

Schneider Series Service Manual

140DDO15310C

1. Description

The Modicon Quantum 140DDO15310C from Schneider Electric functions as a TTL discrete output module. It comprises 32 channels capable of sourcing TTL positive signals with an output voltage of 5 V DC.

2. Specifications

Specification	Value
Manufacturer	Schneider Electric
Product	Type TTL Discrete Output Module
Product	Line Modicon Quantum
Part	Number 140DDO15310C
EAN	3595861135895
Output	Channels 32
Output	Type TTL Positive (sink)
Addressing	Requirement 2 Output Words
Output	Voltage 5 V DC
Internal	Pullup Resistor 440 Ohm
Surge	Current 750 A
Power	Dissipation 4 W
Marking	CE
Format	Standard
Bus	Current Requirement 350 mA
Ambient	Temperature 0 to 60 °C
Standards	UL 508, CSA
Protective	Treatment Conformal Coating

3. Product Information

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Technical specifications for 140DDO15310C

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Description

The Schneider Electric 140DDO15310C TTL discrete output module belongs to the Modicon Quantum series. This module offers 32 output channels that deliver TTL positive (sink) signals. Designed for compatibility with various systems, it operates at a low output voltage of 5 V DC, enabling efficient performance in typical industrial applications.

Addressing the module requires two output words, facilitating integration into larger control schemes. It features an internal pullup resistor rated at 440 ohms, which aids in signal integrity. During operation, the module can withstand surge currents up to 750 Amperes, ensuring resilience against electrical spikes.

The unit has a rated power dissipation of 4 watts, making it energy-efficient in continuous use. With a bus current requirement of 350 mA, it is essential to consider when designing systems to ensure proper power supply allocation. This module is designed to function in environmental conditions ranging from 0 to 60 °C, reinforcing its versatility across different applications.

Weighing just 0.45 kilograms, the 140DDO15310C maintains a compact footprint in various control configurations. Compliance with UL 508 and CSA standards enhances its reliability in industrial environments. The protective conformal coating further safeguards against environmental factors, ensuring long-term stability and operational integrity.

Range of Product

Modicon Quantum automation platform

Product or Component Type

TTL discrete output module

Discrete output number

32

Complementary

Group of channels

4 groups of 8 channels

Discrete output type

TTL

Positive (sink)

Addressing requirement

2 output words

Discrete output voltage

5 V DC

Voltage state 1 guaranteed

<= 0.2 V

[Us] rated supply voltage

4...5.5 V DC

Absolute maximum output

15 V 0.0013 s decaying voltage pulse DC

Internal pullup resistor

440 Ohm

Maximum load current

<= 2.4 A per module

<= 600 mA each group

<= 75 mA each point

Surge current
750 A 0.5 ms between each point
Response time
<= 250 µs at state 0 to state 1 resistive
<= 250 µs at state 1 to state 0 resistive
Protection Type
Output protection by transient voltage suppression
Internal by fuse
Fault indication
Blown fuse
Loss of field power
Power dissipation
4 W
Maximum supply current
0.4 A
Isolation between group
500 Vrms for 1 minute
Marking
CE
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
Bus current requirement
350 mA
Current consumption
2800 mA 5 V DC
Module format
Standard
Net Weight
0.99 lb(US) (0.45 kg)
Environment
Protective treatment
Conformal coating Humiseal 1A33
Product Certifications
FM Class 1 Division 2
C-tick
RMRS
GOST
Standards
CSA C22.2 No 142
UL 508
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
3595861135895
Returnability
No
Country of origin
FR
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)
15.7 oz (446.0 g)