

8C-PCNT03

Series 8 C300 Controller

Configured control execution, Series 8 I/O data and FTE controller communication

PRODUCT SNAPSHOT

BRAND

Honeywell

FAMILY

Experion PKS C300

PART

8C-PCNT03

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PRODUCT OVERVIEW

Configured control execution, Series 8 I/O data and FTE controller communication

- 1 Executes configured Control Builder strategies
- 2 Connects as many as eighty I/O units over two I/O links
- 3 Provides dual one-hundred-megabit FTE interfaces
- 4 Supports IOTA-based redundant controller operation

SYSTEM COMPONENTS

8C-TCNTA1 controller IOTA

Series 8 I/O modules

FTE network

Experion server and Control Builder project

TECHNICAL NOTE

Back up the approved Control Builder project, verify the 8C-TCNTA1 IOTA and supported Experion release, then prove FTE, I/O links and redundancy before production release.

TECHNICAL DATA

PARAMETER	VALUE
Controller model	8C-PCNT03; coated
Program memory	16 MB
Processor	Single core
Supported Experion releases	R110, R120, R500, R51x, R520
Execution units	5500
Tagged objects	4095
Memory units	16384
Control execution period	50 to 60000 ms

PARAMETER	VALUE
CPU reserved capacity	20%
I/O links	2
I/O link rate	750 kbit/s
I/O units per controller	80
I/O units per link	40
Maximum I/O	2560
FTE interfaces	Dual 100 Mbit/s
Redundancy	IOTA based; bumpless switchover

ENGINEERING NOTE

Back up the approved Control Builder project, verify the 8C-TCNTA1 IOTA and supported Experion release, then prove FTE, I/O links and redundancy before production release.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
TK-FXX102	Related industrial automation product	View TK-FXX102 page
FC-RUSLS-3224	Related industrial automation product	View FC-RUSLS-3224 page
FC-TCNT11	Related industrial automation product	View FC-TCNT11 page
FC-SCNT02-51460114-176	Related industrial automation product	View FC-SCNT02-51460114-176 page
FC-TELD-0001	Related industrial automation product	View FC-TELD-0001 page
FC-MCAR-02	Related industrial automation product	View FC-MCAR-02 page
900B08-0202	Related industrial automation product	View 900B08-0202 page
DC-TUI031-51307772-176	Related industrial automation product	View DC-TUI031-51307772-176 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Continuous-process control

Executes configured Control Builder strategies

Redundant C300 controller service

Connects as many as eighty I/O units over two I/O links

Series 8 I/O coordination

Provides dual one-hundred-megabit FTE interfaces

Experion control-node modernization

Supports IOTA-based redundant controller operation

PRODUCT PRECAUTIONS

- 1 Verify the complete 8C-PCNT03 marking and its assigned C300 controller position before work.
- 2 Place the connected process and control strategy in the approved maintenance state.
- 3 Isolate the applicable cabinet supply and I/O-link and FTE field energy before disconnecting conductors.
- 4 Record terminal numbers, channel assignments, polarity, shields and configured ranges before removal.
- 5 Use ESD controls and protect the backplane connector, terminal hardware and coated electronics.
- 6 Confirm the installed 8C-TCNTA1 IOTA and carrier arrangement against the approved project.
- 7 Restore power in a controlled sequence and clear only diagnostics created by the maintenance activity.
- 8 Complete project-load, I/O-link, FTE and redundancy acceptance tests and retain the measured result before returning the channel to automatic service.

ENGINEER FAQ

Q1 Does 8C-PCNT03 match 8C-TCNTA1 controller IOTA in a Continuous-process control installation?

Verify the complete 8C-PCNT03 marking, the documented Experion PKS C300 position and the installed 8C-TCNTA1 controller IOTA before fitting the assembly.

Q2 How should 8C-PCNT03 be wired when it must executes configured control builder strategies?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for 8C-PCNT03; then continuity-test the affected path.

Q3 Which Experion PKS C300 records should be captured before removing 8C-PCNT03?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with 8C-PCNT03 before disconnection.

Q4 What controlled test confirms that 8C-PCNT03 can connects as many as eighty i/o units over two i/o links?

Apply the approved field or simulated stimulus, observe the Experion PKS C300 indication and confirm the intended response without bypassing the normal interlocks.

Q5 Which Series 8 I/O modules condition should be checked when 8C-PCNT03 reports an abnormal state?

Check the Series 8 I/O modules supply, seating and connection first, then compare channel diagnostics with the recorded 8C-PCNT03 baseline.

Q6 Can 8C-PCNT03 be moved directly into Redundant C300 controller service without validating Experion server and Control Builder project?

No. Confirm the Experion server and Control Builder project, revision, connection scheme and Experion PKS C300 configuration before transferring 8C-PCNT03 to that duty.

Q7 What maintenance evidence is required after 8C-PCNT03 is used for Series 8 I/O coordination?

Retain the nameplate record, corrective action, final diagnostics and a controlled series 8 i/o coordination functional-test result for 8C-PCNT03.

Q8 How should 8C-PCNT03 be returned to service in Experion control-node modernization?

Restore power under control, verify provides dual one-hundred-megabit fte interfaces, exercise the intended signal path and release 8C-PCNT03 only after the Experion PKS C300 remains in its approved operating state.

SOURCE Honeywell Series 8 Controller and I/O Specification | S803-150-530, May 2024

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