

Specifications



Eaton 140040

Eaton XNE Digital input card XION ECO, 24 V DC, 16 DI, pulse-switching

General specifications

PRODUCT NAME	Eaton XNE Accessory Input card
CATALOG NUMBER	140040
MODEL CODE	XNE-16DI-24VDC-P
EAN	7640130120525
PRODUCT LENGTH/DEPTH	161.5 mm
PRODUCT HEIGHT	74.5 mm
PRODUCT WIDTH	13 mm
PRODUCT WEIGHT	0.062 kg
COMPLIANCES	RoHS Compliant CE Marked
CERTIFICATIONS	UL Listed CE IEC/EN 61000-6-4 UL Category Control No.: NRAQ, NRAQ7 UL File No.: E205091 UL Recognized IEC/EN 6113-2 Rated data for terminations according to IEC/EN 60947-7-1 CSA-C22.2 No. 142 IEC/EN 61000-6-2 IEC/EN 61131-2 Certified by UL for use in Canada CSA Class No.: 2252-01, 2252-81 cULus UL report applies to both US and Canada UL 508
CATALOG NOTES	Base modules without C- Connection already built in

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

Communication

CONNECTION TYPE	Push-In spring-cage terminals, Connection design in TOP direction
PROTOCOL	Other bus systems

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MAX	85 °C
AMBIENT OPERATING TEMPERATURE - MIN	0 °C
AMBIENT STORAGE TEMPERATURE - MIN	-25 °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)

Design verification

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.
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)	Meets the product standard's requirements.

RADIATION	
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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	2.5 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	2.5 W

Electrical rating

RATED INSULATION VOLTAGE (UI)	500 V
RATED OPERATIONAL VOLTAGE	24 V DC (supply terminal)
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	0 VAC
SUPPLY VOLTAGE AT DC - MAX	30 VDC
SUPPLY VOLTAGE AT DC - MIN	18 VDC

Features & functions

ELECTRIC CONNECTION TYPE	Plug-in connection
FEATURES	Fieldbus connection over separate bus coupler possible
FUNCTIONS	Positive switching

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)

General information

CURRENT CONSUMPTION	3 mA, from supply terminal 15 mA, from module bus, Analog input modules
DEGREE OF PROTECTION	IP20
MOUNTING METHOD	Rail mounting possible
PRODUCT CATEGORY	XNE Slice module
TYPE	I/O module
VOLTAGE TYPE	DC
NUMBER OF CHANNELS	16

Input/Output

INPUT CURRENT	-1 - 1.5 mA (Digital inputs, low level) 2 - 5 mA (Digital inputs, high level)
INPUT CURRENT AT SIGNAL 1	2 mA
INPUT DELAY	300 µ s (falling edge) 150 µ s (rising edge)
INPUT VOLTAGE	-5 - 5 V (Digital inputs, low level) 24 V DC (Digital inputs) 11 - 30 V (Digital inputs, high level)
NUMBER OF INPUTS (DIGITAL)	16
NUMBER OF OUTPUTS (DIGITAL)	0
OUTPUT CURRENT	0 A

Terminal capacities

GAUGE PIN	A1 (according to IEC/EN 60947-1)
STRIPPING LENGTH (MAIN CABLE)	8 mm
TERMINAL CAPACITY	0.25 - 1.5 mm ² , flexible without ferrule, H07V-K 0.25 - 0.75 mm ² , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 1.5 mm ² , solid, H07V-U 0.25 - 1.5 mm ² , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)

Safety

EXPLOSION SAFETY CATEGORY FOR DUST	None
EXPLOSION SAFETY CATEGORY FOR GAS	None
POTENTIAL ISOLATION	Through optocoupler: yes

Resources

BROCHURES	Slice card modular I/O system for the machine building industry XN300 - brochure eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf
DRAWINGS	eaton-io-modules-xion-xne-output-module-dimensions.eps eaton-io-modules-xne-output-module-3d-drawing.eps
ECAD MODEL	ETN.XNE-16DI-24VDC-P
MANUALS AND USER GUIDES	MN05002010Z_EN xne_16di_24vdc_p.stp
MCAD MODEL	eaton-module-mcad-drawings-xne-16di-24vdc-p.dwg
SPECIFICATIONS AND DATASHEETS	Eaton Specification Sheet - XNE-16DI-24VDC-P

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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