

Schneider Series Service Manual

140DAO84210C

1. Description

The 140DAO84210C output module from Schneider Electric is designed to operate within voltage ranges of 100 to 230 V AC. This unit supports a total of 16 outputs, making it suitable for varied applications. It has a weight of 1.98 lbs and operates efficiently at supply frequencies of 47 to 63 Hz.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line Modicon Quantum
Part	Number 140DAO84210C
EAN	3595861136038
Product	Output Module
Operating	Voltage 100/230 V AC
Number	of Outputs 16
Supply	Frequency 47 to 63 Hz
Voltage	Drop 1.5 V
Minimum	Load 5A
Fault	Indication Blown Fuse
Power	Dissipation 1.85 + (1.1 V x total module load current)
Local	Signalling 16 LEDs green input status
Bus	Current Requirement 350 mA
Minimum	Load Current 4A rms per group
Protection	Type Internal by RC filter

3. Product Information

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Technical specifications for 140DAO84210C

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Product Line Modicon Quantum

Part Number 140DAO84210C

EAN 3595861136038

Product Output Module

Operating Voltage 100/230 V AC

Number of Outputs 16

Supply Frequency 47 to 63 Hz

Voltage Drop 1.5 V

Minimum Load 5A

Fault Indication Blown Fuse

Power Dissipation $1.85 + (1.1 \text{ V} \times \text{total module load current})$

Local Signalling 16 LEDs green input status

Bus Current Requirement 350 mA

Minimum Load Current 4A rms per group

Protection Type Internal by RC filter

Description

The Schneider Electric 140DAO84210C output module is part of the Modicon Quantum series and is built for reliable performance in various systems. It functions on an operating voltage range of 100/230 V AC and is capable of supporting 16 individual outputs. Weighing in at 1.98 lbs, this module is designed for applications where space is at a premium. The unit operates effectively at supply frequencies between 47 and 63 Hz, ensuring compatibility across different installations. One notable feature is its voltage drop of 1.5 V, which is essential for system efficiency. For optimal performance, the module has a minimum load requirement of 5 A, making it suitable for various industrial scenarios. A blown fuse serves as the fault indication, providing immediate feedback on module status. This output module's power dissipation is a function of its load current, calculated as 1.85 plus 1.1 V multiplied by the total current flowing through the module. Local signaling is facilitated by 16 green LEDs, allowing users to easily track input status. With a bus current requirement of 350 mA, the module is designed to work seamlessly in automated environments. It also necessitates a minimum load current of 4 A RMS for each group. Internal protection is established through an RC filter, ensuring the robustness of the electrical components. The 140DAO84210C output module exemplifies precision engineering tailored for rigorous operational demands.

Range of Product

Modicon Quantum automation platform

Product or Component Type

AC discrete output modules

Discrete output number

16

Complementary

Group of channels

4 groups of 4 channels

Supply frequency

47...63 Hz

maximum voltage drop

1.5 V

Discrete output voltage

83...253 V AC

Addressing requirement

1 output word

Absolute maximum output

300 Vrms 10 s AC

400 Vrms 1 cycle AC

Maximum load current

2 mA rms 115 Vrms off state leakage per output

2.5 mA rms 230 Vrms off state leakage per output

3 A rms 170...253 V per output

4 A rms 85...132 V per output

16 A rms per module

4 A rms per group

Surge current

10 A during 3 cycles per point

20 A during 2 cycles per point

30 A during 1 cycle per point
25 A during 3 cycles per group
30 A during 2 cycles per group
45 A during 1 cycle per group
DV/dt
400 V/ms
Response Time
<= 0.5 ms at state 0 to state 1
<= 0.5 ms at state 1 to state 0
Fault indication
Blown fuse
Loss of field power
Protection Type
Internal output protection by 5 A fuse
Internal by RC filter
Power dissipation
 $1.85 + (1.1 \text{ V} \times \text{total module load current})$
Marking
CE
Local signalling
1 LED (green) for bus communication is present (Active)
1 LED (red) for external fault detected (F)
16 LEDs (green) for input status
Bus current requirement
350 mA
Module format
Standard
Net Weight
0.99 lb(US) (0.45 kg)
Environment
Protective treatment
Conformal coating Humiseal 1A33
Product Certifications
cUL
FM Class 1 Division 2
Standards
UL 508
CSA C22.2 No 142
Electromagnetic compatibility
Electrostatic discharge immunity test - test level: 4 kV (contact discharge) conforming to IEC 801-2
Electrostatic discharge immunity test - test level: 8 kV (air discharge) conforming to IEC 801-2
Susceptibility to electromagnetic fields - test level: 10 V/m (80...1000 MHz) conforming to 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
US1PC2118155
Discount Schedule
PC21
GTIN
3595861136038
Returnability
No

Packing Units
Unit Type of Package 1
PCE
Nbr. of units in pkg.
1
Package 1 Height
6.4 in (16.3 cm)
Package 1 Width
1.8 in (4.5 cm)
Package 1 Length
12.3 in (31.2 cm)
Package weight(Lbs)
23.4 oz (664 g)