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Data Sheet

August 15, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology SM3001 (1 x 64) Two-Wire 2 A Per Channel Multiplexer

VTI Instruments SM3001 64×1 Two-Wire Multiplexer SMIP Module 2 A The VTI Instruments SM3001 is a high-density multiplexer SMIP module configurable as 64×1 two-wire or 128×1 one-wire scanning. OEM SMIP switching introductions and module descriptions rate 2 A per path, synchronous trigger scanning or asynchronous individual relay control, and up to 384 two-wire channels in an SM1000B/SMP1200 double-slot base. High-density scanner/multiplexer routing in VXI functional test when pairing SMIP modules in SMP1100/SMP1200 bases. The VTI Instruments SM3001 is a high-density multiplexer SMIP module configurable as 64×1 two-wire or 128×1 one-wire scanning. OEM SMIP switching introductions and module descriptions rate 2 A per path, synchronous trigger scanning or asynchronous individual relay control, and up to 384 two-wire channels in an SM1000B/SMP1200 double-slot base. High-density scanner/multiplexer routing in VXI functional test when pairing SMIP modules in SMP1100/SMP1200 bases. 64×1 two-wire or 128×1 one-wire configurations



MODEL

**Ametek / VTI
Instruments / VXI
Technology
SM3001**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

SM3001

LISTING

<https://aumictechlabs.com/products/sm3001-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek VTI Instruments SM3001 is a high-density, two-wire multiplexer module for VXIbus systems that routes signals across 64 individual channels, each rated for 2 A continuous switching. Engineered for automated test environments requiring flexible signal distribution, the SM3001 preserves signal integrity through multi-layer PCB design, extensive ground planes, and shielding. Its control circuitry supports quiescent operation to minimize digital noise when switching low-level signals. The module enables direct register control of all relays, maximizing switching speed by reducing VXIbus backplane traffic. Mix-and-match compatibility with other SMIP (Switch Modularity and Interface Platform) cards allows construction of custom, high-density switching configurations.

Technical Specifications

Configuration: Two-wire Channel Count: 64 channels Current Rating per Channel: 2 A (switching and carry) Path Resistance: 50 mΩ

Switching Time: < 1 ms **Mechanical Rated Operations:** 100×10^6 cycles **Electrical Rated Operations:** 1×10^6 cycles at full load **System Compatibility:** VXIbus

Key Features

- Individual relay control with direct register access
- Hardware-implemented Break-Before-Make (BBM) and Make-Before-Break (MBB) switching modes
- Synchronous triggering and asynchronous control options
- Programmable timing delays for relay settling times
- Downloadable scan lists with backplane trigger advancement
- Automatic channel sequencing via predefined scan lists

Switching Configurations

The SM3001 supports 1-wire, 2-wire, and 4-wire switching topologies, enabling adaptation to diverse measurement architectures. Up to 384 two-wire channels can be housed in a single double-slot VXIbus card (SM1000B) for maximum density applications.

Typical Applications

Automated test systems, multi-channel signal routing, high-speed data acquisition, production test environments, and laboratory measurement setups requiring flexible channel switching and low-noise operation.

SM3001 Characteristics / Specifications

PARAMETER	VALUE
Model	SM3001
Alternate Family Name	SMP3001
Instrument Type	High-density multiplexer SMIP switch module
Two Wire Configuration	64×1
One Wire Configuration	128×1
Current Per Path	2 A
Wire Modes	1-wire 2-wire or 4-wire
Density In Double Slot Base	up to 384 two-wire channels in SM1000B/SMP1200
Control Modes	synchronous with instrument triggers or asynchronous individual relays
Base Compatibility Single	SMP1100 holds up to two modules
Base Compatibility Double	SMP1200 holds up to six modules
Switching Platform	SMIP / SMIP II
Maximum Switching Current Class Gp Mux	2 A
Module Form Factor	SMIP plug-in module
Register Control	direct register control of relays on SMIP interface
Scan Lists	downloadable with backplane trigger advance on SMIP interface
Break Before Make	hardware supported on SMIP interface
Make Before Break	hardware supported on SMIP interface
Signal Integrity Design	multilayer PCB with ground planes and shielding
Control Quiescent State	digital control quiets when idle for low-level switching
Part Number Examples	52-0095-000 52-0095-001 class listings
Maximum Channels One Wire Family Statement	128 per module
Maximum Channels Two Wire Family Statement	64 per module

SM3001 Specifications

PARAMETER	VALUE
Applications	High-density scanner/multiplexer routing in VXI functional test when pairing SMIP modules in SMP1100/SMP1200 bases.
Key Features	64×1 two-wire or 128×1 one-wire configurations
Technical Specifications	Model: SM3001

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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Notes	
From VTI Instruments SMIP switching introduction listings for SMP3001/SM3001 and Artisan/VTI module	

descriptions. Detailed path-resistance/bandwidth tables for general-purpose 2 A SMIP modules appear on sibling SMP500x datasheets.

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