

Schneider  Series Service Manual

140DIO33000C

1. Description

The Schneider Electric 140DIO33000C module is designed as an intrinsically safe discrete output solution. It operates effectively in environments up to 5000 meters and supports output specifications necessary for demanding conditions.

2. Specifications

| Specification | Value                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer  | Schneider Electric                                                                                                                                                                                                                                                                                                                                                               |
| Product       | Type Intrinsically Safe Discrete Output Module                                                                                                                                                                                                                                                                                                                                   |
| Product       | Line Modicon                                                                                                                                                                                                                                                                                                                                                                     |
| Part          | Number 140DIO33000C                                                                                                                                                                                                                                                                                                                                                              |
| Weight        | 32.00 lbs (14.51 kg)                                                                                                                                                                                                                                                                                                                                                             |
| Operating     | Altitude ≤ 5000 m                                                                                                                                                                                                                                                                                                                                                                |
| ESD           | Resistance 4 kV contact, 8 kV air                                                                                                                                                                                                                                                                                                                                                |
| Maximum       | Altitude 1000 meters above sea level                                                                                                                                                                                                                                                                                                                                             |
| Operating     | Temperature 0 to 60°C                                                                                                                                                                                                                                                                                                                                                            |
| Output        | Type Open Collector                                                                                                                                                                                                                                                                                                                                                              |
| EMF           | Resistance 10 V/m (80-2000 MHz)                                                                                                                                                                                                                                                                                                                                                  |
| Product       | Destination Zone 20, 21, 22                                                                                                                                                                                                                                                                                                                                                      |
| Storage       | Temperature -40 to 85°C                                                                                                                                                                                                                                                                                                                                                          |
| Maximum       | Load Current 360 mA per module, 45 mA per point                                                                                                                                                                                                                                                                                                                                  |
| Off           | State Leakage Current 0.4 mA per point                                                                                                                                                                                                                                                                                                                                           |
| Output        | Voltage 24 V                                                                                                                                                                                                                                                                                                                                                                     |
| Humidity      | 95% without condensation                                                                                                                                                                                                                                                                                                                                                         |
| Description   |                                                                                                                                                                                                                                                                                                                                                                                  |
| The           | Modicon series includes the 140DIO33000C, which is classified as an intrinsically safe discrete output module. It is designed for operating altitudes of up to 5000 meters. Suitable for various hazardous locations, this module is rated for Zone 20, 21, and 22 applications. ESD protection is robust, providing resistance of 4 kV for contact and 8 kV for air discharges. |

3. Product Information

The Schneider Electric 140DIO33000C module is designed as an intrinsically safe discrete output solution. It operates effectively in environments up to 5000 meters and supports output specifications necessary for demanding conditions.

Technical specifications for 140DIO33000C

Manufacturer Schneider Electric

Product Type Intrinsically Safe Discrete Output Module

Product Line Modicon

Part Number 140DIO33000C

Weight 32.00 lbs (14.51 kg)

Operating Altitude ≤ 5000 m

ESD Resistance 4 kV contact, 8 kV air

Maximum Altitude 1000 meters above sea level

Operating Temperature 0 to 60°C

Output Type Open Collector

EMF Resistance 10 V/m (80-2000 MHz)

Product Destination Zone 20, 21, 22

Storage Temperature -40 to 85°C

Maximum Load Current 360 mA per module, 45 mA per point

Off State Leakage Current 0.4 mA per point

Output Voltage 24 V

Humidity 95% without condensation

Description

The Modicon series includes the 140DIO33000C, which is classified as an intrinsically safe discrete output module. It is designed for operating altitudes of up to 5000 meters. Suitable for various hazardous locations, this module is rated for Zone 20, 21, and 22 applications. ESD protection is robust, providing resistance of 4 kV for contact and 8 kV for air discharges. With an operating temperature range from 0 to 60°C, it can endure a variety of industrial environments. In storage conditions, it can withstand temperatures between -40 and 85°C, ensuring functionality in extreme conditions. The device also meets EMF resistance standards, maintaining stability at 10 V/m across frequencies from 80 to 2000 MHz.

The output type is open collector, with an output voltage set at 24 V. In terms of load management, it supports a maximum current of 360 mA per module, while individual points can handle 45 mA. The off-state leakage current is minimal, at 0.4 mA per point, contributing to efficient energy usage. Finally, the module is designed to operate in humidity levels up to 95%, provided there is no condensation, indicating its durability in moisture-prone areas.

Range of Product

Modicon Quantum automation platform

Product or Component Type

Intrinsically safe discrete output module

Software designation

Concept V2.2 and above

ProWORX

Unity Pro

Complementary

Product destination

In conjunction with products for zone 20, 21 or 22

Discrete output voltage

24 V

Discrete output type

Open collector

Maximum load current

360 mA per module

45 mA per point

off state leakage current

0.4 mA per point

Response time

1 ms resistive at state 0 to state 1

1 ms resistive at state 1 to state 0

Protection Type

Internal fuse

Transient voltage suppression

Hot swapping fallback

Not allowed per intrinsic safety standards

Power dissipation in W

5 W

Isolation between channels and bus

2500 V DC for 1 minute

1780 V 47...63 Hz AC

Marking

II1 G/D-EEx ia IIC

CE

Bus current requirement

2.2 A

Module format

Standard

Net Weight

0.99 lb(US) (0.45 kg)

Environment

Protective treatment

Conformal coating Humiseal 1A33

Standards

Directive ATEX 94/9/EC

EN 50039

EN 50014

CSA C22.2 No 142

UL 508

EN 50020

EN 50284

EN 50281-1-1

Dust zone

Outside zone

Product Certifications

SIRA 02ATEX2345X

FM Class 1 Division 2

C-tick

GOST

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

00785901486398

Returnability

No

Country of origin

US