

Schneider Series Service Manual

140DDO84300C

1. Description

Schneider Electric’s 140DDO84300C is a discrete output module in the Modicon Quantum series, offering a total of 16 outputs across two channel groups. This module operates within a voltage range of 10 to 60 Volts DC and features local signaling through 17 green and one red LED indicators, enhancing operational visibility.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type Discrete Output Module
Product	Line Modicon Quantum
Part	Number 140DDO84300C
EAN	3595861136656
Number	of Outputs 16 discrete outputs
Number	of Channel Groups 2 channel groups (each group with 8 outputs)
Required	Bus Current 160 milliamperes
Output	Voltage Rating 10 to 60 Volts DC
Output	Voltage Limits 10,2 to 72 Volts DC
Local	Signalling 17 green LEDs and 1 red LED
Coating	Type Conformal coating
Ambient	Operating Temperature 0 to 60°C (in a non-condensing environment)
Power	Dissipation Approximately 1 Watt
Protection	Type 8 Amperes fuse that acts as an internal protection for each output group
Leakage	Current Less than 1 milliamperes
Absolute	Maximum Output 72 Volts (permanent)
Storage	Temperature -40 to 85°C (in a non-condensing environment)

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Technical specifications for 140DDO84300C

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Power Dissipation Approximately 1 Watt

Protection Type 8 Amperes fuse that acts as an internal protection for each output group

Leakage Current Less than 1 milliamperes

Absolute Maximum Output 72 Volts (permanent)

Storage Temperature -40 to 85°C (in a non-condensing environment)

Description

The 140DDO84300C discrete output module, a product of Schneider Electric's Modicon Quantum series, is designed for versatile control applications. It consists of 16 discrete outputs, which are organized into two distinct channel groups, each containing eight outputs. The module supports output voltages ranging from 10 to 60 Volts DC, with an absolute maximum output voltage rating of 72 Volts under permanent conditions.

This module consumes a bus current of 160 milliamperes during operation, efficiently managing power requirements. Local signaling is facilitated by 17 green LEDs and one red LED on the front panel, providing immediate feedback about the status of the module.

With a conformal coating applied, the 140DDO84300C ensures protection against potentially harmful environmental factors. It can operate in ambient temperatures between 0 to 60°C in non-condensing environments, while it withstands storage temperatures from -40 to 85°C. The module has a power dissipation of roughly 1 Watt, making it energy efficient.

Additionally, an internal protection mechanism consisting of an 8-amp fuse safeguards each output group from overcurrent situations. This design feature ensures operational reliability, along with a very low leakage current, less than 1 milliamperes, maintaining system integrity during performance.

Range of product

Modicon Quantum automation platform

Product or component type

Dc discrete output module

Discrete output number

16

Complementary

Group of channels

2 groups of 8

Discrete output logic

Positive logic (source)

Addressing requirement

1 output word

Discrete output voltage

10...60 V DC

Output voltage limits

10.2...72 V

Absolute maximum output

72 V permanent

Maximum voltage drop

<1 V 2 A

Maximum load current

12 A per module

6 A per group

Surge current

7.5 A for 50 s

Response time

<= 1 ms at state 0 to state 1

<= 1 ms at state 1 to state 0

Maximum leakage current

1 mA 60 V

Load inductance

Inductance(H) = $0.5/((\text{current(A)})^2 \times (\text{switching frequency(Hz)}))$

Associated fuse rating

2 A each point

8 A per group

Isolation between channels and bus

2500 Vrms DC for 1 minute

Isolation between group

700 Vrms DC for 1 minute

Protection type

Internal output protection by 8 A fuse per group

Power dissipation

1 W + (1 V x 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

160 mA

Module format

Standard

Net weight

0.45 kg

Environment

Protective treatment

Conformal coating Humiseal 1A33

Product certifications

C-Tick

FM Class 1 Division 2

RMRS

GOST

Standards

CSA C22.2 No 142

UL 508

Resistance to electrostatic discharge

4 kV contact conforming to IEC 801-2

8 kV on air conforming to IEC 801-2

Resistance to electromagnetic fields

10 V/m 80...2000 MHz conforming to IEC 801-3

Ambient air temperature for operation

0...60 °C

Ambient air temperature for storage

-40...85 °C

Relative humidity

95 % without condensation

Operating altitude

<= 5000 m

Packing Units

Unit Type of Package 1

PCE

Number of Units in Package 1

1

Package 1 Height

16.3 cm

Package 1 Width

4.5 cm

Package 1 Length

31.2 cm

Package 1 Weight

680.0 g