MTL8000 2/2 I/O

Product Data Sheet

8103-AI-TX

Eight-channel analog input module

INPUT CHANNELS	NOMINAL INPUT SIGNAL	FULL SIGNAL RANGE	RESOLUTION
8 single-ended	**4-20 mA**	**1-23 mA**	**16 bits**

MTL 8103-AI-TX is an eight-channel, single-ended analog input module for MTL8000 2/2 and PAC8000 modular I/O arrangements. It accepts 4-20 mA signals from two-wire or four-wire transmitters and transfers digitized values to the Railbus with 16-bit resolution.

01 TECHNICAL DATA

Input channels	8 single-ended
Nominal input signal	4-20 mA
Full signal range	1-23 mA
Resolution	16 bits
Accuracy	+/-0.1% of span over temperature
Repeatability	0.05% of span
Channel-to-Railbus isolation	100 V AC
Channel-to-channel isolation	None
Signal-to-Railbus response	27 ms maximum
Bussed field voltage	24 V DC +/-10%

MTL 8103-AI-TX, PAC8000 Modular I/O module specification, page 21.

02 ADDITIONAL PRODUCT DATA

Railbus current	100 mA typical; 150 mA maximum at 12 V
Two-wire transmitter field current	300 mA maximum
Four-wire transmitter field current	60 mA maximum
Out-of-range thresholds	Below 0.5 mA or above 23.5 mA
Module key code	A1

03 PRODUCT FUNCTION

The module provides a 1-23 mA full signal range, open- and short-circuit detection, and a maximum 27 ms signal-to-Railbus response. Its channels share a common reference without channel-to-channel isolation; the channel group is isolated from the Railbus at 100 V AC. A 24 V DC bussed field supply supports the connected transmitter circuits.

04 SYSTEM COMPATIBILITY

Provide the 12 V Railbus supply and separate 24 V DC +/-10% bussed field power. The Railbus demand is 100 mA typical and 150 mA maximum. Budget field current separately: up to 300 mA for two-wire transmitters or 60 mA for the four-wire arrangement. The eight inputs are single-ended and are not isolated from one another.

05 REFERENCE

MTL 8103-AI-TX, PAC8000 Modular I/O module specification, page 21.

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