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Data Sheet

August 13, 2026

KEITHLEY

Keithley 4225-RPM Remote Preamplifier/Switch Module

The Keithley 4225-RPM is a remote preamplifier/switch module designed to enhance the sensitivity and flexibility of measurement systems. It provides low-noise amplification and signal routing capabilities for various applications.



MODEL

Keithley 4225-RPM

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

4225-RPM

LISTING

<https://aumictechlabs.com/products/4225-rpm-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keithley 4225-RPM Remote Preamplifier/Switch Module is an expansion unit for the 4200A-SCS Parameter Analyzer that extends low-current measurement capabilities and enables automatic switching between DC SMUs, C-V, and ultra-fast pulsed I-V instruments without re-cabling. This remote amplifier and multiplexer eliminates the need for manual reconfiguration when transitioning between measurement types, reducing test setup complexity and cycle time.

Technical Specifications The 4225-RPM adds six current measurement ranges to the 4225-PMU Ultra-Fast Pulsed I-V Instrument Module: 100 nA, 1 μ A, 10 μ A, 100 μ A, 1 mA, and 10 mA. Current measurement resolution reaches <200 pA without averaging, with a noise floor of approximately 10 pA. Noise performance varies by range: 200 pA (100 nA range), 2 nA (1 μ A), 5 nA (10 μ A), 50 nA (100 μ A), 300 nA (1 mA), and 1.5 μ A (10 mA). Output resistance typically ranges from 20 Ω to

50 Ω . The 4225-RPM-LR variant reduces this to 2 Ω to 3 Ω and supports capacitive loads up to 75 pF, with correspondingly reduced load-line effects. Autoranging functionality enables automatic range selection during pulsed I-V sweeps, optimizing current measurement across different signal levels. Recommended minimum pulse widths scale from 134 μ s (100 nA range) to 160 ns (10 mA range). Minimum measure windows range from 10 μ s (100 nA) down to 20 ns (10 mA). Key Features Automatic instrument switching - no re-cabling required Extends 4225-PMU measurement range into the nanoampere regime Autoranging across six current decades Compact remote amplifier design Two variants: standard (20–50 Ω output) and low-resistance (2–3 Ω output) Typical Applications Characterization of low-current devices including diodes, transistors, and other semiconductor components requiring I-V curves across multiple decades of current. Compatibility & Integration Designed for integration with Keithley 4200A-SCS Parameter Analyzer mainframes.

Features & description

From manufacturer datasheet

Features

- Three additional low-current ranges versus PMU-only

4225RPM Characteristics / Specifications

PARAMETER	VALUE
Model	4225-RPM
Manufacturer	Keithley / Tektronix
Instrument Type	Remote amplifier and switch module
Alias	4225-RPM
Host	4225-PMU on 4200-SCS / 4200A-SCS
Channels	1 (order two for PMU ch1 and ch2)
Voltage at RPM triax	-10 V to +10 V
Voltage accuracy open load	$\pm(0.5\% + 10 \text{ mV})$
Voltage resolution	less than 0.5 mV
Baseline noise	$\pm(0.39\% + 1 \text{ mV})$
Overshoot ringing	$\pm 2\%$ of amplitude $\pm 20 \text{ mV}$
Current range 100 nA	200 pA noise; $\pm(0.5\% + 1 \text{ nA})$ DC accuracy; 134 us min pulse class
Current range 1 uA	2 nA noise; $\pm(0.5\% + 1 \text{ nA})$; 20.4 us min pulse class
Current range 10 uA	5 nA noise; $\pm(0.5\% + 30 \text{ nA})$; 8.36 us min pulse class
Current range 100 uA	50 nA noise; $\pm(0.5\% + 100 \text{ nA})$; 1.04 us min pulse class
Current range 1 mA	300 nA noise; $\pm(0.5\% + 1 \text{ uA})$; 370 ns min pulse class
Switch paths	PMU, 4200/4201 SMU, 4210/4215 CVU
Output connectors	triax source and sense
Interconnect	2 m RPM cable (HDMI class) to PMU
SMA jumper supplied	20 cm SMA plus triax-BNC and BNC-SMA adapters
Performance location	triax outputs with 2 m RPM cable
Low current measure	200 pA class (RPM) versus 75 nA PMU-only class
Not for 4220 PGU	RPM current ranges require 4225-PMU
Segment timing	per 4225-PMU with RPM tables
Cal conditions	typical values at RPM triax as in 4200-SCS data book

PARAMETER	VALUE
Form	remote box at the DUT/prober
Use	preamp plus mux, notastand-alone SMU Notes Specs from Keithley 4200-SCS technical data book 4225-RPM tables. RPM is optional per PMU channel. Do not cite PMU-only 40 V ranges at the RPM triax (± 10 V).

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Model	4225-RPM
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Alias	4225-RPM
Host	4225-PMU on 4200-SCS / 4200A-SCS
Channels	1 (order two for PMU ch1 and ch2)
Specifications	
PARAMETER	VALUE
Voltage at RPM triax	-10 V to +10 V
Voltage accuracy open load	±(0.5% + 10 mV)
Voltage resolution	less than 0.5 mV
Specifications	
PARAMETER	VALUE
Baseline noise	±(0.39% + 1 mV)
Overshoot ringing	±2% of amplitude ±20 mV
Current range 100 nA	200 pA noise; ±(0.5% + 1 nA) DC accuracy; 134 us min pulse class
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Current range 1 uA	2 nA noise; ±(0.5% + 1 nA); 20.4 us min pulse class
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PARAMETER	VALUE
Current range 1 mA	300 nA noise; $\pm(0.5\% + 1 \text{ uA})$; 370 ns min pulse class
Switch paths	PMU, 4200/4201 SMU, 4210/4215 CVU
Output connectors	triax source and sense

Specifications

PARAMETER	VALUE
Interconnect	2 m RPM cable (HDMI class) to PMU
SMA jumper supplied	20 cm SMA plus triax-BNC and BNC-SMA adapters
Performance location	triax outputs with 2 m RPM cable

Specifications

PARAMETER	VALUE
Low current measure	200 pA class (RPM) versus 75 nA PMU-only class
Not for 4220 PGU	RPM current ranges require 4225-PMU
Segment timing	per 4225-PMU with RPM tables

Specifications

PARAMETER	VALUE
Cal conditions	typical values at RPM triax as in 4200-SCS data book
Form	remote box at the DUT/prober
Use	preamp plus mux, not a stand-alone SMU

Notes

Specs from Keithley 4200-SCS technical data book 4225-RPM tables. RPM is optional per PMU channel. Do not cite PMU-only 40 V ranges at the RPM triax ($\pm 10 \text{ V}$).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.