

APTER POWER ENGINEERING REFERENCE

8C-PAIH51

Series 8 HART Analog Input Module

The 8C-PAIH51 is a coated Series 8 analog-input module that digitizes sixteen 4-20 mA channels and exchanges HART process and diagnostic data with smart field transmitters.

Parameter	Technical value
Manufacturer	Honeywell
Product model	8C-PAIH51
Part number	51454352-175
System family	Experion Series 8 I/O
Document	Product Technical Reference
Country	USA
HS code	8537101190

APTER POWER SALES TEAM

INDUSTRIAL AUTOMATION PRODUCT SUPPORT

One verified model, one engineered configuration path.

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SCAN FOR PRODUCT & QUOTE

8C-PAIH51

1. Product Identity and System Role

The 8C-PAIH51 is a coated Series 8 analog-input module that digitizes sixteen 4-20 mA channels and exchanges HART process and diagnostic data with smart field transmitters.

System role

- Digitizes analog process-current channels
- Transfers HART variables and diagnostics with the primary value
- Supports powered and self-powered transmitter wiring
- Offers single or redundant IOTA arrangements

Matched components

- 8C-TAIX51 nonredundant IOTA
- 8C-TAIX61 redundant IOTA
- HART field transmitter
- Series 8 controller and cabinet power

2. Technical Specifications

Parameter	Technical value
Module model	8C-PAIH51
Part number	51454352-175
Input type	Current; 2-wire or self-powered transmitter
Channels	16 single-ended
A/D resolution	16 bit
Input range	4 to 20 mA through 200 Ohm
Scan rate	50 ms
Filter	Single-pole RC; -3 dB at 6.5 Hz
NMRR at 60 Hz	19 dB
Crosstalk, dc to 60 Hz	-60 dB
No-damage input	+/-30 V
Accuracy at 23.5 +/-2 C	+/-0.075% full scale
Accuracy at 0 to 60 C	+/-0.15% full scale
Country	USA
HS code	8537101190

3. Functions, Applications and Components

Core functions

- Digitizes analog process-current channels
- Transfers HART variables and diagnostics with the primary value
- Supports powered and self-powered transmitter wiring
- Offers single or redundant IOTA arrangements

Industrial applications

- HART pressure and differential-pressure inputs
- Smart temperature and flow transmitters
- Tank level measurement
- Process-unit condition monitoring

Compatible system components

- 8C-TAIX51 nonredundant IOTA
- 8C-TAIX61 redundant IOTA
- HART field transmitter
- Series 8 controller and cabinet power

4. Engineering Precautions and Source

Product precautions

- Choose the IOTA matching the required redundancy.
- Confirm whether each transmitter is loop-powered or self-powered.
- Validate the 200-ohm input path before HART polling.
- Commission analog scaling and digital variables as separate checks.

Manufacturer source

Honeywell Series 8 I/O Specification - Analog Input with HART
Series 8 AI HART

RETURN-TO-SERVICE CHECK

Confirm model 8C-PAIH51, cabinet wiring, control-system channel assignment and the intended field response before releasing the equipment for production.