an Extended Warranty.

Accessories Supplied

AC/DC power adapter (100–120VAC/220–240VAV, 50 or 60Hz) with line cord, user and service manual, two terminal block mating connectors (part no. CS-846-1).

1.888.KEITHLEY (U.S. only)

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Microwave SPDT RS-232 Switch



CONTACT CONFIGURATION: Single Pole Double Throw.
CONNECTOR TYPE: 3-SMA type connectors (COMMON, NO, NC).
MAXIMUM SIGNAL: 120W 3GHz (VSWR 1.15 or less), CAT I.
CONTACT RESISTANCE: 0.15Ω max.
CONTACT LIFE: Mechanical: 5×10^6 (at 180cpm).
Electrical: 5×10^6 (3GHz, 50Ω, VSWR 1.2 at 20cpm).
MAXIMUM COMMON MODE: 42V peak, any terminal to earth.
ACTUATION TIME: 25ms.
RELAY CHARACTERISTICS (50Ω):

| Frequency | DC–1GHz | 1–4GHz | 4–8GHz | 8–12.4GHz | 12.4–18GHz |
|--------------------------|---------|--------|--------|-----------|------------|
| VSWR (max) | 1.1 | 1.15 | 1.25 | 1.35 | 1.5 |
| Insertion Loss (dB max.) | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 |
| Isolation (dB min.) | 85 | 80 | 70 | 65 | 60 |

RF/Microwave Switching for Production Test

The Model 7999-4 is a small, cost-effective, stand-alone RS-232 controllable microwave switch. The 7999-4 contains a DC–18GHz SPDT switch packaged in a small metal enclosure. The small package provides placement flexibility within a test environment, enabling a reduction in RF/microwave cabling—increasing signal integrity.

GENERAL

INTERFACE: RS-232 control (9600 baud, 8 data, 1 stop). Response terminator selectable (CR, LF, CRLF, LF CR).
INDICATORS: Power, relay position status.
ENVIRONMENT: Operating: 0° to 40°C, up to 35°C <80% RH. **Storage:** –25° to 65°C.
POWER CONSUMPTION: 6.5W
WARRANTY: 1 year.
EMC: Conforms with European Union Directive 89/336/EEC, FCC part 15 class B.
SAFETY: Conforms with European Union Directive 73/23/EEC.
DIMENSIONS: 109mm long × 112mm wide × 59mm deep (4.3" × 4.4" × 2.3").

RS-232 Relay Controller

16-Channel



OUTPUTS: 16 open collector relay control lines, each capable of 300mA max. sink current. Coil suppression diodes included.
OUTPUT SATURATION VOLTAGE: 0.18V typ. @ 300mA.
MAXIMUM RELAY POWER VOLTAGE: 28V DC (user supplied).
CONNECTORS: Two 10-position quick disconnect terminal blocks.
Upper Connector: Relay power, relay common, relay control outputs 1–8.
Lower Connector: Relay power, relay common, relay control outputs 9–16.
 The relay common of the upper and lower connectors is internally connected together to chassis ground.
 The relay power inputs of the upper and lower connectors are separate, allowing two different coil voltages to be used for each bank.

RS-232 Control for Production Test Microwave Signal Conditioning

The Model 7999-5 is a 16-channel switch controller providing 16 open collectors. Each open collector is capable of sinking 300mA at 28VDC, and includes an arc suppression diode. The small package provides placement flexibility within a test environment, enabling a reduction in RF/microwave cabling—increasing signal integrity. The Model 7999-5 is also very useful for controlling other components, such as programmable attenuators.

GENERAL

INTERFACE: RS-232 control (9600 baud, 8 data, 1 stop). Response terminator selectable (CR, LF, CRLF, LF CR).
ENVIRONMENT: Operating: 0° to 40°C, up to 35°C <80% RH. **Storage:** –25° to 65°C.
POWER CONSUMPTION: 7.3W
WARRANTY: 1 year.
EMC: Conforms with European Union Directive 89/336/EEC, FCC part 15 class B.
SAFETY: Conforms with European Union Directive 73/23/EEC.
DIMENSIONS: 109mm long × 112mm wide × 59mm deep (4.3" × 4.4" × 2.3").

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