DATASHEET - XN-2DO-120/230VAC-0.5A

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

Part no. XN-2DO-120/230VAC-0.5A
140150

EL Number (Norway) 4560837

General specifications	
Product name	Eaton XN Output module
Part no.	XN-2DO-120/230VAC-0.5A
EAN	7640130120198
Product Length/Depth	55.4 millimetre
Product height	74.1 millimetre
Product width	12.6 millimetre
Product weight	0.035 kilogram
Certifications	CSA Class No.: 2252-01, 2252-81 IEC/EN 6113-2 IEC/EN 61000-6-2 Certified by UL for use in Canada CSA-C22.2 No. 142 IEC/EN 61000-6-4 UL report applies to both US and Canada CULus IEC/EN 61131-2 UL 508 UL File No.: E205091 CE UL Category Control No.: NRAQ, NRAQ7 UL Recognized
Product Tradename	XN
Product Type	Output module
Product Sub Type	None
Catalog Notes	8 (1 period at 60 Hz)
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
General information	
Current consumption	35 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 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
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 gases - H2S: 1 ppm (relative humidity < 75%, no condensation) Harmful gases - 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 operational voltage	120/230 V AC at 45-64 Hz (supply terminal)
Supply voltage at AC, 50 Hz - min	102 V AC
Supply voltage at AC, 50 Hz - max	253 V AC
Supply voltage at DC - min	0 V DC
Supply voltage at DC - max	0 V DC
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
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
Design verification	
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
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.

Technical data ETIM 9.0

Programmable logic controllers PLC (EG000024) / Fieldbus, decentr. periphery - digital I/O module (EC001599)

Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ecl@ss13-27-24-26-04 [BAA055019])

Supply voltage AC 50 Hz	V	102 - 253
Supply voltage AC 60 Hz	V	102 - 253
Supply voltage DC	V	0 - 0
Voltage type (supply voltage)		AC
Number of digital inputs		0
Number of digital outputs		2
Digital inputs configurable		No
Digital outputs configurable		No
Input current at signal 1	mA	0
Permitted voltage at input	V	0 - 0
Type of voltage (input voltage)		AC
Type of digital output		Triac
Output current	A	0.5
Permitted voltage at output	V	0 - 250
Type of output voltage		AC
Short-circuit protection, outputs available		No
Number of HW-interfaces industrial Ethernet		0
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces parallel		0
Number of HW-interfaces wireless		0
Number of HW-interfaces USB		0
Number of HW-interfaces other		1
With optical interface		No
Supporting protocol for EtherCAT		No
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No
Supporting protocol for INTERBUS		No
Supporting protocol for ASI		No
Supporting protocol for KNX		No

Supporting protocol for Modbus		No
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCONET		No
Supporting protocol for LON		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		No
Supporting protocol for SERCOS		No
Supporting protocol for Foundation Fieldbus		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		Yes
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
System accessory		Yes
Degree of protection (IP)		IP20
Type of electric connection		Screw-/spring clamp connection
Time delay at signal change	ms	10 - 11
Fieldbus connection over separate bus coupler possible		Yes
Rail mounting possible		Yes
Wall mounting/direct mounting		No
Front built-in possible		No
Rack-assembly possible		No
Suitable for safety functions		No
SIL according to IEC 61508		None
Performance level according to EN ISO 13849-1		None
Appendant operation agent (Ex ia)		No
Appendant operation agent (Ex ib)		No
Explosion safety category for gas		None
Explosion safety category for dust		None
Certified for UL hazardous location class I		No
Certified for UL hazardous location class II		No
Certified for UL hazardous location class III		No
Certified for UL hazardous location division 1		No
Certified for UL hazardous location division 2		No
Certified for UL hazardous location group A (acetylene)		No
Certified for UL hazardous location group B (hydrogen)		No
Certified for UL hazardous location group C (ethylene)		No
Certified for UL hazardous location group D (propane)		No
Certified for UL hazardous location group E (metal dusts)		No
Certified for UL hazardous location group F (carbonaceous dusts)		No
Certified for UL hazardous location group G (non-conductive dusts)		No
Width	mm	12.6
Height	mm	74.1
Depth	mm	55.4

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