

8C-TAIDB1

Redundant AI IOTA

Honeywell 8C-TAIDB1 is the coated redundant IOTA for the 16-channel 8C-PAIH54 differential analog input module. It supports current or voltage transmitters and single-ended or differential channel configuration within Series 8 I/O.

BRAND	Honeywell	MODEL	8C-TAIDB1
PRODUCT	Redundant AI IOTA	FAMILY	Series 8 I/O
OFFICIAL SOURCE	Series 8 Controller and I/O Specification	RECORD	S803-150-530, Version 1.0, May 2024, sections 4.3.2 and 4.4.1

DOCUMENT SCOPE

Official technical evidence, controlled engineering checks, model-specific FAQ and related product navigation.

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Product Overview and Applications

SYSTEM FUNCTION

Honeywell 8C-TAIDB1 is the coated redundant IOTA for the 16-channel 8C-PAIH54 differential analog input module. It supports current or voltage transmitters and single-ended or differential channel configuration within Series 8 I/O.

FUNCTION 1

Redundant coated IOTA for 8C-PAIH54

FUNCTION 2

Sixteen voltage or current input channels

FUNCTION 3

Single-ended or differential channel operation

FUNCTION 4

HART-capable analog input architecture

APPLICATION	ENGINEERING CONTEXT
Differential transmitter input	Terminates approved differential current or voltage transmitter signals for the 8C-PAIH54 module.
Redundant analog acquisition	Provides the documented redundant IOTA path for high-availability Series 8 analog input service.
HART instrument integration	Supports HART-capable multivariable instruments through the compatible analog input module.
Mixed current-voltage loops	Allows documented current and voltage channels when each IOTA jumper and software range is configured correctly.

Technical Data and Acceptance

PARAMETER	VERIFIED VALUE
Complete model	8C-TAIDB1
Honeywell item number	51307133-175
IOTA role	Redundant differential analog input termination assembly
Compatible I/O module	8C-PAIH54
Input channels	16 single-ended or differential channels
Input type	Voltage or current; 2-wire or self-powered transmitters
Input ranges	0-5 V, 1-5 V, 0.4-2 V and 4-20 mA through 250 ohms
A/D resolution	16 bits
Voltage rating	24 VDC
Module current rating	310 mA
Input scan rate	50 ms
Normal-mode rejection	19 dB at 60 Hz
Common-mode rejection	70 dB, dc to 60 Hz with 500-ohm source imbalance
Input impedance	Greater than 10 Mohm for powered voltage inputs
Powered insertion/removal	Supported
Field power conditioning	Individually protected current-limiting circuits; no fuse required

Acceptance Path

1 IDENTITY

Exact IOTA, item number and 8C-PAIH54 pairing match the engineering record.

2 CONFIGURATION

All channel modes, ranges, jumpers and HART assignments are restored.

3 ELECTRICAL CHECK

Field signals, commons and shields match the approved topology.

4 REDUNDANCY PROOF

All channels and a controlled path transfer pass without unexplained fault.

Precautions and Model-Specific FAQ

NO.	PRECAUTION	QUESTION	ANSWER
1	Verify the complete 8C-TAIDB1 and 51307133-175 marking before work.	Which I/O module is specified for Honeywell 8C-TAIDB1?	Honeywell specifies 8C-TAIDB1 as the redundant coated IOTA for the 8C-PAIH54 analog input module.
2	Confirm the companion module is the documented Honeywell 8C-PAIH54.		
3	Place both redundant paths and the associated process loops in the approved maintenance state.	How many channels does Honeywell 8C-TAIDB1 support?	The documented 8C-PAIH54 and 8C-TAIDB1 arrangement supports sixteen channels configured as single-ended or differential inputs.
4	Record whether every channel is single-ended or differential before disturbing wiring.		
5	Record every current or voltage range and the corresponding 250-ohm IOTA jumper state.	Which signal types can Honeywell 8C-TAIDB1 terminate?	The documented arrangement accepts voltage or current inputs from 2-wire or self-powered transmitters.
6	Preserve field conductors, shields, commons and HART device assignments exactly.	Which ranges are documented for Honeywell 8C-TAIDB1?	The official specification lists 0-5 V, 1-5 V, 0.4-2 V and 4-20 mA through 250 ohms.
7	Use approved ESD controls and inspect the IOTA, connectors and redundant interfaces.		
8	Verify all sixteen channels, diagnostics, HART communication and redundancy transfer before release.		

FAQ, Related Products and Sources

QUESTION	ANSWER
What resolution and scan rate apply to Honeywell 8C-TAIDB1?	The compatible analog input module uses 16-bit conversion and a 50 ms input scan rate.
Why must Honeywell 8C-TAIDB1 jumper positions be recorded?	Each voltage channel requires its 250-ohm load resistor connection to be handled according to the IOTA jumper instruction, so the physical state must match the configured range.
Can Honeywell 8C-TAIDB1 be inserted or removed under power?	The official specification states that module removal and insertion under power is supported, subject to the site's approved maintenance procedure.
What proves Honeywell 8C-TAIDB1 commissioning is complete?	All sixteen ranges, wiring assignments, diagnostics and HART devices must agree with the approved record, and the redundant path transfer must pass its controlled test.

MANUFACTURER SOURCE RECORDS

Series 8 Controller and I/O Specification - S803-150-530, Version 1.0, May 2024, sections 4.3.2 and 4.4.1
Honeywell Series 8 I/O Product Page - Honeywell Process Solutions Series 8 controller and I/O overview

Related Products on Apter Power

MODEL	APTER POWER PAGE
Honeywell 8C-TDODA1-51307149-175	View Honeywell 8C-TDODA1-51307149-175
Honeywell 8C-TDODB1	View Honeywell 8C-TDODB1
Honeywell CC-GDIL01	View Honeywell CC-GDIL01
Honeywell CC-HCN911	View Honeywell CC-HCN911
Honeywell CC-IP0101-51410056-175	View Honeywell CC-IP0101-51410056-175
Honeywell CC-MCAR01	View Honeywell CC-MCAR01
Honeywell CC-PAIH01	View Honeywell CC-PAIH01
Honeywell CC-PAIH02-51405038-376	View Honeywell CC-PAIH02-51405038-376
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