

Schneider Series Service Manual

TSX3722001

1. Description

The Schneider Electric TSX3722001 is a modular base controller from the TSX Micro PLCs series. It operates effectively with a primary voltage range of 100-240 V AC and delivers reliable performance in various applications.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type Modular base controller
Product	Line TSX Micro PLCs
Part	Number TSX3722001
EAN	3389110580563
Weight	3.00 lbs (1.36 kg)
Electrostatic	Discharge Rating IEC 1000-4-2 Level 3
Internal	RAM 20 Kwords data
Internal	RAM (with PCMCIA card) 128 Kwords program and data
Primary	Voltage 100-240 V AC (90-264 V AC)
Input	Current 2 mA, < 60 A
Immunity	to Microbreaks < 20 ms
Output	Current 0.5 A
Integrated	Connection Type 1 serial link (TER/AUX) Uni-Telway 19.2 kbit/s, 1 Modbus RTU 19.2 kbit/s
Real-time	Clock Yes
Max.	Size of Object Areas 256 %Mi, 1 %MWi internal words, 128 %KWi constant words
Application	Structure 1 fast task, 1 master task, 16 event tasks
System	Overhead 2.3 ms master task
Protection	Type Overload protection, Short-circuit
Total	Useful Secondary Power 24 W
Range	of product
Modicon	TSX Micro automation platform
Product	or component type
Modular	base controller
Primary	voltage
100...240	V 90...264 V AC
Input	current
2	mA 60 A
Immunity	to micro

3. Product Information

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Technical specifications for TSX3722001

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Total Useful Secondary Power 24 W

Range of product

Modicon TSX Micro automation platform

Product or component type

Modular base controller

Primary voltage

100...240 V 90...264 V AC

Input current

2 mA 60 A

Immunity to microbreaks

20 ms

Output current

0.5 A

Complementary

Number of slots

3

Analogue input type

0...10 V 8

Analogue output type

0...10 V 1

Counting input type

Discrete incremental counter 1 10 Hz

Incremental 1 10 Hz

Integrated connection type

1 serial link (TER/AUX) Uni-Telway 19.2 kbit/s

1 Modbus Modbus RTU 19.2 kbit/s

Realtime clock

With

Memory description

Flash 15 Kwords data

Internal RAM 20 Kwords data

Internal RAM (with PCMCIA card) 128 Kwords program and data

Internal RAM 128 Kwords data storage

Maximum size of object areas

128 %KWi constant words

256 %Mi

1 %MWi internal words

Execution time per instruction

0.13 μ s Boolean without PCMCIA card

4.5 μ s arithmetic REAL floating without PCMCIA card

0.19 μ s Boolean with PCMCIA card

4.5 μ s arithmetic REAL floating with PCMCIA card

Execution time for 1 Kinstruction

5.88 100 % Boolean without PCMCIA card

0.27 65 % Boolean and 35 % numerical without PCMCIA card

4 100 % Boolean with PCMCIA card

0.266 65 % Boolean and 35 % numerical with PCMCIA card

Application structure

1 fast task

16 event tasks

1 master task

System overhead

2.3 ms for master task

Protection type

Overload protection

Short-circuit

Network frequency

50...60 Hz

Total useful secondary power

24 W

Electromagnetic compatibility

Electrostatic discharge conforming to IEC 1000-4-2 level 3

Electromagnetic field immunity test conforming to IEC 1000-4-3 level 3

Resistance to fast transient conforming to IEC 1000-4-4 level 3

Immunity to impulse waves conforming to IEC 1000-4-5

Damped oscillatory wave conforming to IEC 1000-4-12

Immunity to electromagnetic interference conforming to IEC 61131-2

Environment

Ambient air temperature for operation

0...60 °C

Ambient air temperature for storage

-25...70 °C

Relative humidity

10...95 % without condensation for operation

5...95 % without condensation for operation

Operating altitude

0...2000 m

Width

341.4 mm

Height

151 mm

Depth

152 mm

Net weight

1.75 kg

Description

The TSX3722001 from Schneider Electric serves as a modular base controller within the TSX Micro PLCs line. This unit is equipped to handle a primary voltage range of 100-240 V AC, with tolerance for input voltages anywhere between 90 and 264 V AC. For data handling, it incorporates 20 Kwords of internal RAM, and connecting a PCMCIA card raises its capability for program and data storage to 128 Kwords.

Input draws a minimal 2 mA with a maximum operational capacity of less than 60 A. It offers overload protection and short-circuit safeguards. Additionally, this controller manages output currents at 0.5 A. Communication interfaces include one serial link utilizing Uni-Telway at 19.2 kbit/s, alongside support for Modbus RTU at the same speed.

A built-in real-time clock ensures time-sensitive operations are managed accurately. Object area sizes max out at 256 %Mi for input, 1 %MWi for internal words, and 128 %KW for constant storage. The system architecture is structured to facilitate one fast task, a single master task, and accommodates 16 event tasks. System overhead for the master task equates to 2.3 milliseconds, ensuring efficient processing.

Overall, the TSX3722001 is designed to provide reliable performance in industrial automation while addressing immunity to disturbances and ensuring consistent operation.