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Data Sheet

August 14, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology EX1048 48-Channel, Precision Thermocouple Instrument

AMETEK VTI EX1048 48 Channel Precision Thermocouple Instrument The VTI EX1048/EX1048A is a 1U LXI 48-channel precision thermocouple and voltage instrument. OEM EX10xxA literature lists up to 1000 Sa/s per channel, all standard TC typesJKTESRBN, plus or minus 10 V voltage mode, 12 precision thermistors for CJC, and 90 to 264 VAC 47 VA class AC power. Distributed temperature DAQ, thermal vacuum and chamber mapping, and synchronized high channel count thermocouple logging via IEEE-1588 and LXI trigger bus. The VTI EX1048/EX1048A is a 1U LXI 48-channel precision thermocouple and voltage instrument. OEM EX10xxA literature lists up to 1000 Sa/s per channel, all standard TC typesJKTESRBN, plus or minus 10 V voltage mode, 12 precision thermistors for CJC, and 90 to 264 VAC 47 VA class AC power. Distributed temperature DAQ, thermal vacuum and chamber mapping, and synchronized high channel count thermocouple logging via IEEE-1588 and LXI trigger bus. 48 independent conditioned TC/voltage channels Embedded isothermal CJC with 12 thermistors



MODEL

**Ametek / VTI
Instruments / VXI
Technology
EX1048**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

EX1048

LISTING

**[https://aumictechlabs.c
om/products/ex1048-3/](https://aumictechlabs.com/products/ex1048-3/)**

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek / VTI Instruments / VXI Technology EX1048 is a 48-channel precision thermocouple measurement instrument engineered for accurate temperature monitoring and thermal profiling. This high-density, 1U rackmount module delivers programmable scanning up to 1 kHz with independent channel configuration, integrated cold junction compensation via multiple precision thermistors, and built-in self-calibration for extended accuracy across ambient operating ranges of 15 °C to 35 °C.

Technical Specifications

Channels: 48

Measurement Types: Precision thermocouple; millivoltmeter functionality

Scanning Speed: Programmable up to 1 kHz, independent of channel count

Thermocouple Support: All standard thermocouple types; user-defined polynomial equations accepted

Open Thermocouple Detection (OTD): Integrated detection system

Cold Junction Compensation: Advanced implementation with multiple precision thermistors and thermal mass

Isothermal Input Section: Embedded isothermal block monitored by twelve precision thermistors (one per four channels)

Self-Calibration: Internal calibration source for on-command calibration

Common Mode Rejection: Provides immunity from power line interference and high-frequency noise

Channel Isolation: Channels operate independently with no cross-influence regardless of scanning speed or channel state

Key Features

Each channel independently configurable for measurement function, hardware filter, and limit values

Low-noise millivoltmeter capability for analog signal measurement

Precision hardware handshaking for synchronization

Digital alarm outputs

Input protection with enhanced isolation (particularly with EX10SC signal conditioning platform)

Interfaces & Connectivity

Ethernet communication with LXI LAN and Trigger Bus support

IEEE 1588 time-stamping to 50 ns resolution

D-sub connectors for voltage inputs; Mini-TC connectors for thermocouple inputs

Power and LAN/LXI status LEDs

Compatibility & Integration

The EX1048 integrates with the EX10SC signal conditioning platform for expanded input protection and measurement integrity in demanding measurement environments.

EX1048 Characteristics / Specifications

PARAMETER	VALUE
Model	EX1048 / EX1048A
Channel Count	48 differential
Sample Rate	up to 1000 Sa/s per channel
Thermocouple Types	JKTESRBNVoltage Mode Range: plus or minus 10 V
Thermocouple Accuracy Class	less than 0.3 C
Self Calibration Accuracy Class Typical	plus or minus 0.2 C in stated ranges
CJC Sensors	12 precision thermistors one per four TC channels
Open Transducer Detection	continuous per channel enable/disable
Filters	Bessel 2 pole and Butterworth 1 pole software selectable
Form Factor	1U 19 inch rack standalone
Network	10/100 Base-T Ethernet LXI
Timing	IEEE-1588 plus LXI Trigger Bus
AC Power	90 to 264 VAC 50/60 Hz 47 VA max
DC Power Variant	EX1000A-TCDC 10 to 34 V DC
Connectors	mini thermocouple female jacks
Shock Vibration	MIL-PRF-28800F class
Drivers	IVI and VXI Plug and Play plus EXlab
Channel Path	independent amp filter OTD per channel
Expansion	unlimited channel count via LXI synchronization class
Web Interface	onboard browser UI
Calibration	end to end self calibration per signal path
Series Family	EX10xxA

EX1048 Specifications

PARAMETER	VALUE
Key Features	48 independent conditioned TC/voltage channels
Up to 1000 Sa/s per channel	Embedded isothermal CJC with 12 thermistors
Open transducer detection per channel	LXI IEEE-1588 and wired trigger bus
Technical Specifications	Model: EX1048 / EX1048A

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 EX1048A / EX10xxA product specification summaries. Queue listing EX1048 is the 48-channel thermocouple instrument; A suffix units share the same channel/rate table.	

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
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<https://aumictechlabs.com>

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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.