


Aumictech

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology SMP5002 General Purpose Relay

Ametek / VTI Instruments / VXI Technology SMP5002 50 SPDT 2 A General Purpose Relay Module The Ametek / VTI Instruments / VXI Technology SMP5002 provides 50 SPDT 2 A general-purpose relays sharing the SMP5001/5003 family electrical limits of 300 V ac/dc, 2 A, 60 W dc / 125 VA, path resistance under 300 mOhm, and bandwidth over 100 MHz. SPDT relays may be paired to form 25 DPDT. Up to 300 SPDT relays fit in an SMP1200 double-slot card. Form-C signal routing, ATE transfer switching, and configurable UUT path selection in VXI SMIPII systems. The Ametek / VTI Instruments / VXI Technology SMP5002 provides 50 SPDT 2 A general-purpose relays sharing the SMP5001/5003 family electrical limits of 300 V ac/dc, 2 A, 60 W dc / 125 VA, path resistance under 300 mOhm, and bandwidth over 100 MHz. SPDT relays may be paired to form 25 DPDT. Up to 300 SPDT relays fit in an SMP1200 double-slot card. Form-C signal routing, ATE transfer switching, and configurable UUT path selection in VXI SMIPII systems. Instrument Type: general purpose 2 A SPDT relay module


MODEL

**Ametek / VTI
Instruments / VXI
Technology
SMP5002**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMP5002

LISTING

<https://aumictechlabs.com/products/smp5002-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek VTI Instruments SMP5002 is a high-density, general-purpose relay module for VXIbus systems. It has 50 SPDT relays per module, enabling flexible signal routing and switching in automated test equipment and multi-unit test configurations. The module supports external configuration, allowing adaptation to diverse unit-under-test requirements while maintaining high performance across DC and low-frequency AC applications.

Technical Specifications

Configuration: 50 Single-Pole, Double-Throw (SPDT) relays Switching current: 2 A per channel

Switching voltage: 300 V AC, 300 V DC Switching power: 60 W DC, 125 VA Bandwidth: Greater

than 100 MHz (-3 dB) Path resistance: Less than 300 mΩ Insulation resistance: Greater than 1×10^9

Ω Maximum thermal offset (HI-LO): Less than 7 μV per channel Open channel capacitance: Less

than 50 pF Insertion loss: Less than 0.1 dB at 100 kHz; less than 0.2 dB at 1 MHz; less than 1.0 dB

at 10 MHz Crosstalk: Less than -80 dB at 100 kHz; less than -60 dB at 1 MHz; less than -40 dB at

10 MHz Isolation: Less than -50 dB at 100 kHz; less than -45 dB at 1 MHz; less than -40 dB at 10

MHz Switching time: Less than 3 ms Mechanical rated switch operations: 1×10^7 Electrical rated

switch operations: 5×10^5 at full load

Key Features

High-density relay architecture supporting up to 300 SPDT relays per double-slot mainframe Low thermal offset and path resistance for precision switching Extended bandwidth performance to 100 MHz Excellent isolation and low crosstalk across audio and low-RF frequency ranges Long mechanical and electrical life rating for high-cycle applications

Typical Applications Automated test equipment (ATE) signal routing and switching General-purpose signal multiplexing and distribution Multi-unit test configurations requiring flexible relay switching DC and AC signal switching in precision measurement systems

Compatibility & Integration The SMP5002 integrates into VXIbus systems as part of the SMIP II family and is compatible with VTI Instruments SMIP II base units including the SMP1100 (single-slot) and SMP1200 (double-slot) mainframes. Modules can be mixed with other SMIP II switch types (SPST, SP4T, RF, power, multiplexers) within the same base unit to create application-specific switching configurations.

SMP5002 Characteristics / Specifications

PARAMETER	VALUE
Model	SMP5002
Instrument Type	general purpose 2 A SPDT relay module
Relay Count	50 SPDT
Dpdt Pair Configuration	25 DPDT
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	300 SPDT
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	
PARAMETER	VALUE
Model	SMP5002
Instrument Type	general purpose 2 A SPDT relay module
Relay Count	50 SPDT
Dpdt Pair Configuration	25 DPDT
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
Electrical Life Full Load	5e5 operations

PARAMETER	VALUE
Switching Time	less than 3 ms
Max Relays In Smp1200	300 SPDT

Notes
From VTI Instruments SMP5001/5002/5003 datasheet family tables.

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>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.