

8C-TAOX51

Analog Output IOTA

Honeywell 8C-TAOX51 is the coated non-redundant IOTA for a sixteen-channel Series 8 analog output module. With 8C-PAON01 it delivers 4-20 mA commands and supports channel-level safe-state behavior and open-wire detection.

BRAND	Honeywell	MODEL	8C-TAOX51
PRODUCT	Analog Output IOTA	FAMILY	Series 8 I/O
OFFICIAL SOURCE	PlantCruise by Experion Series 8 I/O Specification	RECORD	PC03-490-100, Release 100, October 2011, section 2.4 Analog Output

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-TAOX51 is the coated non-redundant IOTA for a sixteen-channel Series 8 analog output module. With 8C-PAON01 it delivers 4-20 mA commands and supports channel-level safe-state behavior and open-wire detection.

FUNCTION 1

Sixteen 4-20 mA output channels

FUNCTION 2

Coated non-redundant IOTA

FUNCTION 3

Per-channel FAILOPT safe-state control

FUNCTION 4

Open-field-wire diagnostics

APPLICATION	ENGINEERING CONTEXT
Valve command output	Delivers documented 4-20 mA commands to approved valve positioners through the compatible Series 8 output module.
Analog actuator control	Provides sixteen controlled current outputs for approved final elements and indicating devices.
Configured safe-state action	Applies the recorded HOLD LAST VALUE or SHED to SAFE VALUE behavior for each enabled channel.
Output-loop supervision	Uses open-wire detection to report a Channel Soft Failure for an affected field circuit.

Technical Data and Acceptance

PARAMETER	VERIFIED VALUE
Complete model	8C-TAOX51
Honeywell item number	51306983-175
IOTA role	Coated non-redundant analog output termination assembly
Compatible I/O module	8C-PAON01
Output type	4-20 mA
Output channels	16
Output ripple	100 mV peak-to-peak at line frequency across 250 ohms
Resolution	+/-0.05% of full scale
Calibrated accuracy	+/-0.35% of full scale at 25 degrees C, including linearity
Directly settable current	0 mA or 2.9-21.1 mA
Maximum open-circuit voltage	22 V
Response time	Settles within 1% of final value within 80 ms
Safe-state behavior	Per-channel HOLD LAST VALUE or SHED to SAFE VALUE
Open-wire detection	Channel Soft Failure indication

Acceptance Path

1 IDENTITY

Exact 8C-TAOX51 and 8C-PAON01 pairing match the engineering record.

2 CONFIGURATION

All output assignments, scaling and FAILOPT values are restored.

3 OUTPUT CHECK

Each commanded current and final-element response meets its approved record.

4 SYSTEM PROOF

The non-redundant path and open-wire diagnostics pass.

Precautions and Model-Specific FAQ

NO.	PRECAUTION	QUESTION	ANSWER
1	Verify the complete 8C-TAOX51 and 51306983-175 marking before work.	Which module is paired with Honeywell 8C-TAOX51?	Honeywell specifies 8C-TAOX51 as the coated non-redundant IOTA for the 8C-PAON01 analog output module.
2	Confirm the associated I/O module is the documented Honeywell 8C-PAON01.		
3	Place all affected final elements and process loops in approved safe states.	How many outputs does Honeywell 8C-TAOX51 terminate?	The official specification lists sixteen analog output channels.
4	Record all sixteen output assignments, scaling values and direction of action.		
5	Record the FAILOPT choice and configured safe value for every enabled channel.	Which output range is used by Honeywell 8C-TAOX51?	The documented output type is 4-20 mA, with direct setting at 0 mA or from 2.9 to 21.1 mA.
6	Label output, common, shield and grounding conductors before removal.	What FAILOPT choices apply to Honeywell 8C-TAOX51?	Each channel can be configured to HOLD LAST VALUE or SHED to a SAFE VALUE.
7	Use approved ESD controls and inspect the IOTA and module interfaces.		
8	Verify each commanded output, final-element response and open-wire diagnostic before release.		

FAQ, Related Products and Sources

QUESTION	ANSWER
How quickly does Honeywell 8C-TAOX51 respond to a new command?	The analog output settles to within one percent of its final value within 80 ms.
How does Honeywell 8C-TAOX51 report an open field wire?	The Series 8 output function annunciates a Channel Soft Failure for the affected open-wire condition.
Is Honeywell 8C-TAOX51 the redundant output IOTA?	No. Honeywell identifies 8C-TAOX51 as non-redundant; 8C-TAOX61 is the redundant coated IOTA.
What proves Honeywell 8C-TAOX51 commissioning is complete?	All sixteen assignments, commanded currents, FAILOPT actions, final-element responses and open-wire diagnostics must match the approved record.

MANUFACTURER SOURCE RECORDS

PlantCruise by Experion Series 8 I/O Specification - PC03-490-100, Release 100, October 2011, section 2.4 Analog Output
Series 8 Controller and I/O Specification - S803-150-530, Version 1.0, May 2024, Series 8 architecture and I/O overview

Related Products on Apter Power

MODEL	APTER POWER PAGE
Honeywell MC-PAOY22-80363969-150	View Honeywell MC-PAOY22-80363969-150
Honeywell MC-PDIS12	View Honeywell MC-PDIS12
Honeywell MC-PRHM01	View Honeywell MC-PRHM01
Honeywell MC-PSIM11	View Honeywell MC-PSIM11
Honeywell MC-TAIH02-51304453-150	View Honeywell MC-TAIH02-51304453-150
Honeywell MC-TAIH04-51305900-175	View Honeywell MC-TAIH04-51305900-175
Honeywell MC-TAIH14-51305887-150	View Honeywell MC-TAIH14-51305887-150
Honeywell MC-TAIH22	View Honeywell MC-TAIH22
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