

Schneider Series Service Manual

140DAI75300C

1. Description

The 140DAI75300C is a discrete input module from Schneider Electric's Modicon Quantum series. It features 32 input channels with an operational voltage of 230 VAC, and is designed to meet various industrial automation needs.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type Discrete input module
Product	Line Modicon Quantum
Part	Number 140DAI75300C
EAN	3595860001535
Input	Channels 32
Input	Voltage 230 VAC
Addressing	Requirement 2 input words
Input	Current 9.7 to 11.5 mA
Max	Leakage Current 2.6 mA
Bus	Current Requirement 250 mA
Max	Power Dissipation 5 W
Marking	CE
Format	Standard
Ambient	Temperature 0 to 60 °C
Standards	UL 508, CSA
Protective	Treatment Conformal coating

3. Product Information

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Technical specifications for 140DAI75300C

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Bus Current Requirement 250 mA

Max Power Dissipation 5 W

Marking CE

Format Standard

Ambient Temperature 0 to 60 °C

Standards UL 508, CSA

Protective Treatment Conformal coating

Description

The 140DAI75300C module manufactured by Schneider Electric is part of the Modicon Quantum range, specifically designed as a discrete input interface. This module accommodates up to 32 input channels, designed to operate at a voltage of 230 VAC. Addressing necessitates 2 input words, ensuring effective communication with the connected system. Operationally, the input current for each channel varies between 9.7 and 11.5 mA, with the module maintaining leakage current at a maximum of 2.6 mA to ensure efficient function and safety. Furthermore, it requires a bus current of 250 mA to operate correctly. Power dissipation is limited to 5 watts, which also contributes to the module's long-term reliability. Overall, the 140DAI75300C is compact, with a weight of 0.3 kg, making it suitable for various applications within control systems.

This device is engineered for use in environments ranging from 0 to 60 degrees Celsius, providing adaptability across typical industrial settings. The module's design incorporates a conformal coating that enhances protection against environmental factors. It complies with CE certification and meets standards set by UL 508 and CSA, guaranteeing its suitability for industrial automation applications.

Range of product

Modicon Quantum automation platform

Product or component type

VAC discrete input modules

Software name

Concept

ProWORX 32

Unity Pro

Discrete input number

32

Complementary

Group of channels

4

Addressing requirement

2 input words

Discrete input voltage

230 V AC

Input current

11.5 mA 57...63 Hz

9.7 mA 47...53 Hz

Voltage state 1 guaranteed

165...264 V AC 57...63 Hz

175...264 V AC 47...53 Hz

Voltage state 0 guaranteed

0...40 V AC 57...63 Hz

0...40 V AC 47...53 Hz

Input impedance

26500 Ohm capacitive 57...63 Hz

31800 Ohm capacitive 47...53 Hz

Network frequency limits

47...63 Hz

Maximum leakage current

2.6 mA

Absolute maximum input

264 V continuous

312 V 10 s

400 V 1 cycle

Response time

4.9...0.75 ms x line cycle Off-On

7.3...12.3 ms On-Off

Isolation between group

1780 Vrms for 1 minute

Isolation between group and bus

1780 Vrms for 1 minute

Bus current requirement

250 mA

Maximum power dissipation in W

5 W

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

Module format

Standard

Net weight

0.7 lb(US) (0.3 kg)

Environment

Protective treatment

Conformal coating Humiseal 1A33

Standards

UL 508

CSA C22.2 No 142

Product certifications

FM Class 1 Division 2

cUL

Resistance to electrostatic discharge

4 kV contact IEC 801-2

8 kV on air IEC 801-2

Resistance to electromagnetic fields

9.1 V/yd (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

<= 5000 m

Packing Units

Unit Type of Package 1

PCE

Number of Units in Package 1

1

Package 1 Height

1.8 in (4.5 cm)

Package 1 Width

12.2 in (31.0 cm)

Package 1 Length
6.3 in (16.0 cm)
Package 1 Weight
18.7 oz (530.0 g)