FIELD GUIDE / 01

# Honeywell CC-PDIL01 51405040-175

Installation & Commissioning Guide

| Exact role | Evidence boundary |
| --- | --- |
| Acquires thirty-two 24 VDC discrete field states for an Experion Series C I/O position while applying optical isolation, diagnostics and open-wire status handling. | Honeywell Experion Series-C I/O Specification EP03-490-520, Version 1.5, Dec 2021, section 5.12, PDF page 29 |
| **Identity control** | **Release basis** |
| Retain the complete Honeywell CC-PDIL01 51405040-175 marking throughout the work. | Accept the installation only after controlled configuration, wiring, diagnostic and functional checks. |

## SYSTEM RELATIONSHIP

| FIELD CONTACT | IOTA | CC-PDIL01 | CONTROLLER |
| --- | --- | --- | --- |
| Provides a 24 VDC discrete state. | Terminates wiring and field power. | Conditions 32 isolated inputs. | Uses valid channel states in control logic. |

## DOCUMENT PACKAGE

| As-found record | Configuration record |
| --- | --- |
| Model, rack position, channel assignments and physical condition. | Channel use, scaling or discrete logic, alarms and diagnostic behavior. |
| **Wiring record** | **Acceptance record** |
| Terminal identity, conductor labels, field source and shield/ground practice. | Stimulus, observed value/state, diagnostics and sign-off for every used channel. |

## RELEASE DELIVERABLES

| Controlled drawing | Channel worksheet | Diagnostic record | Operations handback |
| --- | --- | --- | --- |
| Updated rack/IOTA position and field-termination record. | As-left channel tag, expected state or range and test result. | Normal module status and resolved installation observations. | Approved return-to-service time, reviewer and operating status. |

READINESS / 02

# Pre-installation engineering checks

Resolve identity and configuration before any conductor is moved.

| Parameter | Verified value |
|---|---|
| **Model identity** | Verify Honeywell CC-PDIL01 51405040-175 on the installed unit and work package. |
| **System position** | Confirm the controller family, rack, slot or IOTA position from the controlled drawing. |
| **Channel map** | Record every active channel, tag, normal state or expected temperature range. |
| **Field interface** | Record conductor identity, polarity where applicable, common/reference and termination position. |
| **Safe state** | Place dependent equipment and control loops in the approved maintenance condition. |
| **Inspection** | Check connectors, terminals, coating, latches and the replacement module for damage or contamination. |

## VERIFIED EXACT-MODEL DATA

| Parameter | Verified value |
|---|---|
| **Input / output model** | CC-PDIL01 - 24Volt Digital Input |
| **Input channels** | 32 |
| **DI power voltage range** | 18 to 30 VDC |
| **ON sense** | 13 VDC minimum or 3 mA minimum |
| **OFF sense** | 5 VDC maximum or 1.2 mA maximum |
| **Input impedance** | 4.2 kOhm |
| **Isolation** | 1500 VAC RMS or +/-1500 VDC; optical in the IOM |
| **Input-filter and isolation delay** | 5 ms +/-20% |
| **Guaranteed ON field resistance** | 300 Ohm maximum at 15 VDC |
| **Guaranteed OFF field resistance** | 30 kOhm minimum at 30 VDC |

## CONFIGURATION BOUNDARY

CC-TDIL01, CC-TDIL11, CC-GDIL11, CC-GDIL21, CC-GDIL01 and CC-SDXX01 are listed IOTA arrangements for CC-PDIL01 in the source specification.

## FIELD DATA TO RETAIN

| Position | Channel identity | Interface | Expected behavior |
|---|---|---|---|
| Cabinet, rack, carrier/IOTA and module position. | Channel number, field tag and process or equipment function. | Terminal, conductor, common/reference and field device. | Normal state or configured measurement behavior and diagnostics. |

INSTALLATION / 03

# Controlled replacement sequence

Preserve model identity, channel identity and mechanical interfaces at each step.

| | |
|---|---|
| 1 | Issue the approved work permit and place affected process functions in the documented maintenance state. |
| 2 | Verify the complete Honeywell CC-PDIL01 51405040-175 identity and the exact assigned position. |
| 3 | Capture the as-found status, channel map and all removable connector or conductor labels. |
| 4 | Isolate applicable energy, verify the safe condition and apply approved ESD controls. |
| 5 | Remove the installed module without forcing connectors, backplane contacts or terminal hardware. |
| 6 | Inspect the mating interface and install the exact replacement in the documented orientation. |
| 7 | Reconnect every labeled interface and compare the as-left wiring with the controlled record. |
| 8 | Restore power in stages, confirm healthy diagnostics and continue to channel-level acceptance. |

## STOP-WORK CONDITIONS

### Identity mismatch

Stop if any model, item, rack or interface marking differs from the approved work package.

### Wiring uncertainty

Stop if a conductor, common, shield or terminal cannot be positively identified.

### Physical damage

Stop for bent contacts, contaminated interfaces, cracked housings or compromised coating.

### Configuration conflict

Stop if online configuration does not match the controlled engineering record.

## MECHANICAL AND INTERFACE CHECK

| Inspection point | Acceptance condition |
|---|---|
| Mating interface | No bent, recessed, contaminated or overheated contacts |
| Module seating | Correct orientation, full insertion and secure retention |
| Conductor control | Labels legible; no unrecorded swaps or loose terminations |
| Cabinet condition | Approved cleanliness, airflow and separation maintained |

COMMISSIONING / 04

# Channel-by-channel acceptance

Use controlled stimuli and retain an auditable result for each used channel.

| Test stage | Acceptance evidence |
|---|---|
| **Power** | Measure the documented 18 to 30 VDC field-power condition at the assigned IOTA. |
| **OFF test** | Apply the approved OFF stimulus and confirm the controller reports the intended inactive state. |
| **ON test** | Apply the approved ON stimulus and confirm the matching channel changes state. |
| **Open-wire test** | Where enabled and permitted, prove the diagnostic and confirm the affected value becomes invalid. |
| **Direction** | Confirm direct or reverse input indication matches the configured logic. |
| **Redundancy** | Where installed, check both module paths and the approved redundancy status. |
| **Full scan** | Test every used channel and document any intentionally unused channel. |
| **Control response** | Confirm the tested input drives only the intended indication, alarm or interlock path. |

## FAULT-ISOLATION ORDER

| IDENTITY | CONFIGURATION | WIRING | STIMULUS | RESULT |
|---|---|---|---|---|
| Model and position | Channel assignment | Terminal continuity | Known field condition | Value, state and diagnostics |

## RETEST RULE

After any correction, repeat the affected channel test and any dependent control-function test before release.

## ACCEPTANCE LOG FIELDS

| Stimulus | Observed result | Dependent function | Disposition |
|---|---|---|---|
| Applied field or simulator condition and equipment used. | Controller value/state, indication and diagnostic status. | Alarm, interlock, trend or control response checked. | Pass, corrected and retested, or unresolved hold point. |

HANDOVER / 05

# Release record and support

Close the work only when identity, configuration, wiring and functional evidence agree.

| | |
|---|---|
| **Identity**<br>Honeywell CC-PDIL01 51405040-175 and the observed revision or item marking. | **Installation**<br>Rack or IOTA position, interface inspection and as-left wiring record. |
| **Configuration**<br>Channel map, ranges or logic states, diagnostic settings and approved changes. | **Acceptance**<br>Per-channel stimulus and result, alarms/interlocks checked, reviewer and date. |

## RELATED HONEYWELL PRODUCTS

| | |
|---|---|
| **Honeywell CC-TDOB11** | Series C digital-output IOTA listing |
| **Honeywell CC-TAOX01** | Series C analog-output IOTA listing |
| **Honeywell DC-TAIX01** | Series C HART analog-input IOTA listing |
| **Honeywell CC-PAIL51** | Series C low-level temperature-input module |

## SOURCE CONTROL

Honeywell Experion Series-C I/O Specification EP03-490-520, Version 1.5, Dec 2021, section 5.12, PDF page 29


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