

INDUSTRIAL AUTOMATION PRODUCT

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.

IDENTITY	VERIFIED VALUE
Manufacturer	Hitachi
System family	Hitachi EH-150 programmable controller
Part number	EH-PT4
Country	Japan
HS code	8537101190

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Technical Specifications

Technical values below are limited to the named Hitachi product record.

PARAMETER	TECHNICAL 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
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

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System Role and Architecture

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.

FUNCTION 1

Measures four platinum resistance-temperature detector channels

FUNCTION 2

Linearizes Pt100 or Pt1000 resistance into signed temperature data

FUNCTION 3

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

FUNCTION 4

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

Matched system components

- EH-150 base and CPU
- Pt100 or Pt1000 sensors
- 24 V DC field supply
- three-core shielded field cables

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	EH-150 base and CPU
Companion hardware	Pt100 or Pt1000 sensors
Field connection	24 V DC field supply
Primary system function	Measures four platinum resistance-temperature detector channels
Controlled acceptance duty	Process-vessel temperature measurement

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Applications and Engineering Context

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

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.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	EH-PT4 / EH-PT4 recorded
Physical interface	EH-150 base and CPU
Companion check	Pt100 or Pt1000 sensors
Functional proof	Measures four platinum resistance-temperature detector channels
Application test	Process-vessel temperature measurement

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Engineering 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.

CONFIGURATION VERIFICATION MATRIX

- **INSTALLED POSITION** EH-150 base and CPU
- **COMPANION HARDWARE** Pt100 or Pt1000 sensors
- **FUNCTIONAL DUTY** Measures four platinum resistance-temperature detector channels
- **ACCEPTANCE APPLICATION** Process-vessel temperature measurement

MANUFACTURER SOURCE RECORD

EH-150 Programmable Controller Technical Specifications

EH-150 Technical Specifications

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