

Specifications



Eaton 140150

Eaton XN Digital output module XI/ON,
120/230VAC, 2DO, 0.5A

General specifications

PRODUCT NAME	Eaton XN Output module
CATALOG NUMBER	140150
MODEL CODE	XN-2DO-120/230VAC-0.5A
EAN	7640130120198
PRODUCT LENGTH/DEPTH	55.4 mm
PRODUCT HEIGHT	74.1 mm
PRODUCT WIDTH	12.6 mm
PRODUCT WEIGHT	0.035 kg
CERTIFICATIONS	UL 508 IEC/EN 61000-6-4 Certified by UL for use in Canada cULus UL Recognized CE IEC/EN 61131-2 IEC/EN 61000-6-2 UL File No.: E205091 UL report applies to both US and Canada CSA Class No.: 2252-01, 2252-81 CSA-C22.2 No. 142 UL Category Control No.: NRAQ, NRAQ7 IEC/EN 6113-2
CATALOG NOTES	8 (1 period at 60 Hz)



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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

Communication

INTERFACES	Terminating resistor: 240 - 6,000 Ω (at 120 V AC) Terminating resistor: 460 - 11,500 Ω (at 230 V AC)
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 - H ₂ S: 1 ppm (relative humidity < 75%, no condensation) Harmful gasses - SO ₂ : 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	0 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

Electrical rating

POWER LOSS	1 W
RATED OPERATIONAL VOLTAGE	120/230 V AC at 45-64 Hz (supply terminal)
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	253 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	102 VAC
SUPPLY VOLTAGE AT DC - MAX	0 VDC
SUPPLY VOLTAGE AT DC - MIN	0 VDC

Features & functions

ELECTRIC CONNECTION TYPE	Screw-/spring clamp connection
FEATURES	Fieldbus connection over separate bus coupler possible
FITTED WITH:	Connectable sensors for inductive loads Connectable sensors for lamp loads Connectable sensors for resistive loads

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	35 mA, from module bus, Analog input modules
DEGREE OF PROTECTION	IP20
MOUNTING METHOD	Rail mounting possible
PRODUCT CATEGORY	XN Slice module
SUITABLE FOR	Base modules with C-connection: 2-wire/3-wire Base modules with C-connection: 4-wire
TYPE	XI/ON I/O module
USED WITH	XN-S3T-SBC XN-S3S-SBC XN-S4S-SBCS XN-S4T-SBCS
VOLTAGE TYPE	AC
NUMBER OF CHANNELS	2

Input/Output	
DELAY TIME	T/2 +1 ms, Digital outputs, Delay on signal change and resistive load, from Low to High signal 300, Digital outputs, Delay on signal change and resistive load, from High to Low signal
INPUT CURRENT AT SIGNAL 1	0 mA
INPUT VOLTAGE	> U low level - 2 V (Digital inputs, high level)
NUMBER OF INPUTS (DIGITAL)	0
NUMBER OF OUTPUTS (DIGITAL)	2
OUTPUT	2 Digital Outputs (120/230 V AC, 0.5 A)
OUTPUT CURRENT	1 A, Module total current, Digital outputs 0.5 A 0.02 - 0.5 A (high level, permissible range) < 1.5 mA (low level)
OUTPUT VOLTAGE	> U low level - 2 V (zero-point switching triac)
UTILIZATION FACTOR	100 % 100 % (observe derating)

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

Resources

BROCHURES

[eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf](#)

[Slice card modular I/O system for the machine building industry XN300 - brochure](#)

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-2DO-120_230VAC-0.5A](#)

MANUALS AND USER GUIDES

[MN05002010Z_EN](#)

MCAD MODEL

[DA-CS-xn_2do_120_230vac_0_5a](#)

[eaton-module-mcad-drawings-xn-2do-120-230vac-0-5a.dwg](#)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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