

INDUSTRIAL AUTOMATION PRODUCT

MC-TDIA72

Thirty-Two-Channel 120 Vac Digital Input FTA

Honeywell MC-TDIA72 is a 32-channel 120 Vac digital-input field termination assembly. It optically isolates high-voltage field states and connects them to TPS Process Manager digital-input processing.

| IDENTITY      | VERIFIED VALUE          |
|---------------|-------------------------|
| Manufacturer  | Honeywell               |
| System family | TPS Process Manager I/O |
| Part number   | 51303930-150            |
| Country       | USA                     |
| HS code       | 8537101190              |

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## Technical Specifications

Technical values below are limited to the named Honeywell product record.

| PARAMETER            | TECHNICAL VALUE           |
|----------------------|---------------------------|
| Input channels       | 32                        |
| Nominal input        | 120 Vac                   |
| Input range          | 90 to 132 Vac             |
| Frequency            | 47 to 63 Hz               |
| Isolation            | 1500 Vac rms; +/-1500 Vdc |
| Isolation method     | Optical                   |
| On current           | 5.2 mA minimum            |
| Off current          | 1.47 mA maximum           |
| Input delay          | 25 ms maximum             |
| On field resistance  | 100 ohm maximum           |
| Off field resistance | 71 kohm minimum           |
| Terminal type        | Screw                     |
| Plug-in isolators    | None                      |

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## System Role and Architecture

Honeywell MC-TDIA72 is a 32-channel 120 Vac digital-input field termination assembly. It optically isolates high-voltage field states and connects them to TPS Process Manager digital-input processing.

**FUNCTION 1**

Terminates thirty-two high-voltage discrete inputs

**FUNCTION 2**

Optically isolates field states from TPS electronics

**FUNCTION 3**

Detects 120 Vac contact and powered-input conditions

**FUNCTION 4**

Routes grouped digital status to the matched processor

### Matched system components

- TPS digital-input processor
- FTA-to-IOP cable
- 120 Vac field-contact circuits
- Screw-terminal cabinet wiring

### SYSTEM INTEGRATION RECORD

| INTEGRATION ITEM           | DOCUMENTED ROLE                                    |
|----------------------------|----------------------------------------------------|
| Installed host / carrier   | TPS digital-input processor                        |
| Companion hardware         | FTA-to-IOP cable                                   |
| Field connection           | 120 Vac field-contact circuits                     |
| Primary system function    | Terminates thirty-two high-voltage discrete inputs |
| Controlled acceptance duty | Motor-starter running feedback                     |

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# Applications and Engineering Context

**Motor-starter running feedback**

Terminates thirty-two high-voltage discrete inputs

**Switchgear auxiliary contacts**

Optically isolates field states from TPS electronics

**Heater and burner permissives**

Detects 120 Vac contact and powered-input conditions

**High-voltage package status inputs**

Routes grouped digital status to the matched processor

**TECHNICAL NOTE**

De-energize all 120 Vac inputs, segregate the wiring from low-voltage signals and verify every channel crosses the documented on/off thresholds before enabling interlocks.

**MODEL-SPECIFIC ACCEPTANCE EVIDENCE**

| CHECK              | ACCEPTANCE CONDITION                               |
|--------------------|----------------------------------------------------|
| Identity           | MC-TDIA72 / 51303930-150 recorded                  |
| Physical interface | TPS digital-input processor                        |
| Companion check    | FTA-to-IOP cable                                   |
| Functional proof   | Terminates thirty-two high-voltage discrete inputs |
| Application test   | Motor-starter running feedback                     |

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## Engineering Precautions

1

Verify the complete MC-TDIA72 marking and its assigned TPS Process Manager I/O position before work.

2

Isolate the energy associated with TPS digital-input processor before disconnecting MC-TDIA72.

3

Protect the MC-TDIA72 connectors and electronic assembly using approved ESD controls.

4

Record the as-found FTA-to-IOP cable connections and configured assignment before replacement.

5

Confirm 120 Vac field-contact circuits matches the approved installation record for MC-TDIA72.

6

Restore MC-TDIA72 under controlled conditions and review its model-specific diagnostics.

7

Complete a documented functional test for motor-starter running feedback before release.

### RELATED PRODUCTS ON APTER POWER

| MODEL     | SYSTEM ROLE                                     | APTER POWER PAGE                  |
|-----------|-------------------------------------------------|-----------------------------------|
| MC-TDOR62 | TPS relay-output field termination assembly     | <a href="#">Open product page</a> |
| MC-TPIX12 | TPS pulse-input field termination assembly      | <a href="#">Open product page</a> |
| MC-TSIM12 | TPS serial-interface field termination assembly | <a href="#">Open product page</a> |
| MC-TAOY25 | TPS analog-output field termination assembly    | <a href="#">Open product page</a> |

### MANUFACTURER SOURCE RECORD

Honeywell TPS Process Manager I/O Specification and Technical Data  
IO03-684 Rev. 2

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