Specifications

# Eaton 140056

## Catalog Number: 140056

Eaton XN Digital input card XI/ON, 24 V DC, 2DI, pulse-switching



### General specifications

**Product Name**
Eaton XN Accessory Input card

**Catalog Number**
140056

**EAN**
7640130120181

**Product Length/Depth**
55.4 mm

**Product Height**
74.1 mm

**Product Width**
12.6 mm

**Product Weight**
0.026 kg

**Certifications**
UL Category Control No.: NRAQ, NRAQ7
UL report applies to both US and Canada
IEC/EN 61000-6-2
IEC/EN 61000-6-4
UL Recognized
IEC/EN 61131-2
UL 508
CSA Class No.: 2252-01, 2252-81
CE
CSA-C22.2 No. 142
UL File No.: E205091
CULus
IEC/EN 6113-2
Certified by UL for use in Canada

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## Features & Functions

### Electric connection type

Screw-/spring clamp connection

### Features

Fieldbus connection over separate bus coupler possible

### Functions

Positive switching

## General

### Current consumption

20 mA, from supply terminal

28 mA, from module bus, Analog input modules

### Degree of protection

IP20

### Mounting method

Rail mounting possible

### Number of channels

2

### Product category

XN Slice module

### Suitable for

Base modules without C-Connection: 2-/3-wire

Base modules with C-connection: 4-wire

Base modules without C-Connection: 2-wire proximity switches (Bero® initiators) can be attached, with a permissible quiescent current up to 1.5 mA.

### Type

I/O module

### Used with

XN-S3T-SBB

XN-S4T-SBBC

XN-S4S-SBBC

XN-S3S-SBB

### Voltage type

DC

## Ambient conditions, mechanical

### Drop and topple

According to IEC 60068-2-31, free fall according to IEC 60068-2-32

### Shock resistance

Continuous according to IEC/EN 60068-2-29

Mechanical, According to IEC/EN 60068-2-27

### Vibration resistance

According to IEC/EN 60068-2-6

## Climatic environmental conditions

### Ambient operating temperature - min

0 °C

### Ambient operating temperature - max

55 °C

### Ambient storage temperature - min

-25 °C

### Ambient storage temperature - max

85 °C

### Environmental conditions

Harmful gasses - H2S: 1 ppm (relative humidity < 75%, no condensation)

Harmful gasses - SO2: 10 ppm (relative humidity < 75%, no condensation)

### Relative humidity

5 - 95 % (indoor, Level RH-2, non-condensing for storage at 45°C)

## Electro magnetic compatibility

### Air discharge

According to EN 61100-4-2

### Burst impulse

According to IEC/EN 61000-4-4

### Contact discharge

According to EN 61100-4-2

### Electromagnetic fields

According to IEC EN 61100-4-2

### Emitted interference

30 - 230 MHz (radiated, high frequency, according to EN 55016-2-3)

230 - 1000 MHz (radiated, high frequency, according to EN 55016-2-3)

### Radiated RFI

IEC/EN 61100-4-6

### Surge rating

According to IEC/EN 61000-4-5 Level 4

### Voltage dips

According to EN 61131-2 (Voltage fluctuations/voltage dips)

## Electrical rating

### Power loss

1 W

### Rated insulation voltage (Ui)

500 V

### Rated operational voltage

24 V DC (supply terminal)

### Supply voltage at AC, 50 Hz - min

0 VAC

### Supply voltage at AC, 50 Hz - max

0 VAC

### Supply voltage at DC - min

18 VDC

### Supply voltage at DC - max

30 VDC

## Communication

### Protocol

Other bus systems

## Input/Output

### Input current

2 - 10 mA (Digital inputs, high level)

0 - 1.5 mA (Digital inputs, low level)

### Input current at signal 1

2 mA

### Input delay

200 µs (rising edge)

200 µs (falling edge)

### Input voltage

-30 - 5 V (Digital inputs, low level)

24 V DC (Digital inputs)

11 - 30 V (Digital inputs, high level)

### Number of inputs (digital)

2

### Number of outputs (digital)

0

### Output current

0 A

## Safety

### Explosion safety category for dust

None

### Explosion safety category for gas

None

### Potential isolation

Through optocoupler: yes

## Design verification

### Equipment heat dissipation, current-dependent Pvid

0.7 W

### Heat dissipation capacity Pdiss

0 W

### Heat dissipation per pole, current-dependent Pvid

0 W

### Rated operational current for specified heat dissipation (In)

0 A

### Static heat dissipation, non-current-dependent Pvs

0.7 W

### 10.2.2 Corrosion resistance

Meets the product standard's requirements.

### 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

### 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

### 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects

Meets the product standard's requirements.

### 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

### 10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

### 10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

## Resources

### Brochures

Slice card modular I/O system for the machine building industry XN300 - brochure

eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf

### Declarations of conformity

DA-DC-00003698.pdf

DA-DC-00003875.pdf

### Drawings

eaton-io-modules-xion-xn-input-card-dimensions.eps

eaton-electronic-devices-xion-xn-input-card-3d-drawing.eps

### eCAD model

DA-CE-ETN.XN-2DI-24VDC-P

### Manuals and user guides

MN05002010Z_EN

### mCAD model

DA-CS-xn_2di_24vdc_p

DA-CD-xn_2di_24vdc_p

### 10.2.7 Inscriptions

Meets the product standard's requirements.

### 10.3 Degree of protection of assemblies

Meets the product standard's requirements.

### 10.4 Clearances and creepage distances

Meets the product standard's requirements.

### 10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

### 10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

### 10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

### 10.8 Connections for external conductors

Is the panel builder's responsibility.

### 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

### 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

### 10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

### 10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

### 10.11 Short-circuit rating

Is the panel builder's responsibility.

### 10.12 Electromagnetic compatibility

Is the panel builder's responsibility.

### 10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.




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