FIELD INSTALLATION QUICK GUIDE

Installation Instructions

ICS Triplex T8431C

triplicated analog input module

PRODUCT	T8431C
SYSTEM	Trusted TMR safety systems
FUNCTION	triplicated analog input module
STATUS	Verify exact installed equipment

Prepared by Amikon Limited from Rockwell Automation ICSTT-RM273Q-EN-P Trusted TMR 24 Vdc Analog Input Module manual. This quick guide supplements the complete manufacturer documentation, controlled site procedure and safety requirements.

01 CONFIRM THE ORDERED CONFIGURATION

INPUT CHANNELS	40 triplicated analog inputs
BACKPLANE SUPPLY	20 to 32 V DC
INPUT RANGE	0 to 22 mA
INPUT VOLTAGE	0 to 5.5 V DC
POWER DISSIPATION	20 W maximum
SOE RESOLUTION	1 ms

02 PREPARATION AND CONNECTION

- Confirm the exact T8431C identity and approved Trusted TMR I/O slot.
- Inspect the module housing and rear I/O connector for damage or bent pins.
- Isolate applicable field circuits and record the channel and FTA wiring schedule.
- Use electrostatic-discharge controls and handle the module only by its housing.
- Match the module and cable polarization keying before insertion.

03 MODULE INSTALLATION AND FIELD PIN-OUT

Official manufacturer drawings reproduced from Rockwell Automation ICSTT-RM273Q-EN-P Trusted TMR 24 Vdc Analog Input Module manual. Match the complete model and controlled system configuration before applying any connection or setting.

Installation

Module insertion and removal

Before installation, visually inspect the module for damage. Ensure that the module housing appears undamaged and inspect the I/O connector at the back of the module for bent pins. If the module appears damaged or any pins are bent, do not install the module. Do not try to straighten bent pins. Return the module for replacement.

Ensure that the module is of the correct type.

Record the module type, revision and serial number of the module before installation.

WARNING: The module contains static sensitive parts. Static handling precautions must be observed. Specifically ensure that exposed connector pins are not touched. Under no circumstances should the module housing be removed.

To install the module:

1. Ensure that the field cable assembly is installed and correctly located.
2. Release the ejector tabs on the module using the release key. Ensure that the ejector tabs are fully open.
3. Holding the ejectors, carefully insert the module into the intended slot.
4. Push the module fully home by pressing on the top and bottom of the module fascia.
5. Close the module ejectors, ensuring that they click into their locked position.

The module should mount into the chassis with a minimum of resistance. If the module does not mount easily, do not force it. Remove the module and check it for bent or damaged pins. If the pins have not been damaged, try reinstalling the module.

Field cable selection

I/O cables suitable for use with the Trusted® TMR 24 Vdc Analog Input Module are detailed in these publications:

- Trusted I/O Companion Slot Cables Product Description, publication ICSTT-RM311 (PD-TC200)
- Trusted I/O SmartSlot Cables Product Description, publication ICSTT-RM313 (PD-TC500)

The publications listed above also detail the types of Field Termination Assembly (FTA) or Versatile Field Termination Assembly (VFTA) that may be used with this type of module.

Module pin-out connections

This table describes the module pin-out connections:

Table 2 Field Connector Pin-out

	C	B	A
1	SmartSlot Link C	SmartSlot Link B	SmartSlot Link A
2			
3	Chan 28 (+)	Chan 14 (+)	Chan 0 (+)
4	Chan 28 (-)	Chan 14 (-)	Chan 0 (-)
5	Chan 29 (+)	Chan 15 (+)	Chan 1 (+)
6	Chan 29 (-)	Chan 15 (-)	Chan 1 (-)
7	Chan 30 (+)	Chan 16 (+)	Chan 2 (+)
8	Chan 30 (-)	Chan 16 (-)	Chan 2 (-)
9	Return	Return	Return
10	Chan 31 (+)	Chan 17 (+)	Chan 3 (+)
11	Chan 31 (-)	Chan 17 (-)	Chan 3 (-)
12	Chan 32 (+)	Chan 18 (+)	Chan 4 (+)
13	Chan 32 (-)	Chan 18 (-)	Chan 4 (-)
14	Chan 33 (+)	Chan 19 (+)	Chan 5 (+)
15	Chan 33 (-)	Chan 19 (-)	Chan 5 (-)
16	Chan 34 (+)	Chan 20 (+)	Chan 6 (+)
17	Chan 34 (-)	Chan 20 (-)	Chan 6 (-)
18	Chan 35 (+)	Chan 21 (+)	Chan 7 (+)
19	Chan 35 (-)	Chan 21 (-)	Chan 7 (-)
20	Return	Return	Return
21	Chan 36 (+)	Chan 22 (+)	Chan 8 (+)
22	Chan 36 (-)	Chan 22 (-)	Chan 8 (-)
23	Chan 37 (+)	Chan 23 (+)	Chan 9 (+)
24	Chan 37 (-)	Chan 23 (-)	Chan 9 (-)
25	Chan 38 (+)	Chan 24 (+)	Chan 10 (+)
26	Chan 38 (-)	Chan 24 (-)	Chan 10 (-)
27	Chan 39 (+)	Chan 25 (+)	Chan 11 (+)
28	Chan 39 (-)	Chan 25 (-)	Chan 11 (-)
29	Chan 40 (+)	Chan 26 (+)	Chan 12 (+)
30	Chan 40 (-)	Chan 26 (-)	Chan 12 (-)
32	Chan 41 (+)	Chan 27 (+)	Chan 13 (+)
32	Chan 41 (-)	Chan 27 (-)	Chan 13 (-)

Trusted module polarization and keying

All Trusted modules have been Keyed to prevent insertion into the wrong position within a chassis. The polarization comprises two parts: the module and the associated field cable.

Each module type has been Keyed during manufacture. The organization responsible for the integration of the Trusted System must key the cable by

Official manufacturer drawings reproduced at their original aspect ratio.

04 MODULE INSERTION AND CHANNEL CHECKS

- Align the module with the correct Trusted chassis guides and keyed slot.
- Insert the module without forcing the rear connector or polarization components.
- Connect the field termination assembly according to the official 40-channel pin-out.
- For Companion Slot arrangements, confirm both keying strips and partner-slot assignment.
- Secure the module and cable assemblies before restoring system power.

05 INITIAL SYSTEM CHECKS

- Restore the 20 to 32 V DC backplane supply in the approved sequence.
- Confirm the module Healthy indicators and verify that no slice fault is active.
- Check each assigned input against a known field-current or simulated value.
- Record slot assignment, keying, diagnostics and final channel-test results.

06 CONTROLLED DOCUMENTS

Official source	Rockwell Automation ICSTT-RM273Q-EN-P Trusted TMR 24 Vdc Analog Input Module manual
Product record	T8431C
Manufacturer	ICS Triplex
Support	INFO@AMIKON.CN