

Schneider Series Service Manual

170PNT11020

1. Description

The 170PNT11020 from Schneider Electric is a communication adapter designed for Modicon Momentum systems. This adapter employs a Modbus Plus protocol with a baud rate of 1 megabit per second for reliable data transmission.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type Communication Adapter
Product	Line Modicon Momentum
Part	Number 170PNT11020
EAN	3595861147355
Weight	1.00 lbs (0.45 kg)
Transmission	Cable Type Twisted pairs cable
Communication	Protocol Modbus Plus
Baud	Rate 1 megabits per second
Access	Method Token bus and peer-to-peer (P2P)
Ambient	Operating Temperature 0 to 60°C (in a non-condensing environment)
Number	of Devices Per Segment 0 to 31 per segment and 0 to 64 for all segments
Maximum	Cable Distance Between Devices Approximately 16,404 feet (5,000 meters) with repeater
Protection	Class IP20
Storage	Temperature -40 to 85°C (in a non-condensing environment)
Electrical	Connection Type Two 9-pin D-Sub connectors for redundant and connecting Modbus Plus network
Compliance	Standards UL, CSA, and CE safety standards
Operating	Altitude Less than 16,404 feet (5,000 meters)

3. Product Information

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Technical specifications for 170PNT11020

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Communication Protocol Modbus Plus

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Electrical Connection Type Two 9-pin D-Sub connectors for redundant and connecting Modbus Plus network

Compliance Standards UL, CSA, and CE safety standards

Operating Altitude Less than 16,404 feet (5,000 meters)

Description

The Schneider Electric 170PNT11020 is a robust communication adapter specifically developed for use within the Modicon Momentum series. It is designed to facilitate data transfer using a twisted pairs cable, ensuring efficient communication.

Operating on the Modbus Plus protocol, this device provides a baud rate of 1 megabit per second, enabling fast data exchange. The access method is based on a token bus and peer-to-peer (P2P) configuration, allowing flexible network topologies for various industrial applications.

This communication adapter can connect up to 31 devices per individual segment and supports a total of 64 devices across all segments, making it versatile for larger setups. The maximum cable length between devices can reach approximately 16,404 feet (5,000 meters) when using a repeater, supporting extensive installations.

The 170PNT11020 operates effectively in ambient temperatures ranging from 0 to 60°C. It also has a wide storage temperature range, functioning in conditions from -40 to 85°C. The unit maintains an IP20 protection class, indicating basic safeguards against dust and accidental contact.

Electrical connections are facilitated through two 9-pin D-Sub connectors, ensuring redundancy and facilitating integration into the Modbus Plus network. Additionally, this device complies with several safety standards, including UL, CSA, and CE, confirming its reliability in domestic and industrial applications. The recommended operating altitude is below 16,404 feet (5,000 meters). With a weight of just 0.44 pounds (0.2 kilograms), it is lightweight and manageable for installation and use.

Range of Product

Modicon Momentum automation platform

Product or Component Type

Modbus Plus communication adaptor

Bus manager PLC

Premium

Quantum

Structure type

Industrial

Communication Port Protocol

Modbus Plus

Method of access

Token bus

Peer to peer

Transmission Rate

1 Mbit/s

Transmission support medium

Twisted pair

Complementary

Topology

Multidrop, device connecting by extension or tap off cable

Number of devices per segment

0...31 per segment

0...63 all segment

Maximum cable distance between devices

16404.2 ft (5000 m) with repeater

Data format

IEC 61131-2

Fail state

Full scale value

Forcing to state zero

Maintain value

Fallback to zero

Supply

From I/O base

Marking

CE

Local signalling

1 LED (green) for module powered up or communicating (MB + ACT)

1 LED (red) for communication error network A (ERR A)

1 LED (red) for communication error network B (ERR B)

Electrical connection

1 connector SUB-D 9 for connecting Modbus Plus network

1 connector SUB-D 9 for redundant Modbus Plus network

Environment

Product Certifications

CSA

UL

Standards

FM Class 1 Division 2

Protective treatment

TC

Resistance to electrostatic discharge

4 kV contact IEC 801-2

8 kV on air IEC 801-2

Resistance to electromagnetic fields

9.1 V/m (10 V/m) 80...1000 MHz IEC 801-3

Ambient Air Temperature for Operation

32...140 °F (0...60 °C)

Ambient Air Temperature for Storage

-40...185 °F (-40...85 °C)

Relative Humidity

95 % without condensation

Operating altitude

<= 16404.2 ft (5000 m)

Ordering and shipping details

Category

US1PC3118206

Discount Schedule

PC31

GTIN

3595861147355

Returnability

Yes

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)
7.5 oz (213.0 g)