

Schneider Series Service Manual

TSXPBY100

1. Description

The TSXPBY100 is part of Schneider Electric's TSX Micro PLCs product line. This Profibus-DP option module operates effectively within a temperature range from 0 °C to +60 °C and can be stored safely at temperatures as low as -25 °C and as high as +70 °C, making it suitable for various environments.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line TSX Micro PLCs
Part	Number TSXPBY100
EAN	3389110105438
Weight	0.75 lbs (0.34 kg)
Operating	Temperature 0 °C to +60 °C
Storage	Temperature -25 °C to +70 °C
Humidity	30% to 95% (non-condensing)
Altitude	0 to 2000 meters
Vibration	Immunity Complies with IEC 68-2-6 standard
Shock	Immunity Complies with IEC 68-2-27 standard
Electrostatic	Discharge Immunity Complies with IEC 1000-4-2 standard
Power	Supply 5 V DC provided by the rack power supply
Current	Consumption 400 mA on 5 V DC
Module	Type Profibus-DP Option Module
Compatibility	Compatible with Modicon Premium PLCs
Transmission	Rate Supports 9.6 Kbit/s to 12 Mbit/s
Maximum	Segment Length Up to 1200 meters at 9.6 Kbit/s
Number	of Slaves Supports up to 124 slaves with repeaters
Input/Output	Data Size 4096 inputs / 4096 outputs
Range	of Product
Profibus	DP
Product	or Component Type
Profibus	DP V0 module kit
Kit	composition
Host	module for the PCMCIA card
T-junction	box enabling the tap link of th

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Technical specifications for TSXPBY100

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Product Line TSX Micro PLCs

Part Number TSXPBY100

EAN 3389110105438

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Maximum Segment Length Up to 1200 meters at 9.6 Kbit/s

Number of Slaves Supports up to 124 slaves with repeaters

Input/Output Data Size 4096 inputs / 4096 outputs

Range of Product

Profibus DP

Product or Component Type

Profibus DP V0 module kit

Kit composition

Host module for the PCMCIA card

T-junction box enabling the tap link of the main bus

Profibus DP PCMIA card with its integrated connecting cable (0.6 m)

Product Compatibility

For Atrium slot-PLC

For Premium PLC

Structure type

Industrial bus

Complementary

Physical interface

RS485

Method of access

Master class 1

Master class 2

Mode of Transmission

NRZ

Transmission support medium

twisted shielded pairs cable

Transmission rate

12 Mbit/s, 328.08 ft (100 m) without repeater

12 Mbit/s, 1312.3 ft (400 m) with 3 repeaters

9.6 kbit/s, 3937.008 ft (1200 m) without repeater

9.6 kbit/s, 15748.03 ft (4800 m) with 3 repeaters

Number of server device(s)

126

Number of inputs

3872

Number of outputs

3872

Communication service

Check slave configuration (on power up) class 1 master

Manage monitoring request (Global CONTROL and Get Master Diag) class 2 master

No master/master dialogue class 2 master

Profibus FMS message handling not supported class 1 master

Profibus FMS message handling not supported class 2 master

Read/write DP slave I/O data class 1 master

Set slave parameters (on power up) class 1 master

Transfer slave diagnostic data class 1 master

Current consumption

400 mA 5 V DC internal

Module format

Standard

Net Weight

1.92 lb(US) (0.87 kg)

Environment

Ambient Air Temperature for Operation

32...140 °F (0...60 °C)

Ambient Air Temperature for Storage

-13...158 °F (-25...70 °C)

Relative Humidity

5...95 % without condensation

Operating altitude

<= 6561.68 ft (2000 m)

Ordering and shipping details

Category

22558-TSX PREMIUM, ATRIUM & PL7 PRO

Discount Schedule

PC22

GTIN

3389110105438

Returnability

No

Country of origin

FR

Packing Units

Unit Type of Package 1

PCE

Nbr. of units in pkg.

1

Package 1 Height

9.6 in (24.5 cm)

Package 1 Width

9.6 in (24.5 cm)

Package 1 Length

10.8 in (27.5 cm)

Package weight(Lbs)

2.886 lb(US) (1.309 kg)

Description

The TSXPBY100 option module from Schneider Electric is engineered for seamless integration with Modicon Premium PLCs. It is specialized for Profibus-DP communication and supports data transmission rates between 9.6 Kbit/s to 12 Mbit/s. This flexibility allows for substantial adaptability in various setups. For maximum efficiency, it can maintain a segment length of up to 1200 meters at the lower speed of 9.6 Kbit/s, making it ideal for larger systems.

This module's architecture is capable of managing up to 124 slaves, provided that repeaters are utilized to enhance connectivity. It encompasses significant data handling capacity, allowing for 4096 inputs and 4096 outputs, ensuring comprehensive control and communication capabilities.

Regarding durability, the TSXPBY100 is robustly built to withstand a temperature operational bracket from 0 °C to +60 °C, with a storage tolerance from -25 °C to +70 °C. Humidity levels can range from 30% to 95%, non-condensing, ensuring functionality in a variety of climatic conditions. The operating altitude reaches 2000 meters, expanding its usability in different geographical settings. Its construction complies with IEC standards for vibration, shock, and electrostatic discharge, reflecting its reliability in demanding industrial applications.