

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.

IDENTITY	VERIFIED VALUE
Manufacturer	Honeywell
Complete model	8C-TAOX51
Product role	Analog Output IOTA
System family	Series 8 I/O
Source record	PC03-490-100, Release 100, October 2011, section 2.4 Analog Output

DOCUMENT SCOPE

Model identity, official technical data, model-specific applications, precautions, FAQ and controlled acceptance records.

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8C-TAOX51

Technical Specifications

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

ENGINEERING BOUNDARY

Use 8C-TAOX51 with the documented 8C-PAON01 analog output module. Record every output assignment, configured FAILOPT action, safe value and field response before disturbing wiring, then verify open-wire diagnostics and each commanded output.

System Role and Common Applications

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.

ACCEPTANCE DUTY
Confirm identity, interface, companion hardware, configured values and controlled functional response before release.

Engineering Precautions and FAQ

NO.	PRECAUTION
1	Verify the complete 8C-TAOX51 and 51306983-175 marking before work.
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.
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.
6	Label output, common, shield and grounding conductors before removal.
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.

QUESTION	ANSWER
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.
How many outputs does Honeywell 8C-TAOX51 terminate?	The official specification lists sixteen analog output channels.
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.
What FAILOPT choices apply to Honeywell 8C-TAOX51?	Each channel can be configured to HOLD LAST VALUE or SHED to a SAFE VALUE.

FAQ, Related Products and Official 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.

MODEL	APTER POWER PAGE
Honeywell FC-QPP-0002-V1-0	View Honeywell FC-QPP-0002-V1-0
Honeywell FC-QPP-0002-V1-2	View Honeywell FC-QPP-0002-V1-2
Honeywell FC-QPP-0002-V2-0	View Honeywell FC-QPP-0002-V2-0
Honeywell FC-RUSIO-3224	View Honeywell FC-RUSIO-3224
Honeywell FC-RUSLS-3224	View Honeywell FC-RUSLS-3224
Honeywell FC-SCNT02-51460114-176	View Honeywell FC-SCNT02-51460114-176
Honeywell FC-SCNT02	View Honeywell FC-SCNT02
Honeywell FC-SSWM01-51306930-176	View Honeywell FC-SSWM01-51306930-176

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

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