

3700A

32-Point 0-5 VDC Analog Input Module

CONTROLLED ENGINEERING COPY

Match the panel and shunt arrangement to voltage or current service, preserve differential polarity and common-mode limits, then prove scaling and mid-value channel agreement.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	3700A
Manufacturer part	3700A
Hardware type	TMR analog input
System family	Tricon analog input



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01 PRE-INSTALLATION PLAN

1

Verify 3700A and the thirty-two-point differential input assignment before work.

2

Place affected analog safety functions in the approved maintenance condition.

3

Isolate transmitter supplies and record polarity, shielding, and channel scaling.

4

Confirm any 250-ohm shunt and termination-panel jumper arrangement.

5

Keep common-mode voltage and input overrange inside the published limits.

MATCHED HARDWARE

- 9761-210, 9771-210, or other listed termination panel
- 0-5 V differential transmitters
- Tricon I/O chassis and hot spare
- shielded analog field wiring

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
Identity	3700A / 3700A recorded
Physical interface	9761-210, 9771-210, or other listed termination panel
Companion check	0-5 V differential transmitters
Functional proof	Samples thirty-two differential analog inputs through three independent channels
Application test	Safety transmitter 4-20 mA conversion

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED VALUE
Module type	TMR analog input
Input points	32 differential; DC coupled
Input range	0 to 5 VDC plus 6% overrange
Isolated points	No
Input update rate	55 ms
Resolution	12 bit
Accuracy	<0.15% FSR, 0 to 60 degC
Input resistance	30 MOhm DC minimum
Power-off resistance	30 kOhm DC typical
Common-mode rejection	-80 dB DC to 100 Hz typical
Common-mode range	-12 to +12 V peak
Leg-to-leg isolation	200 kOhm typical
Normal-mode rejection	-3 dB at 8 Hz; -17 dB at 60 Hz; -23 dB at 120 Hz
Input overrange protection	150 VDC / 115 VAC continuous

FIELD NOTE

Match the panel and shunt arrangement to voltage or current service, preserve differential polarity and common-mode limits, then prove scaling and mid-value channel agreement.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	ACCEPTANCE CONDITION
Identity	3700A / 3700A recorded
Physical interface	9761-210, 9771-210, or other listed termination panel
Companion check	0-5 V differential transmitters
Functional proof	Samples thirty-two differential analog inputs through three independent channels
Application test	Safety transmitter 4-20 mA conversion

04 RETURN-TO-SERVICE RECORD

- ☐ Use ESD controls and inspect the keyed module and hot-spare slot.
- ☐ Inject controlled values across the range and compare all three channel readings.
- ☐ Verify PASS/FAULT/ACTIVE state, scaling, alarms, and safety action before release.
- ☐ Confirm the intended process response before normal operation.

VERIFICATION RECORD

TECHNICIAN

DATE

CABINET / POSITION

FINAL DIAGNOSTIC STATE

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Triconex 3504E	High-Density Digital Input Module	Open product page
Triconex 3008	Main Processor Module	Open product page
Triconex 4210	Remote Extender Module Set	Open product page
Triconex 4119A	Enhanced Intelligent Communication Module	Open product page

SOURCE IDENTIFIERS

Tricon Systems Technical Product Guide
9791007-013

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