

INDUSTRIAL AUTOMATION PRODUCT

# 9771-210

## 16-Point User-Configurable Current Input Panel

Triconex 9771-210 is a sixteen-point user-configurable current-input termination panel. It powers and converts field current loops for compatible Tricon analog input modules.

| IDENTITY      | VERIFIED VALUE                         |
|---------------|----------------------------------------|
| Manufacturer  | Triconex                               |
| System family | Tricon v9-v10 analog input termination |
| Part number   | 9771-210                               |
| Country       | USA                                    |
| HS code       | 8537101190                             |

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## Technical Specifications

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

| PARAMETER                          | TECHNICAL VALUE                  |
|------------------------------------|----------------------------------|
| Panel type                         | Current input; user-configurable |
| Input points                       | 16                               |
| Supported module ranges            | 0-5 VDC; 0-10 VDC; -5 to +5 VDC  |
| Field signal example               | 4-20 mA                          |
| Positive-terminal resistor         | 180 Ohm series                   |
| Input shunt                        | 250 Ohm precision                |
| Current conversion                 | 0-5 VDC                          |
| Power sources                      | Redundant 24 VDC                 |
| Power combining                    | Diode ORing                      |
| Compatible modules                 | 3700; 3700A; 3703E; 3721         |
| Panels for 32-point module         | 2                                |
| W17 with 3700A / 3721              | Installed                        |
| W17 for extended 3703E common mode | Removed                          |
| Panel width                        | 4.5 in (11.43 cm)                |
| Panel length                       | 5.729 in (14.552 cm)             |
| Panel height                       | 4.25 in (10.795 cm)              |
| ETA number                         | 3000656-210                      |
| Associated cable                   | 4000103-510                      |

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System Role and Architecture

Triconex 9771-210 is a sixteen-point user-configurable current-input termination panel. It powers and converts field current loops for compatible Tricon analog input modules.

FUNCTION 1

Converts sixteen field current loops into precision voltage inputs through 250-ohm shunts

FUNCTION 2

Supplies current transmitters from diode-ORed redundant 24 VDC sources

FUNCTION 3

Uses removable point jumpers to support approved transmitter-sharing arrangements

FUNCTION 4

Adapts W17 configuration to the selected 3700A, 3703E, or 3721 input module

Matched system components

- 3700, 3700A, 3703E, or 3721 analog-input module
- 4000103-510 I/O cable
- redundant 24 VDC transmitter supplies
- 4-20 mA transmitters and shielded loop wiring

SYSTEM INTEGRATION RECORD

| INTEGRATION ITEM           | DOCUMENTED ROLE                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------|
| Installed host / carrier   | 3700, 3700A, 3703E, or 3721 analog-input module                                           |
| Companion hardware         | 4000103-510 I/O cable                                                                     |
| Field connection           | redundant 24 VDC transmitter supplies                                                     |
| Primary system function    | Converts sixteen field current loops into precision voltage inputs through 250-ohm shunts |
| Controlled acceptance duty | Redundant-powered process transmitter termination                                         |

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# Applications and Engineering Context

**Redundant-powered process transmitter termination**

Converts sixteen field current loops into precision voltage inputs through 250-ohm shunts

**Shared transmitter interface with an external DCS**

Supplies current transmitters from diode-ORed redundant 24 VDC sources

**3703E extended common-mode configuration**

Uses removable point jumpers to support approved transmitter-sharing arrangements

**Thirty-two-point analog-input split-panel wiring**

Adapts W17 configuration to the selected 3700A, 3703E, or 3721 input module

**TECHNICAL NOTE**

Set W17 and point jumpers for the exact input module and sharing design, then verify transmitter supply, shunt conversion, loop scaling, and safety/control segregation.

**MODEL-SPECIFIC ACCEPTANCE EVIDENCE**

| CHECK              | ACCEPTANCE CONDITION                                                                      |
|--------------------|-------------------------------------------------------------------------------------------|
| Identity           | 9771-210 / 9771-210 recorded                                                              |
| Physical interface | 3700, 3700A, 3703E, or 3721 analog-input module                                           |
| Companion check    | 4000103-510 I/O cable                                                                     |
| Functional proof   | Converts sixteen field current loops into precision voltage inputs through 250-ohm shunts |
| Application test   | Redundant-powered process transmitter termination                                         |

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## Engineering Precautions

1

Verify 9771-210, the input-module model, and the approved jumper drawing before work.

2

Isolate both 24 VDC transmitter supplies and the affected safety input functions.

3

Record every W point jumper and W17 position before removing the panel.

4

Retain W17 for 3700A or 3721 service; apply the documented 3703E rule when extended common mode is required.

5

Do not share a transmitter with another system unless the safety/control segregation review permits it.

### RELATED PRODUCTS ON APTER POWER

| MODEL          | SYSTEM ROLE                               | APTER POWER PAGE                  |
|----------------|-------------------------------------------|-----------------------------------|
| Triconex 3504E | High-Density Digital Input Module         | <a href="#">Open product page</a> |
| Triconex 3008  | Main Processor Module                     | <a href="#">Open product page</a> |
| Triconex 4210  | Remote Extender Module Set                | <a href="#">Open product page</a> |
| Triconex 4119A | Enhanced Intelligent Communication Module | <a href="#">Open product page</a> |

### MANUFACTURER SOURCE RECORD

Field Terminations Guide for Tricon v9-v10 Systems

9700052-018, February 2009

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