

KEITHLEY

7001

The Keithley 7001 is a half-rack, high-density, two-slot switch/control mainframe designed to support a wide range of test and measurement signals. It features an integrated analog backplane, built-in scan control with a 100-pattern memory, and supports over 30 different switch cards including DC, RF, and optical modules.

SPECIFICATIONS

General

Display	Dual-line vacuum fluorescent (1st line: 20-character, 2nd line: 32-character) with full channel status display
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Physical

Power Supply	90 to 125 V AC or 180 to 250 V AC, 50/60 Hz, 50 VA max
Operating Temperature	0 to 50 °C
Dimensions (W×H×D)	213 × 89 × 397 mm
Weight	3.4 kg

System Configuration & Capacity

Number of Card Slots	2
Maximum Channels per Slot	40
Memory Capacity (Switch Patterns)	100 (battery backed-up storage)
Analog Backplane Capabilities	Four 3-pole rows (Hi, Lo, Guard)
Analog Backplane Maximum Voltage	250 VDC, 250 Vrms, 350 VAC peak
Analog Backplane Maximum Current	1 A peak
Analog Backplane Channel Crosstalk	<-65 dB @ 1 MHz (50 Ω load)
Analog Backplane Bandwidth	<3 dB loss at 100 MHz (50 Ω load)

Switching Performance & Execution

Maximum Scan Rate (Channels/Second)	130/s (with 7011 card), 500/s (with 7015 card)
Maximum Scan Rate (Memory/Second)	125/s (with 7011 card), 450/s (with 7015 card)
Switching Sequence	Automatic break-before-make
Relay Drive Capability	700 mA maximum for both card slots combined

Triggering & Synchronization

Trigger Sources	External Trigger, IEEE-488 bus, Trigger Link, Manual (front panel), Internal Timer
Trigger Input Logic Level	TTL-compatible (External Trigger BNC)
Minimum Trigger Input Pulse Width	600 ns
Internal Timer Range	1 ms to 99999.999 s
Internal Timer Resolution	1 ms increments
Channel Ready Output Signal	TTL-compatible, low-going pulse (10 μ s typical) issued after relay settling time

Interfaces & Communication

Command Set / Programming Language	SCPI-1990, IEEE-488.2, IEEE-488.1
IEEE-488 Interface Functions	SH1, AH1, T5, TE0, L4, LE0, SR1, RL1, PP0, DC1, DT1, C0, E1
Digital I/O Outputs	4 open-collector outputs (30 V max pull-up, 100 mA max sink, 10 Ω output impedance)
Digital I/O Inputs	1 TTL compatible input

Physical Characteristics

Form Factor / Rack Size	Half-rack
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Supported Modules & Accessories

Compatible Switch/Control Cards	Supports more than 30 Keithley switch/control cards
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Environmental

Storage Temperature	-25 °C to +65 °C
Operating Humidity	< 80% RH (0 to 35 °C), < 50% RH (35 to 50 °C)

Capacity & Expansion

Maximum System Channels	80 (with two 40-channel cards)
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Power

Maximum Power Consumption	50 VA
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Inputs & Outputs

External Trigger Connector	BNC
Channel Ready Connector	BNC
Trigger Link Connector	8-pin micro-DIN

Compliance

Safety Standard Compliance	EN 61010-1
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TECHNOLOGY

Switch/Control Mainframe

APPLICATIONS

Production testing, automated test equipment (ATE), and versatile signal routing/switching

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.