TRUSTED TMR ANALOG I/O

Product Data Sheet

T8431CX

40-channel TMR analog input

ANALOG INPUT COUNT	NOMINAL CURRENT SIGNAL	FULL INPUT-CURRENT RANGE	BACKPLANE SUPPLY RANGE
40 channels, triplicated architecture	**4-20 mA**	**0-22 mA**	**20-32 V DC**

ICS Triplex T8431CX is a conformal-coated, non-RoHS-designated Trusted TMR analog input module with 40 channels. Triplicated input processing and module diagnostics support the documented Trusted 8000 safety arrangement, while the nominal 4-20 mA field signals are represented through the configured I/O variables.

01 TECHNICAL DATA

Analog input count	40 channels, triplicated architecture
Nominal current signal	4-20 mA
Full input-current range	0-22 mA
Backplane supply range	20-32 V DC
Module power demand	20 W
FTA input impedance	250 ohm
Module input impedance	16.967 kohm; halved with partner modules fitted
Channel-to-channel isolation	None
Field-common isolation	50 V reinforced continuous; 250 V basic fault conditions
Input resolution	3.906 uA per LSB

Rockwell Automation ICSTT-RM273Q-EN-P, August 2021; T8431 family hardware.

02 ADDITIONAL PRODUCT DATA

Safety accuracy	+/-200 uA
Calibration accuracy	+/-0.15% under stated maintenance conditions
Sequence-of-events timing	1 ms resolution; +/-10 ms timestamp accuracy
Operating temperature	0 to +60 C
Manufacturer execution	Conformal coated; non-RoHS designation

03 PRODUCT FUNCTION

The shared T8431 hardware accepts a 20-32 V DC backplane supply and has a 20 W module demand. Its full input range is 0-22 mA, with a 250 ohm FTA impedance, 3.906 uA resolution and no channel-to-channel isolation. Sequence-of-events data are available at 1 ms resolution with the specified timestamp accuracy; thresholds and indication behavior are configured through the Trusted toolset.

04 SYSTEM COMPATIBILITY

Provide the documented 20-32 V DC backplane supply and allow 20 W. The 250 ohm FTA impedance is distinct from the module 16.967 kohm impedance; effective module input impedance halves when partner modules are fitted. Inputs do not have channel-to-channel isolation, and any required intrinsically safe barrier must be provided externally.

05 REFERENCE

Rockwell Automation ICSTT-RM273Q-EN-P, August 2021; T8431 family hardware.

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