

Schneider Series Service Manual

140CPS22400C

1. Description

The 140CPS22400C from Schneider Electric is a redundant power supply module designed for use in Modicon Quantum systems. It operates on a voltage input range of 20 to 30 VDC and provides a reliable output voltage of 5.1 VDC with a redundancy feature supporting an output current of 8 A.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line Modicon Quantum
Part	Number 140CPS22400C
EAN	3595861136014
Product	Name Redundant Power Supply Module
Voltage	Input 20 to 30 VDC
Input	Current 3.8 A max.
Inrush	Current 25 A at 24 VDC, 14 A at 20 VDC
Output	Voltage 5.1 VDC
Output	Current 8 A (redundant)
Overvoltage	Protection Internal
Local	Signaling LEDs
Alarm	Output 1 Normally Closed (NC) contact rated at 6 A, 220 V for power supply fault
Overload	Protection 2.3 times the maximum rated input voltage for 1.3 ms
Power	Dissipation 6 + (1.8 x Iout) watts, where Iout is in amperes
UL	Listed Yes

3. Product Information

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Technical specifications for 140CPS22400C

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Product Line Modicon Quantum

Part Number 140CPS22400C

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Product Name Redundant Power Supply Module

Voltage Input 20 to 30 VDC

Input Current 3.8 A max.

Inrush Current 25 A at 24 VDC, 14 A at 20 VDC

Output Voltage 5.1 VDC

Output Current 8 A (redundant)

Overvoltage Protection Internal

Local Signaling LEDs

Alarm Output 1 Normally Closed (NC) contact rated at 6 A, 220 V for power supply fault

Overload Protection 2.3 times the maximum rated input voltage for 1.3 ms

Power Dissipation 6 + (1.8 x Iout) watts, where Iout is in amperes

UL Listed Yes

Description

The Schneider Electric 140CPS22400C is a specialized redundant power supply module within the Modicon Quantum series. Designed for robustness, this unit accommodates an input voltage range from 20 volts DC to 30 volts DC. It handles a maximum current of 3.8 A, ensuring effective performance in various applications.

At startup, the module may experience an inrush current, reaching 25 A at 24 VDC or 14 A at 20 VDC. The output provides a stable voltage of 5.1 VDC, delivering a redundancy-supported output current of 8 A. For safety, the module integrates internal overvoltage protection which significantly enhances system stability.

Local indication of working status is facilitated through built-in LED signals, offering quick visual feedback. Additionally, a normally closed alarm output contact, rated at 6 A and 220 V, is available for monitoring power supply faults, enhancing overall system reliability.

To ensure further protection, the module offers overload capability, with the ability to withstand 2.3 times the maximum rated input voltage for brief periods of 1.3 milliseconds. The formula for determining power dissipation is defined as 6 + (1.8 times the output current in amperes), indicating efficient power management.

Additionally, the 140CPS22400C is UL Listed, confirming compliance with safety standards, making it suitable for integration into critical applications where reliability and safety are paramount.