DATASHEET - XN-2AO-I(0/4...20MA)

Analog output module XI/ON, 24 V DC, 2AO (0/4 to 20mA)

Part no.	**XN-2AO-I(0/4...20MA)**
	140146
EL Number (Norway)	**4520643**

General specifications

Product name	Eaton XN Output module
Part no.	XN-2AO-I(0/4...20MA)
EAN	7640130120143
Product Length/Depth	55.4 millimetre
Product height	74.1 millimetre
Product width	12.6 millimetre
Product weight	0.034 kilogram
Certifications	UL Category Control No.: NRAQ, NRAQ7 IEC/EN 61000-6-2 IEC/EN 6113-2 IEC/EN 61000-6-4 UL File No.: E205091 UL Recognized CULus CSA-C22.2 No. 142 IEC/EN 61131-2 UL 508 Certified by UL for use in Canada CSA Class No.: 2252-01, 2252-81 CE UL report applies to both US and Canada
Product Tradename	XN
Product Type	Output module
Product Sub Type	None
Catalog Notes	0.2 0/4 to 20 mA 150 ppm/°C of full scale

Features & Functions

Electric connection type	Screw-/spring clamp connection
Features	Output signal configurable Output, current Fieldbus connection over separate bus coupler possible Analog outputs configurable

General information

Current consumption	40 mA, from module bus, Analog input modules 50 mA, from supply terminal
Degree of protection	IP20 NEMA 1
Mounting method	Rail mounting possible
Number of channels	2
Product category	XN Slice module
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

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 - SO2: 10 ppm (relative humidity < 75%, no condensation) Harmful gases - H2S: 1 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

Electrical rating

Power loss	1 W
Rated operational voltage	24 V DC (supply terminal)
Supply voltage at AC, 50 Hz - min	0 V AC
Supply voltage at AC, 50 Hz - max	0 V AC
Supply voltage at DC - min	20.4 V DC
Supply voltage at DC - max	28.8 V DC

Communication

Number of bytes	3 parameter bytes (per channel)
Protocol	Other bus systems

Input/Output

Frequency	200 Hz (Transfer)
Load resistance	< 450 Ω < 0.001 h (inductive load)
Measured value representation	12-bit full range left-justified 16-bit signed integer
Measured variables	Current
Number of inputs (analog)	0
Number of outputs (analog)	2
Output	2 Analog Outputs
Output current	0/4 - 20 mA
Settling time	2 ms, Inductive load, Analog output modules 0.5 ms, Capacitive load, Analog output modules 2 ms, Resistive load, Analog output modules

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.
10.2.3.2 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.
10.10 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 - analogue I/O module (EC001596)

Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - analogue I/O module (ecl@ss13-27-24-26-01 [BAA061019])

Supply voltage AC 50 Hz		V	0 - 0
Supply voltage AC 60 Hz		V	0 - 0
Supply voltage DC		V	20.4 - 28.8
Voltage type (supply voltage)			DC
Power consumption		W	
Input, current			No
Input, voltage			No
Input, resistor			No
Input, resistance thermometer			No
Input, thermocouple			No
Input signal, configurable			No
Resolution of the analogue inputs		Bit	0
Output, current			Yes
Output, voltage			No
Output signal configurable			Yes
Resolution of the analogue outputs		Bit	16
Number of analogue inputs			0
Number of analogue outputs			2
Analogue inputs configurable			No
Analogue outputs configurable			Yes
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
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
Degree of protection (NEMA)		1
Type of electric connection		Screw-/spring clamp connection
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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