Specifications

Eaton 140068



Catalog Number: 140068

Eaton XN Analog input card XI/ON, 24 V DC, 2AI (thermocouples type B, E, J, K, N, R, N/O, T)

General specifications

Product Name
Eaton XN Accessory Input card

Catalog Number
140068

EAN
7640130120129

Product Length/Depth
55.4 mm

Product Height
74.1 mm

Product Width
12.6 mm

Product Weight
0.036 kg

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

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Features & Functions

Electric connection type

Screw-/spring clamp connection

Features

Fieldbus connection over separate bus coupler possible

Analog outputs configurable

Input, thermocouple

Input signal, configurable

Analog inputs configurable

Fitted with:

Connectable sensors: Class 1, 2, 3 (according to DIN IEC 584)

Functions

Diagnosis function

General

Current consumption

30 mA, from supply terminal

45 mA, from module bus, Analog input modules

Degree of protection

IP20

NEMA 1

Mounting method

Rail mounting possible

Number of channels

2

Product category

XN Slice module

Repetition accuracy

0.09 % (deviation)

Suitable for

Base modules without C-Connection, for sensor feeding: 4-wire, with integrated cold-junction compensation

Type

XI/ON I/O module

Used with

XN-S4T-SBBS-CJ

XN-S4S-SBBS-CJ

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

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

Continuous according to IEC/EN 60068-2-29

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

230 - 1000 MHz (radiated, high frequency, according to EN 55016-2-3)
30 - 230 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

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

20.4 VDC

Supply voltage at DC - max

28.8 VDC

Communication

Connection

Connection of thermocouple types B, E, J, K, N, R, S, T

Cycle time

Temperature measurement: 130 ms, per channel
Voltage measurement: 70 ms, per channel

Number of bytes

2 parameter bytes (1 per channel)

Protocol

Other bus systems

Input/Output

Linearity

0.1 %

Measured value representation

16-bit signed integer

12-bit full range left-justified

Measured variables

Temperature (Thermocouple)

Number of inputs (analog)

2

Number of outputs (analog)

0

Timing cycle

0.1 % Offset error

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

1 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

1 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.

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.

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-2AI-THERMO-PI

Manuals and user guides

MN05002011Z_EN

mCAD model

DA-CS-xn_2ai_thermo_pi

DA-CD-xn_2ai_thermo_pi



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Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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