

EXACT-MODEL ENGINEERING SUMMARY

Schneider Electric 140DSI35300

Discrete Input Module

Schneider Electric 140DSI35300 is a Modicon Quantum 24 V DC supervised discrete input module with 32 positive-logic inputs arranged as four groups of eight. Its supervision circuit is designed to identify a broken field connection through dedicated status registers when the monitored current falls below the documented threshold.

SYSTEM CONTEXT **Modicon Quantum**

Verified highlights

- Thirty-two 24 V DC supervised inputs
- Four groups of eight positive-logic channels
- Broken-field-wire supervision
- Quantum rack I/O integration

Functional signal path

FIELD / SYSTEM INPUT

Thirty-two field input circuits are divided into four groups of eight.

EXACT-MODEL INTERFACE

Each supervised point uses a shunt-resistor path across the field switch.

INTERNAL PROCESSING

A small open-switch current confirms field wiring continuity.

CONTROL-SYSTEM RESULT

Input states map into two input words for controller logic.

Verified technical matrix

Product family	Modicon Quantum
Module function	Supervised discrete input
Input voltage	24 V DC
Input count	32
Channel grouping	Four groups of eight inputs
Input logic	Positive logic

I/O addressing	Two input words
Supervision method	Shunt resistor across the switching device
Continuity current	>=0.15 mA, switch open
Broken-wire reporting	Broken Wire registers 3 and 4
Rack interface	Quantum local or remote I/O rack
Status handling	Separate input-state and supervision diagnostics

Engineering boundary

Only the values shown in the exact-model source set are stated. Final settings, wiring, firmware, companion devices and safety functions must be matched to the installed system before energization.

Interfaces and system relationships

INTERFACE 1

Thirty-two field input circuits are divided into four groups of eight.

INTERFACE 2

Each supervised point uses a shunt-resistor path across the field switch.

INTERFACE 3

A small open-switch current confirms field wiring continuity.

INTERFACE 4

Input states map into two input words for controller logic.

INTERFACE 5

Broken-wire information is mapped separately in registers 3 and 4.

INTERFACE 6

The rack backplane supplies the module-system interface.

INTERFACE 7

Group commons and field supply polarity must follow the positive-logic wiring diagram.

INTERFACE 8

The module belongs to the Modicon Quantum I/O architecture.

Where the module is used

Supervised contact monitoring

Monitors field contacts while retaining a small continuity current through the supervision resistor.

Critical discrete status collection

Brings 32 grouped 24 V DC status points into a Quantum controller with field-wire diagnostics.

Legacy Quantum maintenance

Supports exact-module replacement in existing racks without changing controller I/O mapping.

Broken-wire troubleshooting

Separates field continuity faults from normal switch-open states through the mapped diagnostic registers.

Engineering checks and diagnostic decisions

1

An input that never changes requires field-voltage, switch and terminal checks before module replacement.

2

A broken-wire indication with a normal open switch points to the supervision resistor or field conductor.

3

Multiple faults in one group warrant checking the group common and field supply.

4

Unexpected controller bits require verification of the two input-word mapping.

5

Use registers 3 and 4 to separate wire supervision from process state.

6

Do not bypass supervision permanently to clear a diagnostic.

7

Clear temporary forces before the functional test.

8

Retest the fault case after any field repair to prove diagnostic recovery.

Evidence ledger

SOURCE 1

Schneider Electric Modicon Quantum Automation Platform catalog, discrete I/O selection guide, page 3/14.

SOURCE 2

Schneider Electric FAQ FA197897, supervised input operation and Broken Wire register behavior.

Engineering FAQ

Q1 What is Schneider Electric 140DSI35300?

It is a Modicon Quantum 24 V DC supervised discrete input module with 32 positive-logic inputs.

Q2 How are the inputs grouped on Schneider Electric 140DSI35300?

The 32 channels are arranged as four groups of eight inputs.

Q3 How does Schneider Electric 140DSI35300 supervise field wiring?

A shunt resistor across the switching device maintains a small current when the switch is open, allowing the module to distinguish continuity from an interrupted field circuit.

Related products
Verified related products on ApterPower

Schneider Electric TSXETZ410

Ethernet communication component

[View Schneider Electric TSXETZ410](#)

Schneider Electric 170ADO35000

Discrete output module

[View Schneider Electric 170ADO35000](#)

Schneider Electric 140XBP01000

Modicon Quantum backplane

[View Schneider Electric 140XBP01000](#)

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