

Schneider Series Service Manual

140CPU53414UC

1. Description

The 140CPU53414UC CPU Module from Schneider Electric's Modicon Quantum series features a Quantum Unity processor. This unit supports two local racks and is equipped with 586 KB of RAM, with a program memory capacity of 4 MB. The module ensures robust communication through Modbus RS232/Plus ports.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type CPU Module
Product	Line Modicon Quantum
Part	Number 140CPU53414UC
Processor	Type Quantum Unity
Number	of Racks 2 local racks
RAM	586 KB
Instruction	Rate 1.86-2.49 Kinst/ms
Memory	Type Internal RAM
Communication	Ports Modbus RS232/Plus
Program	Memory 4 MB
Operating	Temperature Industrial Range
Power	Supply 5 V DC
Execution	Time (Boolean) 0.1-0.27 µs
Communication	Memory 1 MB + CC
Protective	Coating Yes (CC)
LED	Indicators Status and Error LEDs
Description	The Schneider Electric 140CPU53414UC serves as a highly efficient CPU Module within the Modicon Quantum range. Featuring a Quantum Unity processor, this module is designed to handle two local racks, allowing for expanded system capabilities. It incorporates 586 KB of RAM, providing adequate memory for various applications, alongside a robust program memory of 4 MB, demonstrating its ability to manage complex programming requirements.

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Technical specifications for 140CPU53414UC

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The module's communication features are highlighted by Modbus RS232/Plus ports, facilitating effective device communication. The execution time for Boolean operations is notably efficient, ranging between 0.1 and 0.27 microseconds, ensuring rapid processing capabilities that can enhance the performance of automation tasks.

Designed for industrial environments, it operates across a broad temperature range. Powering the 140CPU53414UC requires a 5 V DC supply, making it compatible with standard industrial power systems. The module features a communication memory that exceeds 1 MB while also incorporating CC, further maximizing its data management efficiency. LED indicators for status and errors provide users with immediate feedback on operational health, aiding in diagnostics and maintenance.

Additional to its functional capabilities, the module comes with a protective coating, ensuring durability against environmental factors that may affect its performance. Overall, the 140CPU53414UC is engineered to deliver reliable operation in demanding industrial applications.

ProWORX32, Concept, 2972kB RAM, 100MHz

Range of Product

Modicon Quantum automation platform

Product or Component Type

Processor

Software name

ProWORX 32

Concept

Processor name

80486

Mathematical coprocessor

With

Complementary

Clock frequency

100 MHz

Memory description

Internal RAM 2972 kB

Exact time for 1 Kinstruction

0.1...0.5 ms LL984

Watchdog timer

250 ms

Clock drift

+/-8 s/day 32...140 °F (0...60 °C)

I/O words

30 I/32 O distributed

64 I/64 O max local

64 I/64 O remote

I/O words/network

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500 I/500 O distributed
Drops/network
63 distributed
Number of drops
31 remote
Number of network
2 remote
3 distributed
Battery type
Lithium 10 μ A 420 μ A
Battery Capacity
1.2 Ah
Battery Life
10 year(s)
Switch Function
Key switch
Marking
CE
Bus current requirement
1250 mA
Module format
Standard
Net Weight
1.87 lb(US) (0.85 kg)
Environment
Product Certifications
FM Class 1 Division 2
cUL
Standards
CSA C22.2 No 142
UL 508
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...2000 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)

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