

KEYSIGHT TECHNOLOGIES (AGILENT HP)

44471A

The Keysight (Agilent) 44471A is a 10-channel, 1-wire general-purpose relay module designed for use with the 3488A Switch/Control Unit. It features independent SPST latching relays capable of switching up to 250 V, 2 A, and up to 60 W (DC) or 125 VA (AC) per channel. The module includes built-in screw terminal connections and custom terminal pads for adding relay protection networks, making it ideal for DUT power control, external relay actuation, or signal routing.

SPECIFICATIONS

General

Interfaces	Screw terminal block
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Physical

Power Supply	Powered via mainframe backplane
Operating Temperature	0 °C to 55 °C °C

Topology and Configuration

Switch Type	Non-latching Relay
Number of Channels	10
Configuration Topology	10 independent channels
Contact Form	SPST (Single Pole Single Throw)
Compatible Mainframes	Agilent HP 3488A Switch/Control Unit
Protection Networks	Provisions on-board to add simple RC protection circuits

Physical and Connection Interface

Connector Type	Screw terminal block
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DC Electrical Specifications

Maximum Switching Voltage (DC)	250 V
Maximum Switching Current	2 A
Maximum Carry Current	2 A
Maximum Switching Power (per channel, DC)	60 W
Initial Closed Channel Resistance	< 1 Ω
Thermal EMF / Offset Voltage	< 4 μ V per channel

AC and RF Electrical Specifications

Maximum Switching Voltage (AC)	250 V
Maximum Switching Power (per channel, AC)	125 VA

Timing and Switching Dynamics

Maximum Scan Rate	43 channels/sec
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Relay Life and Reliability

Mechanical Lifetime (No-Load)	10^8 cycles
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AC Performance

-3 dB Bandwidth	10 MHz (into 50 Ω)
Crosstalk (at 100 kHz)	<-80 dB (into 50 Ω)
Crosstalk (at 1 MHz)	<-60 dB (into 50 Ω)
Isolation (at 100 kHz)	<-80 dB (into 50 Ω)
Isolation (at 1 MHz)	<-60 dB (into 50 Ω)

Reliability

Electrical Lifetime	10^5 operations (at rated load)
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Environmental

Storage Temperature Range	-40 °C to +75 °C
Operating Humidity	Up to 95% R.H. at 40 °C

Performance

Relay Settling Time	< 20 ms
Relay Mechanism	Non-latching
DC Isolation Resistance	> 10^10 Ω (at 25 °C, < 40% R.H.)
Maximum Terminal-to-Chassis Voltage	250 V AC rms / 250 V DC

Inputs & Outputs

Terminal Connection	Detachable screw terminal block
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TECHNOLOGY

Electromechanical Latching Relay

APPLICATIONS

Independent signal switching, DUT power control, attenuator configuration, relay actuation

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