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

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.

Technical specifications for TSXAEY800

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

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

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

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.