

Schneider Series Service Manual

140CRA21120C

1. Description

The 140CRA21120C is a DIO drop interface from Schneider Electric’s Modicon Quantum series, designed for industrial automation. This module operates on a supply voltage of 24 VDC with specified limits ranging from 20 to 30 V, providing reliable operation in various environments.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type DIO drop interface
Product	Line Modicon Quantum
Part	Number 140CRA21120C
EAN	3595861136236
Ports	2 redundant
Supply	Voltage 24 VDC
Supply	Voltage Limits 20 to 30 V
Inrush	Current 30 A
Max	Buffer Time 1 ms
Fuse	Rating 2.5 A
Output	Voltage 5.1 V
Output	Current 3 A
Short-Circuit	Protection Yes
Overvoltage	Protection Yes
Power	Dissipation 11 W
Altitude	<= 5000 m
Protective	Treatment Conformal coating
Humidity	95 % without condensation

3. Product Information

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Technical specifications for 140CRA21120C

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Product Type DIO drop interface

Product Line Modicon Quantum

Part Number 140CRA21120C

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Supply Voltage Limits 20 to 30 V

Inrush Current 30 A

Max Buffer Time 1 ms

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Output Voltage 5.1 V

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Short-Circuit Protection Yes

Overvoltage Protection Yes

Power Dissipation 11 W

Altitude <= 5000 m

Protective Treatment Conformal coating

Humidity 95 % without condensation

Description

The Schneider Electric model 140CRA21120C, part of the Modicon Quantum series, serves as a DIO drop interface. This component is engineered to function with a nominal supply voltage of 24 VDC, ensuring performance across a range from 20 to 30 V. It incorporates two redundant ports, which provide an added layer of reliability in communication. A notable feature is its capability to manage an inrush current of up to 30 A, making it suitable for demanding industrial applications. The module's output voltage settles at 5.1 V while allowing a maximum output current of 3 A. This design provides robust output capabilities while maintaining efficiency. Furthermore, the module offers critical protective features, including short-circuit and overvoltage protection to safeguard both the device and the connected systems. With a power dissipation capacity of 11 W, the 140CRA21120C can operate effectively under various conditions. It is rated for use at altitudes reaching up to 5000 meters, expanding its suitability for diverse installations. The protective treatment includes a conformal coating, enhancing its durability against environmental factors. Additionally, it can sustain humidity levels up to 95% without condensation, confirming its reliability in humid environments.

Range of Product

Modicon Quantum automation platform

Product or Component Type

DIO drop interface

Complementary

Number of port

2 redundant

[Us] rated supply voltage

24 V DC

Supply voltage limits

20...30 V

Maximum supply current

1.6 A 24 V

Inrush current

30 A 24 V

Maximum buffer time

1 ms

Associated fuse rating

2.5 A

Output voltage

5.1 V

nominal output current

3 A

Minimum load current

0 A

Short-circuit protection

With

Output overvoltage protection

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With

I/O words

30 I/32 O

Typical backplanes

6 positions

3 positions

4 positions

16 positions

2 positions

10 positions

Diagnostics startup

RAM

RAM address

Checksum

Diagnostics run time

Checksum

RAM address

RAM

Power dissipation in W

11 W

Connections - Terminals

Terminal block, 7 poles

Module format

Standard

Environment

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)

Protective treatment

Conformal coating Humiseal 1A33

TC

Standards

UL 508

Product Certifications

CSA Class 1 Division 2

DNV

UL

GOST

C-tick

Ordering and shipping details

Category

18155-QUANTUM I/O & POWER SUPPLIES

Discount Schedule

PC21

GTIN

3595861136236

Returnability

No

Country of origin

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FR
Packing Units
Unit Type of Package 1
PCE
Nbr. of units in pkg.
1
Package 1 Height
2.0 in (5.0 cm)
Package 1 Width
6.5 in (16.5 cm)
Package 1 Length
12.4 in (31.5 cm)
Package weight(Lbs)
24.2 oz (685.0 g)

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