

Eaton 140056

Catalog Number: 140056

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



General specifications

Product Name	Catalog Number
Eaton XN Accessory Input card	140056
EAN	Product Length/Depth
7640130120181	55.4 mm
Product Height	Product Width
74.1 mm	12.6 mm
Product Weight	Certifications
0.026 kg	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

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 (U_i)

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 P_{vid}

0.7 W

Heat dissipation capacity P_{diss}

0 W

Heat dissipation per pole, current-dependent P_{vid}

0 W

Rated operational current for specified heat dissipation (I_n)

0 A

Static heat dissipation, non-current-dependent P_{vs}

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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