

Schneider Series Service Manual

140DDI35300C

1. Description

The Schneider Electric 140DDI35300C functions as a discrete input module within the Modicon Quantum series. Capable of managing up to 32 discrete inputs, it operates effectively at a nominal voltage of 24 volts DC with specific voltage limits set between 19.2 to 30 volts.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line Modicon Quantum
Part	Number 140DDI35300C
EAN	3595861135888
Product	Discrete Input Module
Discrete	Input Number 32
Group	of Channels 4
Logic	Input Positive
Discrete	Input Voltage 24 V
Voltage	Type DC
Input	Voltage Limits 19.2 - 30 V
Current	State >= 2 mA
Addressing	Requirement 2 input words
Input	Impedance 2500 Ohm
Max.	Leakage Current 200 mA
Absolute	Max. Input 36 V
Power	Dissipation 1.7 W
Isolation	Between Group 500 Vrms

3. Product Information

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Technical specifications for 140DDI35300C

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Product Line Modicon Quantum

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Product Discrete Input Module

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Input Voltage Limits 19.2 - 30 V

Current State ≥ 2 mA

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Input Impedance 2500 Ohm

Max. Leakage Current 200 mA

Absolute Max. Input 36 V

Power Dissipation 1.7 W

Isolation Between Group 500 Vrms

Description

The 140DDI35300C from Schneider Electric is a discrete input module tailored for integration into the Modicon Quantum series. This unit is engineered to facilitate 32 discrete input channels, enhancing control capabilities in various applications. It functions with a nominal input voltage of 24 volts DC, suited for a range of applications, while accepting an input voltage from 19.2 to 30 volts. The module's positive logic input configuration simplifies the interfacing with various control systems.

For setup purposes, the module requires addressing with two input words. It features an input impedance of 2500 Ohms, supporting the detection of current states of 2 mA or higher.

When evaluating performance, the module can tolerate a maximum leakage current of 200 mA and is designed to operate with an absolute maximum input voltage of 36 volts.

Power considerations dictate that this discrete input module dissipates a total of 1.7 watts. Additionally, it is built to ensure electrical isolation between groups at 500 Vrms, enhancing safety and stability in demanding environments. With a weight of only 0.3 kg, it is compact enough for installation in various applications, making the 140DDI35300C a valuable component in the Modicon Quantum architecture.

Range of product

Modicon Quantum automation platform

Product or component type

Low voltage dc discrete input modules

Discrete input number

32

Complementary

Group of channels

4

Logic input

Positive (sink)

Discrete input voltage

24 V DC

Input voltage limits

19.2...30 V

Voltage state 1 guaranteed

15...30 V DC

Voltage state 0 guaranteed

-3...5 V DC

Current state 1 guaranteed

≥ 2 mA at $U_s = 5.5$ V and $U_{in} = 0$ V

Current state 0 guaranteed

≤ 0.5 mA

Addressing requirement

2 input words

Input impedance

2500 Ohm

Maximum leakage current

200 mA at $U_s = 5.5$ V and $U_{in} = 4$ V

Absolute maximum input

30 V continuous

56 V during 1.3 ms decaying pulse

Response time

<= 1 ms from state 0 to state 1

<= 1 ms from state 1 to state 0

Protection type

Input protection by resistor limited

Power dissipation

1.7 W + (0.36 x number of points on)

Isolation between group and bus

1780 Vrms for 1 minute

Isolation between group

500 Vrms for 1 minute

Local signalling

1 LED (green) for bus communication is present (Active)

1 LED (red) for external fault detected (F)

32 LEDs (green) for input status

Marking

CE

Bus current requirement

330 mA

Module format

Standard

Net weight

0.3 kg

Environment

Protective treatment

Conformal coating Humiseal 1A33

Standards

CSA C22.2 No 142

UL 508

Product certifications

RMRS

ABS

GOST

BV

C-Tick

DNV

RINA

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
431.0 g