

Schneider TSXAEY1614 Manual

Brand	Schneider
Product Series	Schneider
Product Type	Analog input module

Description

The TSXAEY1614, part of Schneider Electric's TSX Micro PLC series, features 16 analog input channels, allowing for precise thermocouple and voltage measurements. With a conversion resolution of 16 bits, the module effectively monitors a variety of input types, supporting multiple thermocouple standards alongside voltage inputs, ensuring versatile application capability.

Technical specifications for TSXAEY1614

Manufacturer Schneider Electric

Product Line TSX Micro PLCs

Part Number TSXAEY1614

EAN 3389110876321

Weight 1.00 lbs (0.45 kg)

Analog Input Channels 16 high-level inputs

Analog/Digital Conversion 16 bits

Input Types Thermocouple (B, E, J, K, L, N, R, S, T, U), Voltage (mV, 80 mV)

Nominal Read Cycle Time 70 ms per channel

Measurement Error Varies by thermocouple type, e.g., 0.8°C for thermocouple E at 25°C

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

Common Mode Voltage 250 V AC or 280 V AC between channels, 250 V DC between channels and earth

Electrical Connection 2 connectors SUB-D 25

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

Current Consumption 300 mA at 5 V DC

Module Format Standard

Operating Temperature 0 to 60°C

Storage Temperature -25 to 70°C

Relative Humidity 10 to 95% without condensation for operation

Range of Product

Modicon Premium Automation platform

Product or Component Type

Analog input module

Analogue input number

16

Analogue input type

Thermocouple thermocouple B

Thermocouple thermocouple E

Thermocouple thermocouple J

Thermocouple thermocouple K

Thermocouple thermocouple L

Thermocouple thermocouple N

Thermocouple thermocouple R

Thermocouple thermocouple S

Thermocouple thermocouple T
Thermocouple thermocouple U
Voltage +/- 80 mV
Analog/digital conversion
16 bits
Complementary
Nominal read cycle time
70 ms per channel
Measurement error
0.8 °C thermocouple E 25 °C
0.9 °C thermocouple J 25 °C
0.9 °C thermocouple L 25 °C
1 °C thermocouple K 25 °C
1 °C thermocouple T 25 °C
1 °C thermocouple U 25 °C
1.1 °C thermocouple N 25 °C
1.2 °C thermocouple E 0...60 °C
1.3 °C thermocouple T 0...60 °C
1.3 °C thermocouple U 0...60 °C
1.4 °C thermocouple J 0...60 °C
1.4 °C thermocouple L 0...60 °C
1.6 °C thermocouple K 0...60 °C
1.7 °C thermocouple N 0...60 °C
2.1 °C thermocouple R 25 °C
2.2 °C thermocouple S 25 °C
2.4 °C thermocouple R 0...60 °C
2.5 °C thermocouple B 25 °C
3.7 °C thermocouple S 0...60 °C
4 °C thermocouple B 0...60 °C
Isolation between channels and bus
1000 Vrms
Isolation between channels and ground
1000 Vrms
Common mode between channels
250 V AC or 280 V AC
Common mode between channels and earth
250 V DC
Input overvoltage protection
-15...15 V at state 0 250 Ohm
-30...30 V at state 1 250 Ohm
Electrical connection
2 connectors SUB-D 25
Overcurrent
-30...30 mA at state 1 250 kOhm
Marking
CE
Current consumption
300 mA 5 V DC
Module format
Standard
Net Weight

0.77 lb(US) (0.35 kg)

Environment

Standards

NFC 42-330

IEC 1131

DIN 43710

IEC 751

DIN 43760

IEC 584

Product Certifications

DNV

RMRS

LR

ABS

RINA

BV

GL

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

22558-TSX PREMIUM, ATRIUM & PL7 PRO

Discount Schedule

PC22

GTIN

3389110876321

Returnability

No

Country of origin

FR

Packing Units

Unit Type of Package 1

PCE

Nbr. of units in pkg.

1

Package 1 Height

2.2 in (5.5 cm)

Package 1 Width

7.09 in (18.0 cm)

Package 1 Length

10.2 in (26.0 cm)

Package weight(Lbs)

15.8 oz (447.0 g)

Description

The Schneider Electric TSXAEY1614 is a sophisticated analog input module belonging to the TSX Micro PLCs series. This unit is equipped with 16 high-level input channels, delivering high-resolution measurements with a capability of 16-bit analog-to-digital conversion. The input types supported include various thermocouples such as B, E, J, K, L, N, R, S, T, and U, in addition to voltage measurements of +/- 80 mV, making it versatile for different industrial applications.

Operational efficiency is enhanced with a nominal read cycle time of 70 ms for each channel, allowing for timely data retrieval. Measurement error tolerance varies between different thermocouple types; for example, thermocouple E has an error of 0.8°C at 25°C, ensuring accuracy based on the type of sensor utilized. The module features robust isolation at 1000 Vrms, effectively separating both between channels and the bus, as well as between channels and the ground.

The TSXAEY1614 also provides protection against common mode voltages, managing up to 250 V AC or 280 V AC between channels, and 250 V DC relative to the earth connection. Electrical connections are established through two SUB-D 25 connectors, which allow for straightforward wiring. Input overvoltage protection ranges from -15 to 15 V at state 0 and -30 to 30 V when in state 1, enhancing operational safety.

In terms of power consumption, this module requires 300 mA at a 5 V DC supply. It exhibits a standard module format, weighing 0.35 kg, making it suitable for various installations. Operating temperature specifications range from 0 to 60°C, while storage temperatures can fall between -25 to 70°C. Moreover, the device supports a relative humidity range of 10 to 95%, provided condensation is absent during operation. This combination of reliable performance characteristics makes the TSXAEY1614 a valuable asset in diverse automation systems.

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www.AutoDCSTech.com