

Schneider Series Service Manual

TSXAEY800

1. Description

The TSXAEY800 model from Schneider Electric is a reliable analog input module designed for use within the TSX Micro PLCs series. It can handle various input types while ensuring effective performance and protection across different applications.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type Analog input module
Product	Line TSX Micro PLCs
Part	Number TSXAEY800
EAN	3389110747638
Weight	1.00 lbs (0.45 kg)
IP	Degree of Protection IP20
Number	of Inputs 8 high-level inputs
Input	Types Current (0-20 mA, 4-20 mA), Voltage (+/- 10 V, 0-10 V, 0-5 V, 1-5 V)
Analog/Digital	Conversion 12 bits
Measurement	Error 0.15% to 0.41% of full scale, depending on input type and temperature
Electrical	Connection 1 connector SUB-D 25
Current	Consumption 270 mA at 5 V DC
Fast	Read Cycle Time 3 ms + 3 ms per channel used
Nominal	Read Cycle Time 27 ms
Isolation	1000 Vrms between channels and bus, 1000 Vrms between channels and ground
Input	Overvoltage Protection -15 to +15 V at state 0, -30 to +30 V at state 1
Operating	Temperature 0 to 60 °C
Storage	Temperature -25 to 70 °C
Range	of Product
Modicon	Premium Automation platform
Product	or Component Type
Analog	input module
Input	level
High	level
Analogue	input number
8	
Analogue	input type
Current	0...20 mA

3. Product Information

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Technical specifications for TSXAEY800

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Product Line TSX Micro PLCs

Part Number TSXAEY800

EAN 3389110747638

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Nominal Read Cycle Time 27 ms

Isolation 1000 Vrms between channels and bus, 1000 Vrms between channels and ground

Input Overvoltage Protection -15 to +15 V at state 0, -30 to +30 V at state 1

Operating Temperature 0 to 60 °C

Storage Temperature -25 to 70 °C

Range of Product

Modicon Premium Automation platform

Product or Component Type

Analog input module

Input level

High level

Analogue input number

8

Analogue input type

Current 0...20 mA

Current 4...20 mA

Voltage +/- 10 V

Voltage 0...10 V

Voltage 0...5 V

Voltage 1...5 V

Analog/digital conversion

12 bits

Complementary

Nominal read cycle time

27 ms

Fast read cycle time

3 ms + 3 ms x number of channels used

Measurement error

0.15 % of full scale 0...5 V 25 °C

0.15 % of full scale 1...5 V 25 °C

0.19 % of full scale +/- 10 V 25 °C

0.19 % of full scale 0...10 V 25 °C

0.22 % of full scale +/- 10 V 0...60 °C

0.22 % of full scale 0...10 V 0...60 °C

0.22 % of full scale 0...5 V 0...60 °C

0.22 % of full scale 1...5 V 0...60 °C

0.25 % of full scale 0...20 mA 25 °C

0.25 % of full scale 4...20 mA 25 °C

0.41 % of full scale 0...20 mA 0...60 °C

0.41 % of full scale 4...20 mA 0...60 °C

Isolation between channels and bus

1000 Vrms

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Isolation between channels and ground
1000 Vrms
Isolation between channels
Common point
Common mode between channels
None
Input overvoltage protection
-15...15 V at state 0 250 Ohm
-30...30 V at state 1 250 Ohm
Electrical connection
1 connector SUB-D 25
Overcurrent
-30...30 mA at state 1 250 kOhm
Marking
CE
Current consumption
270 mA 5 V DC
Module format
Standard
Net Weight
0.68 lb(US) (0.31 kg)
Environment
Standards
IEC 1131
Product Certifications
DNV
RINA
GL
BV
LR
RMRS
ABS
Ambient Air Temperature for Operation
32...140 °F (0...60 °C)
Ambient Air Temperature for Storage
-13...158 °F (-25...70 °C)
Relative Humidity
10...95 % without condensation for operation
5...95 % without condensation for storage
Operating altitude
0...6561.68 ft (0...2000 m)
Protective treatment
TC
IP Degree of Protection
IP20
Pollution degree
2
Ordering and shipping details
Category
US1PC2222558
Discount Schedule
PC22
GTIN
3389110747638
Returnability
No
Packing Units
Unit Type of Package 1
PCE

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Nbr. of units in pkg.

1

Package 1 Height

2.165 in (5.500 cm)

Package 1 Width

7.087 in (18.000 cm)

Package 1 Length

10.236 in (26.000 cm)

Package weight(Lbs)

15.697 oz (445.000 g)

Description

Schneider Electric's TSXAEY800 is an efficient analog input module intended for integration with TSX Micro PLCs. This unit is rated IP20 for its protection level, making it suitable for indoor use. It accommodates up to eight high-level inputs, facilitating significant flexibility in application. The module supports multiple input types, including both current (0-20 mA, 4-20 mA) and voltage (+/- 10 V, 0-10 V, 0-5 V, 1-5 V), providing a comprehensive solution for diverse measurement needs.

The current draw for this device is specified at 270 mA when powered at 5 V DC. For added reliability, the TSXAEY800 includes input overvoltage protection, rated at -15 to +15 V for state 0 and -30 to +30 V for state 1. The module delivers exceptional isolation performance, with ratings of 1000 Vrms between channels and the bus, as well as between channels and ground. This guards against interference and ensures accurate readings.

With a quick read cycle time of 3 ms, plus an additional 3 ms for each utilized channel, the overall nominal read cycle time reaches 27 ms. The module features 12-bit analog-to-digital conversion, ensuring your input data is precise. Operational conditions can range from 0 to 60 °C, while its storage tolerances extend from -25 to 70 °C, permitting versatility in varied environments.

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