

EH-PT4

Four-Channel RTD Input Module

Hitachi EH-PT4 is a four-channel resistance-temperature-detector input module for EH-150 controllers. It converts Pt100 or Pt1000 sensor resistance into temperature values for PLC monitoring and control.

PRODUCT SNAPSHOT

BRAND

Hitachi

FAMILY

Hitachi EH-150 programmable controller

PART

EH-PT4

ORIGIN / HS

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PRODUCT OVERVIEW

Hitachi EH-PT4 is a four-channel resistance-temperature-detector input module for EH-150 controllers. It converts Pt100 or Pt1000 sensor resistance into temperature values for PLC monitoring and control.

1

Measures four platinum resistance-temperature detector channels

2

Linearizes Pt100 or Pt1000 resistance into signed temperature data

3

Transfers temperature values through the EH-150 I/O backplane

4

Supports open-circuit and wiring verification at the removable terminal block

SYSTEM COMPONENTS

EH-150 base and CPU

Pt100 or Pt1000 sensors

24 V DC field supply

three-core shielded field cables

TECHNICAL DATA

PARAMETER	VALUE
Input type	Pt100 / Pt1000 RTD
Input channels	4
Conversion resolution	Signed 15 bit
Pt100 range 1	-20 to +40 degC
Pt100 range 2	-50 to +400 degC
Pt1000 range	-50 to +400 degC
Conversion time	Approximately 0.5 s per 4 inputs
Pt100 accuracy at 25 degC	+/-0.1 degC or +/-0.6 degC by range

PARAMETER	VALUE
Pt1000 accuracy at 25 degC	+/-0.8 degC
Isolation	Input-to-internal photocoupler isolation
Inter-channel isolation	None
Terminal block	Removable M3
Recommended wiring	3-core shielded cable
Maximum lead resistance	2 Ohm current terminal to ground
Internal current	160 mA approximately at 5 V DC
External supply	24 V DC +/-10%, 70 mA maximum

TECHNICAL NOTE

Select the Pt100 or Pt1000 range before commissioning, use three-wire shielded connections, short unused inputs as instructed, and verify channel scaling against a traceable resistance source.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Process-vessel temperature measurement

Measures four platinum resistance-temperature detector channels

Machine bearing temperature monitoring

Linearizes Pt100 or Pt1000 resistance into signed temperature data

Oven and dryer thermal control

Transfers temperature values through the EH-150 I/O backplane

Utility skid multi-point RTD acquisition

Supports open-circuit and wiring verification at the removable terminal block

PRODUCT PRECAUTIONS

- 1 Confirm EH-PT4 and the assigned EH-150 base position before work.
- 2 Isolate the external 24 V DC supply and associated process interlocks.
- 3 Keep all three RTD conductors together in a shielded cable.
- 4 Do not introduce inter-channel potential because the four inputs are not mutually isolated.
- 5 Short unused terminals in the arrangement specified by the Hitachi guide.
- 6 Check lead resistance and terminal tightness before module insertion.
- 7 Simulate at least two resistance points on every commissioned channel.
- 8 Verify engineering units, alarm thresholds, and open-circuit diagnostics before service.

ENGINEER FAQ

Q1 How should the field connections for EH-PT4 be recorded before replacement?

Record terminal or connector identity, polarity, shield, cable tag, channel assignment, and the as-found diagnostic state before disconnecting EH-PT4.

Q2 What isolation is required before installing EH-PT4?

Place process-vessel temperature measurement in the approved maintenance state, isolate every applicable power, signal, and stored-energy source, and prove the work area safe.

Q3 Which configuration check is essential when commissioning EH-PT4?

Restore only the approved model-specific channel, range, address, scale, or interface settings and compare them with the physical installation before enabling the process function.

Q4 How can an engineer function-test EH-PT4 after installation?

Apply a controlled input, reference, or limited output appropriate to four-channel rtd input module, observe the system indication and diagnostics, and confirm the intended process response.

Q5 What should be checked if EH-PT4 reports an unstable or incorrect value?

Check seating, supply, grounding, shielding, matched components, mechanical installation, and the signal path before changing configuration or replacing additional hardware.

Q6 Can EH-PT4 be replaced by a visually similar model without review?

No. Verify the complete part number, electrical execution, connector arrangement, companion hardware, and approved software or rack configuration.

Q7 What commissioning evidence should be retained for EH-PT4?

Retain the full EH-PT4 identity, as-left wiring and settings, measured functional-test results, final diagnostics, and authorization to return the affected equipment to service.

Q8 Which installed hardware must be matched before fitting EH-PT4?

Match the complete EH-PT4 marking to EH-150 base and CPU and Pt100 or Pt1000 sensors, then confirm the assigned Hitachi EH-150 programmable controller position and approved system configuration.

SOURCE EH-150 Programmable Controller Technical Specifications | EH-150 Technical Specifications

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