

# 8C-PAOHA1

## Series 8 Analog Output Module with HART

Honeywell 8C-PAOHA1 is a coated Series 8 sixteen-channel analog output module with HART. It drives field current loops and carries HART communication for Experion control strategies.

### PRODUCT SNAPSHOT

**BRAND**

Honeywell

**FAMILY**

Experion Series 8 I/O

**PART**

51454469-275

**ORIGIN / HS**

USA / 8537101190

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# PRODUCT OVERVIEW

Honeywell 8C-PAOHA1 is a coated Series 8 sixteen-channel analog output module with HART. It drives field current loops and carries HART communication for Experion control strategies.

- 1

Generates sixteen controlled analog current outputs
- 2

Supports HART communication on configured field loops
- 3

Operates with nonredundant or redundant Series 8 output IOTAs
- 4

Maintains commanded output behavior through controller and I/O diagnostics

## SYSTEM COMPONENTS

- 8C-TAOXA1 nonredundant IOTA
- 8C-TAOXB1 redundant IOTA
- 24 Vdc Series 8 cabinet supply
- 4-20 mA HART field devices

### RELATED PRODUCTS ON APTER POWER

| MODEL     | SYSTEM ROLE                             | APTER POWER PAGE                  |
|-----------|-----------------------------------------|-----------------------------------|
| 8C-PAON01 | Series 8 analog-output module           | <a href="#">Open product page</a> |
| CC-PAOH01 | Series C analog-output module with HART | <a href="#">Open product page</a> |
| 8C-TDODB1 | Series 8 redundant digital-output IOTA  | <a href="#">Open product page</a> |
| CC-MCAR01 | Experion Series C carrier assembly      | <a href="#">Open product page</a> |

## TECHNICAL DATA

| PARAMETER                | VALUE                 |
|--------------------------|-----------------------|
| Output channels          | 16                    |
| Output signal            | 4 to 20 mA            |
| Load resistance          | 50 to 800 Ohm         |
| Module supply            | 24 Vdc                |
| Module current           | 205 mA                |
| Output resolution        | +/-0.05% FS           |
| Calibrated accuracy      | +/-0.2% FS at 25 degC |
| Current linearity        | +/-0.05% FS nominal   |
| Output temperature drift | 0.005% FS/degC        |
|                          |                       |

| PARAMETER                    | VALUE              |
|------------------------------|--------------------|
| Directly settable current    | 2.9 to 21.1 mA     |
| Maximum open-circuit voltage | 22 V               |
| Response time                | Within 1% in 80 ms |
| Redundancy switchover gap    | 10 ms maximum      |
| Operating temperature        | 0 to 60 degC       |
| Storage temperature          | -40 to +85 degC    |
| Nonredundant IOTA            | 8C-TAOXA1; 6 inch  |
| Redundant IOTA               | 8C-TAOXB1; 12 inch |
| Hot removal and insertion    | Supported          |

### TECHNICAL NOTE

Match 8C-PAOHA1 to the installed IOTA execution, preserve loop polarity and channel assignment, then prove commanded current, HART communication and redundancy behavior under controlled conditions.

# APPLICATIONS & PRECAUTIONS

## COMMON APPLICATIONS

### Control-valve positioning with HART diagnostics

Generates sixteen controlled analog current outputs

### Analog setpoint delivery to package equipment

Supports HART communication on configured field loops

### Redundant critical-process output loops

Operates with nonredundant or redundant Series 8 output IOTAs

### Field-device commissioning from Experion

Maintains commanded output behavior through controller and I/O diagnostics

## PRODUCT PRECAUTIONS

- 1 Verify 8C-PAOHA1 and part 51454469-275 on the physical label before work.
- 2 Isolate the affected process outputs and document their safe states before module removal.
- 3 Confirm whether the installed IOTA is the nonredundant or redundant execution.
- 4 Keep output-loop polarity and shield termination unchanged during replacement.
- 5 Use ESD controls and protect module and IOTA connectors from contamination.
- 6 Restore channel ranges, failsafe actions and HART assignments from the approved control database.
- 7 Inject or command controlled current values and compare them at the field circuit.
- 8 For a redundant pair, verify synchronization and switchover without upsetting the process.

# ENGINEER FAQ

## Q1 Does 8C-PAOHA1 match 8C-TAOXA1 nonredundant IOTA in a Control-valve positioning with HART diagnostics installation?

Verify the complete 8C-PAOHA1 marking, the documented Experion Series 8 I/O position and the installed 8C-TAOXA1 nonredundant IOTA before fitting the assembly.

## Q2 How should 8C-PAOHA1 be wired when it must generates sixteen controlled analog current outputs?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for 8C-PAOHA1; then continuity-test the affected path.

## Q3 Which Experion Series 8 I/O records should be captured before removing 8C-PAOHA1?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with 8C-PAOHA1 before disconnection.

## Q4 What controlled test confirms that 8C-PAOHA1 can supports hart communication on configured field loops?

Apply the approved field or simulated stimulus, observe the Experion Series 8 I/O indication and confirm the intended response without bypassing the normal interlocks.

## Q5 Which 8C-TAOXB1 redundant IOTA condition should be checked when 8C-PAOHA1 reports an abnormal state?

Check the 8C-TAOXB1 redundant IOTA supply, seating and connection first, then compare channel diagnostics with the recorded 8C-PAOHA1 baseline.

## Q6 Can 8C-PAOHA1 be moved directly into Analog setpoint delivery to package equipment without validating 4-20 mA HART field devices?

No. Confirm the 4-20 mA HART field devices, revision, connection scheme and Experion Series 8 I/O configuration before transferring 8C-PAOHA1 to that duty.

## Q7 What maintenance evidence is required after 8C-PAOHA1 is used for Redundant critical-process output loops?

Retain the nameplate record, corrective action, final diagnostics and a controlled redundant critical-process output loops functional-test result for 8C-PAOHA1.

## Q8 How should 8C-PAOHA1 be returned to service in Field-device commissioning from Experion?

Restore power under control, verify operates with nonredundant or redundant series 8 output iotas, exercise the intended signal path and release 8C-PAOHA1 only after the Experion Series 8 I/O remains in its approved operating state.