

Schneider Series Service Manual

TSXP57104M

1. Description

The TSXP57104M by Schneider Electric is a compact controller module from the TSX Micro PLCs series. With internal RAM capabilities of up to 224 KB when using a PCMCIA card, it provides efficient data storage and processing for automation tasks.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line TSX Micro PLCs
Part	Number TSXP57104M
UPC	785901573869
Weight	1.00 lbs (0.45 kg)
Memory	Description Internal RAM (with PCMCIA card) 224 KB program, Internal RAM (without PCMCIA card) 96 KB program and data
PCMCIA	Card 256 KB additional data storage
Execution	Time per Instruction 0.19 µs Boolean without PCMCIA card, 0.25 µs Boolean with PCMCIA card
Number	of Instructions per ms 2.1 Kinst/ms (65% Boolean + 35% fixed arithmetic with PCMCIA card), 3.71 Kinst/ms (65% Boolean + 35% fixed arithmetic without PCMCIA card)
Local	Signalling 1 LED (green) for processor running (RUN), 1 LED (red) for I/O module or configuration fault (I/O), 1 LED (red) for processor or system fault (ERR), 1 LED (yellow) for activity on the terminal port (TER)
Current	Consumption 850 mA, 5 V DC
Module	Format Standard
Internal	RAM 96 KB data
Number	of Racks 2 (12 slots), 4 (4/6/8 slots)
Discrete	I/O Processor Capacity 512 I/O
Analogue	I/O Processor Capacity 24 I/O
Integrat	

3. Product Information

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Technical specifications for TSXP57104M

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Current Consumption 850 mA, 5 V DC

Module Format Standard

Internal RAM 96 KB data

Number of Racks 2 (12 slots), 4 (4/6/8 slots)

Discrete I/O Processor Capacity 512 I/O

Analogue I/O Processor Capacity 24 I/O

Integrated Connection Type Non-isolated serial link, 2 female mini DIN, 19.2 kbit/s

Communication Module Processor Capacity 2 modules

Range of Product

Modicon Premium Automation platform

Product or Component Type

Unity processor

Software Designation

Unity Pro

Complementary

Number of racks

2 12 slots

4 4/6/8 slots

Number of slots

16

24

32

Discrete I/O processor capacity

512 I/O

Analogue I/O processor capacity

24 I/O

Number of application specific channel

8

Integrated connection type

Non isolated serial link 2 female mini DIN RS485)19.2 kbit/s)

Communication module processor capacity

2

1

Memory description

Internal RAM (with PCMCIA card) 224 kB program

Internal RAM (with PCMCIA card) 96 kB data

Internal RAM (without PCMCIA card) 96 kB program and data

PCMCIA card 256 kB additional data storage

Maximum size of object areas

32 kB (elementary and derived data) unlocated internal data

4096 %Mi located internal bits

64 %KWi constant words located internal data

64 %MWi internal words located internal data

64 kB (DFB and EFB function blocks) unlocated internal data

Application structure

32 event tasks

1 master task

1 fast task

Execution time per instruction

0.19 μ s Boolean without PCMCIA card

0.25 μ s Boolean with PCMCIA card

0.25 μ s word or fixed-point arithmetic without PCMCIA card

0.5 μ s word or fixed-point arithmetic with PCMCIA card

1.75...2.6 μ s floating points with PCMCIA card

1.75...2.6 μ s floating points without PCMCIA card

Number of instructions per ms

2.1 Kinst/ms 65 % Boolean + 35 % fixed arithmetic with PCMCIA card

3.1 Kinst/ms 100 % Boolean with PCMCIA card

3.71 Kinst/ms 65 % Boolean + 35 % fixed arithmetic without PCMCIA card

4.76 Kinst/ms 100 % Boolean without PCMCIA card

System overhead

0.3 ms fast task

1 ms master task

Marking

CE

Local signalling

1 LED (green) for processor running (RUN)

1 LED (red) for I/O module or configuration fault (I/O)

1 LED (red) for processor or system fault (ERR)

1 LED (yellow) for activity on TER or AUX terminal port (TER)

Current consumption

850 mA 5 V DC

Module format

Standard

Net Weight

0.84 lb(US) (0.38 kg)

Environment

Standards

CSA C22.2 No 213 Class I Division 2 Group A

73/23/EEC

89/336/EEC

UL 508

92/31/EEC

93/68/EEC

CSA C22.2 No 142

CSA C22.2 No 213 Class I Division 2 Group C

CSA C22.2 No 213 Class I Division 2 Group D

CSA C22.2 No 213 Class I Division 2 Group B

IEC 61131-2

Product Certifications

RMRS

GL

LR

ABS

BV

DNV

RINA

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
3595863808629
Returnability
No

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 cm)
Package 1 Length
10.2 in (26 cm)
Package weight(Lbs)
20.0 oz (566 g)

Description
The Schneider Electric TSXP57104M is a versatile controller module ideal for various applications. It features internal RAM specifications of 96 KB for data when not using the PCMCIA card and 224 KB for programs when the card is utilized, allowing for flexible data management. Storage can be extended through a PCMCIA card, which offers 256 KB of additional capacity.
This controller has impressive processing speeds, capable of executing instructions in 0.19 µs for Boolean calculations when the PCMCIA card is not in play and 0.25 µs with it installed. Remarkable instruction throughput enables it to manage up to 3.71 Kinst/ms without the card while dropping to 2.1 Kinst/ms when it is equipped. The device has various LEDs that provide instant feedback on operational status, including indications for running processes, I/O errors, processor faults, and terminal activities.
The TSXP57104M has a power draw of 850 mA and operates on 5 V DC, making it efficient for integrating many systems. The standard-sized module weighs a mere 0.84 lbs. (0.38 kg), ensuring easy handling and installation. It can accommodate a variety of configurations with support for 2 racks having 12 slots or 4 racks having 4, 6, or 8 slots.
With a 512 discrete inputs/outputs capacity and 24 for analog I/O, it easily manages complex automation tasks. Communication capabilities include a non-isolated serial link featuring two female mini-DIN connectors, allowing for a rate of 19.2 kbit/s. It is also capable of interfacing with two communication modules, broadening its connectivity options for comprehensive system integration.