

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

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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

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

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)