

KEYSIGHT TECHNOLOGIES (AGILENT HP)

44470A

The Keysight Technologies (formerly Agilent / HP) 44470A is a 10-channel multiplexer module designed for use with the HP 3488A Switch/Control Unit. It provides dual-line (high and low) switching to a common bus, making it ideal for precision low-level signal routing, four-wire resistance measurements, and general-purpose signal scanning up to 250V and 2A.

SPECIFICATIONS

Physical

Power Supply	Powered directly by HP 3488A mainframe
Operating Temperature	0 to 55 °C °C
Weight	0.31 kg kg
Mainframe Slots Occupied	1 slot
Maximum Wire Size	18 AWG
Shipping Weight	0.77 kg
Form Factor	Plug-in module

Channel and Configuration

Number of Channels	10
Multiplexer Configuration	10-channel, 2-wire
Relay Type	Latching electromechanical
Switch Type	Double-pole, single-throw (DPST)
Input Connector Type	Screw terminal block
Custom Circuit Provision	Provisions to add simple attenuators or filter networks
Operating Modes	Break-before-make or multiple channels close
4-Wire Resistance Support	Card pair mode programming (using two 44470A modules)

Electrical Specifications

Maximum Switching Voltage (DC)	250 V
Maximum Switching Voltage (AC RMS)	250 V
Maximum Switching Current (DC)	2 A
Maximum Switching Current (AC RMS)	2 A
Maximum Carrying Current	2 A
Maximum Switching Power (DC)	60 W
Maximum Switching Power (AC)	125 VA
Thermal Offset Voltage	< 3 µV
Closed-Channel Path Resistance	< 2 Ω
DC Isolation Resistance	10 ¹⁰ Ω (at 25 °C, 50% RH)

AC and RF Performance

Bandwidth (-3 dB)	10 MHz (typical into 50 Ω)
Crosstalk (at 100 kHz)	< -75 dB
Crosstalk (at 1 MHz)	< -55 dB
Crosstalk (at 10 MHz)	< -35 dB

Switching Characteristics and Lifetime

Relay Actuation Time	10 ms (typical)
Maximum Switching Rate	40 channels/second
Mechanical Life Expectancy	10,000,000 operations
Electrical Life Expectancy (At Rated Load)	100,000 operations

Power and Host Mainframe Integration

Compatible Host Mainframe	HP / Agilent 3488A
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Environmental

Storage Temperature	-40 °C to +75 °C
Operating Humidity	Up to 95% RH at 40 °C (non-condensing)

Electrical Safety

Maximum Terminal-to-Chassis Voltage	250 V AC RMS / 250 V DC
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Connectivity

Terminal Block Type	Removable screw terminal block
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Configuration

Configurable Topologies	Single 1x10 or dual 1x5 multiplexer (selectable via internal jumpers)
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TECHNOLOGY

Electromechanical Relay

APPLICATIONS

Signal routing, multiplexing, and precision low-level measurement scan

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