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Data Sheet
August 15, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology SMP5003 General Purpose Relay

Ametek / VTI Instruments / VXI Technology SMP5003 26 SP4T 2 A General Purpose Switch Module The Ametek / VTI Instruments / VXI Technology SMP5003 provides 26 SP4T (1×4) 2 A switches using the same family electrical envelope as SMP5001/5002: 300 V ac/dc, 2 A, 60 W dc / 125 VA, under 300 mOhm path resistance, over 100 MHz bandwidth, and under 3 ms switching. Up to 156 SP4T relays fit in an SMP1200 double-slot card. 1-of-4 signal selection, multiplexer building blocks, and compact multi-throw ATE routing in SMIPII systems. The Ametek / VTI Instruments / VXI Technology SMP5003 provides 26 SP4T (1×4) 2 A switches using the same family electrical envelope as SMP5001/5002: 300 V ac/dc, 2 A, 60 W dc / 125 VA, under 300 mOhm path resistance, over 100 MHz bandwidth, and under 3 ms switching. Up to 156 SP4T relays fit in an SMP1200 double-slot card. 1-of-4 signal selection, multiplexer building blocks, and compact multi-throw ATE routing in SMIPII systems. Instrument Type: general purpose 2 A SP4T switch module Maximum Switching Voltage: 300 V ac and 300 V dc

MODEL **Ametek / VTI Instruments / VXI Technology SMP5003**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **SMP5003**	LISTING **https://aumictechlabs.com/products/smp5003-3/**

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This unit

The Ametek VTI Instruments SMP5003 is a general-purpose relay module for high-density switching in VXIbus automated test systems. This SMIP II series card provides 26 SP4T (Single Pole, 4 Throw) relays, each rated 2 A and capable of switching up to 300 V AC/DC and 125 VA. Individual relays can be used for signal routing or combined externally for user-defined configurations, delivering flexibility across diverse test applications.Path resistance remains below 300 mΩ with insulation resistance exceeding 1×10^{9} Ω, ensuring reliable switching performance. Switching time is under 3 ms, supported by 1×10^{7} mechanical operations and 5×10^{5} electrical operations at full load.Technical Specifications Relay Configuration: 26 SP4T relays per module; up to 156 SP4T relays in a double-slot VXIbus card Switching Voltage: 300 V AC, 300 V DC maximum Switching Current: 2 A maximum Switching Power: 60 W DC, 125 VA maximum Path Resistance: 1×10^{9} Ω Thermal Offset (HI-LO): < 7 µV per channel Capacitance: Open channel < 50 pF; channel-mainframe < 80 pF; high-low 100 MHz Insertion Loss: < 0.1 dB @ 100 kHz; < 0.2 dB @ 1 MHz; < 1.0 dB @ 10 MHz Crosstalk: < -80 dB @ 100 kHz; < -60 dB @ 1 MHz; < -40 dB @ 10 MHz Isolation: < -50 dB @ 100 kHz; < -45 dB @ 1 MHz; < -40 dB @ 10 MHz Coil Voltage: Driven from VXIbus +5 V supply Switching Time: < 3 ms Mechanical Life: 1×10^{7} operations Electrical Life: 5×10^{5} operations at full loadKey Features High-density switching in compact VXIbus form factor Flexible relay configuration allows individual or combined use Low thermal offset supports precision signal switching Excellent isolation and low crosstalk across audio to RF frequencies Compatible with SMP1100 and SMP1200 base unitsTypical Applications Automated test equipment (ATE) signal routing Data acquisition system switching Multi-unit test configuration General-purpose signal multiplexingCompatibility & Integration The SMP5003 integrates with VXIbus chassis and operates within the SMIP II module family. Compatible drivers include LabVIEW and IVI standards for test automation software integration.

SMP5003 Characteristics / Specifications

PARAMETER	VALUE
Model	SMP5003
Instrument Type	general purpose 2 A SP4T switch module
Switch Count	26 SP4T
Switch Topology	1×4
Maximum Switching Voltage	300 V ac and 300 V dc
Maximum Switching Current	2 A
Maximum Switching Power Dc	60 W
Maximum Switching Power Ac	125 VA
Path Resistance	less than 300 mOhm
Insulation Resistance	greater than 1e9 Ohm
Thermal Offset Hi Lo	less than 7 uV
Open Channel Capacitance	less than 50 pF
Channel Mainframe Capacitance	less than 80 pF
High Low Capacitance	less than 50 pF
Bandwidth 3 dB	greater than 100 MHz
Insertion Loss 100 kHz	less than 0.1 dB
Insertion Loss 1 MHz	less than 0.2 dB
Insertion Loss 10 MHz	less than 1.0 dB
Crosstalk 100 kHz	less than -80 dB
Crosstalk 1 MHz	less than -60 dB
Crosstalk 10 MHz	less than -40 dB
Isolation 100 kHz	less than -50 dB
Isolation 1 MHz	less than -45 dB
Isolation 10 MHz	less than -40 dB
Mechanical Life	1e7 operations

PARAMETER	VALUE
Electrical Life Full Load	5e5 operations
Switching Time	less than 3 ms
Max Relays In Smp12	156 SP4T
Bandwidth	3 dB: greater than 100 MHz

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

Specifications

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Insertion Loss 10 MHz	less than 1.0 dB
Crosstalk 100 kHz	less than -80 dB
Crosstalk 1 MHz	less than -60 dB
Crosstalk 10 MHz	less than -40 dB
Isolation 100 kHz	less than -50 dB
Isolation 1 MHz	less than -45 dB
Isolation 10 MHz	less than -40 dB
Mechanical Life	1e7 operations
Electrical Life Full Load	5e5 operations

PARAMETER	VALUE
Switching Time	less than 3 ms
Max Relays In Smp1200	156 SP4T

Notes
From VTI Instruments SMP5001/5002/5003 datasheet.

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
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

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