# Emerson

# KJ3002X1-BG2 12P1731X032

## 8-Channel Thermocouple and mV Input Card

This technical reference records only manufacturer-supported boundaries for Emerson KJ3002X1-BG2 12P1731X032. Undocumented suffix-specific features are intentionally excluded.

## System position

| Exact identity | System family | Functional role | Release basis |
|---|---|---|---|
| KJ3002X1-BG2 12P1731X032 | DeltaV M-series | DeltaV Temperature Input Card | Recorded test and diagnostics |

## Control the identity boundary

For temperature and low-level millivolt acquisition, KJ3002X1-BG2 digitizes eight isolated field channels and monitors open-sensor conditions. Sensor type, compensation method, polarity and terminal hardware must be reconciled with the installed loop schedule.

| IDENTITY / RESOURCE | DOCUMENTED VALUE |
|---|---|
| Complete item marking | KJ3002X1-BG2 12P1731X032 |
| Documented base model | KJ3002X1-BG2 |
| Input channels | 8 |
| Supported thermocouples | B, E, J, K, N, R, S and T |
| Additional input | Uncharacterized millivolt source |
| Conversion resolution | 16 bit |

Technical evidence record: DeltaV M-series Traditional I/O, Emerson product data sheet

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# Interfaces and integration

## Trace the installed signal path

Trace the installed power, signal, communication and terminal path before changing any hardware or configuration. Keep the complete item marking linked to the

| | |
|---|---|
| **Complete item marking** | KJ3002X1-BG2 12P1731X032 |
| **Documented base model** | KJ3002X1-BG2 |
| **Input channels** | 8 |

## Define the receiving position

The host review links the physical slot, companion hardware and retained engineering revision to the offered item.

| | |
|---|---|
| **Host** | DeltaV M-series |
| **Primary role** | eight-channel thermocouple and millivolt acquisition |
| **Acceptance** | Recorded diagnostic response |

### Interface control matrix

| CONTROL BAND | VERIFICATION RECORD |
|---|---|
| **Identity** | Model, designation and complete label |
| **Mechanical** | Position, seating and retention |
| **Electrical** | Loop supply and field conductors |
| **Processing** | Range, limits and correction |
| **Supervision** | Supply, range and wire-break states |
| **Release** | Controlled test with retained result |

## Configuration ownership

Keep assigned channel values under the approved project record.

## Acceptance ownership

Name the retained result that authorizes handover of the measurement path.


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# Technical resource bands

Only capabilities tied to the exact execution appear here; operating assignments remain configuration-controlled.

| PARAMETER | VALUE |
|---|---|
| Complete item marking | KJ3002X1-BG2 12P1731X032 |
| Documented base model | KJ3002X1-BG2 |
| Input channels | 8 |
| Supported thermocouples | B, E, J, K, N, R, S and T |
| Additional input | Uncharacterized millivolt source |
| Conversion resolution | 16 bit |
| LocalBus power | 12 V DC at 350 mA maximum |

| PARAMETER | VALUE |
|---|---|
| Field circuit | 5.5 V DC at 0.6 mA per channel |
| Diagnostic | Open-sensor detection |
| Operating temperature | -40 to 70°C |
| Storage temperature | -40 to 85°C |
| Relative humidity | 5 to 95%, non-condensing |
| Airborne contaminants | ISA-S71.04-1985 G3 |

### Label decision

Accept the stated part number only when the complete installed identity agrees.

### Circuit decision

Confirm the recorded field-circuit arrangement before reconnecting any loop.

### Processing decision

Restore channel processing from the approved project rather than a neighboring position.

### Evidence decision

Use diagnostic observations and a controlled response to support final handover.

## Engineering boundary

A similar faceplate or matching channel total does not prove interchangeability. Resolve the host position, connection scheme and controlled revision before use.

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# Controls and service logic

### Process-temperature measurement

Collects eight configured thermocouple or millivolt signals.

### Mixed sensor planning

Associates each channel with its documented thermocouple type and range.

### Open-sensor diagnostics

Reports an interrupted field circuit through the supported diagnostic path.

### Cold-junction review

Retains the installed terminal and compensation arrangement during replacement.

## Service decision path

| STEP | REQUIRED OUTCOME |
|---|---|
| **1. Identify** | Resolve label, designation and receiving position |
| **2. Compare** | Review circuit type, processing and supervision |
| **3. Restore** | Rebuild the recorded connection and configuration state |
| **4. Demonstrate** | Retain diagnostic and functional acceptance evidence |

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# Engineering decisions

### What is the documented purpose of Emerson KJ3002X1-BG2 12P1731X032?

Emerson KJ3002X1-BG2 12P1731X032 is retained as the complete supplied identity for a DeltaV temperature-input position. Manufacturer

### Which product family contains Emerson KJ3002X1-BG2 12P1731X032?

The documented base model belongs to the DeltaV M-series product family.

### Which function is documented for Emerson KJ3002X1-BG2 12P1731X032?

For the documented base model, input channels is 8.

### What channel or interface detail applies to Emerson KJ3002X1-BG2 12P1731X032?

For the documented base model, supported thermocouples is B, E, J, K, N, R, S and T.

### Which power boundary applies to Emerson KJ3002X1-BG2 12P1731X032?

For the documented base model, additional input is Uncharacterized millivolt source.

### Which environmental limit applies to Emerson KJ3002X1-BG2 12P1731X032?

For the documented base model, conversion resolution is 16 bit.

**Related Apter Power pages**

- Emerson KJ3243X1-BK1 SE4022
- Emerson KL2101X1-BA1 SE6501T01
- Emerson KL2101X1-BB1 SE6504

Technical evidence record: DeltaV M-series Traditional I/O, Emerson product data sheet


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