

Schneider Series Service Manual

140DDI84100C

1. Description

The 140DDI84100C discrete input module, part of Schneider Electric's Modicon Quantum series, features 16 discrete inputs organized into 8 channels. It has input voltage limits ranging from 10 to 60 volts with an absolute maximum of 75 volts, ensuring versatility in various applications.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Line Modicon Quantum
Part	Number 140DDI84100C
EAN	3595861136649
Product	Discrete Input Module
Discrete	Input Number 16
Group	of Channels 8
Input	Voltage Limits 10 to 60 V
Absolute	Max Voltage 75 V
Addressing	Requirement 1 input word
Switching	Frequency <= 100 Hz
Response	Time 4 ms
Isolation	Between Group and Bus 2500 Vrms
Power	Dissipation 1W
Local	Signalling LED
Resistance	to Electrostatic Discharge 4 kV / 8 kV
Resistance	to electromagnetic field 10 V/m

3. Product Information

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Technical specifications for 140DDI84100C

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Local Signalling LED

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Resistance to electromagnetic field 10 V/m

Description

The Schneider Electric 140DDI84100C is a discrete input module belonging to the Modicon Quantum series. It is designed to accommodate 16 discrete inputs split into 8 groups. The module operates within input voltage limits of 10 to 60 V, reaching an absolute maximum of 75 V, which allows for compatibility with a variety of signal levels. Addressing is done with just one input word, streamlining configuration.

Designed for efficient operation, this module can handle switching frequencies up to 100 Hz, making it suitable for applications requiring prompt signal processing. Its response time is rated at 4 milliseconds, facilitating quick reaction to input changes. Enhanced safety is provided through an isolation rating of 2500 Vrms between the group and the bus, which protects the control system from voltage spikes and electrical noise.

The device consumes minimal power with a dissipation rate of only 1 watt. It includes local signaling with an LED, providing visual feedback on operational status. Weighing 0.3 kg, the module is lightweight and easy to incorporate into existing setups. Furthermore, it demonstrates resistance to electrostatic discharge (4 kV / 8 kV) and can endure electromagnetic field interference of up to 10 V/m, ensuring reliable performance in challenging environments.

Range of Product

Modicon Quantum automation platform

Product or Component Type

Dc discrete input modules

Discrete input number

16

Complementary

Group of channels

8

Logic input

Positive (sink)

Input voltage limits

10...60 V

Input voltage

12 V 5...10 mA DC

24 V 6...30 mA DC

48 V 2...15 mA DC

60 V 1...5 mA DC

Voltage state 1 guaranteed

11...24 V 24 V +/- 20 %

34...48 V 48 V +/- 20 %

45...60 V 60 V +/- 20 %

9...12 V 12 V +/- 5 %

Voltage state 0 guaranteed

0...1.8 V 12 V +/- 5 %

0...10 V 48 V +/- 20 %

0...5 V 24 V +/- 20 %

0...9 V 60 V +/- 20 %

Absolute maximum voltage

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75 V

Addressing requirement

1 input word

Response Time

4 ms from state 0 to state 1

4 ms from state 1 to state 0

Switching frequency

≤ 100 Hz

Isolation between group and bus

2500 Vrms DC for 1 minute

Isolation between group

700 Vrms DC for 1 minute

Power dissipation

1 W + (0.62 x number of points on)

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

200 mA

Module format

Standard

Net Weight

0.7 lb(US) (0.3 kg)

Environment

Protective treatment

Conformal coating Humiseal 1A33

Standards

CSA C22.2 No 142

UL 508

Product Certifications

FM Class 1 Division 2

C-tick

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)

Ordering and shipping details

Category

18155-QUANTUM I/O & POWER SUPPLIES

Discount Schedule

PC21

GTIN

3595861136649

Returnability

No

Country of origin

CN

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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)
16.5 oz (468.0 g)

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