DATASHEET - XNE-4AO-U/I

Analog output module XI/ON ECO, 24 V DC, 4A(voltage, current)

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Powering Business Worldwide™

Part no.	XNE-4AO-U/I
	140034
EL Number (Norway)	4520015

General specifications

Product name	Eaton XNE Output module
Part no.	XNE-4AO-U/I
EAN	7640130095304
Product Length/Depth	161.5 millimetre
Product height	74.5 millimetre
Product width	13 millimetre
Product weight	0.064 kilogram
Certifications	CULus IEC/EN 6113-2 Rated data for terminations according to IEC/EN 60947-7-1 CE IEC/EN 61000-6-2 IEC/EN 61131-2 IEC/EN 61000-6-4
Product Tradename	XNE
Product Type	Output module
Product Sub Type	None
Catalog Notes	-10/0 to +10 V DC 0.2 0/4 to 20 mA 200 ppm/°C of full-scale value Switchable as channels

Features & Functions

Electric connection type	Plug-in connection
Features	Analog outputs configurable Output, current Fieldbus connection over separate bus coupler possible Output, voltage Output signal configurable

General information

Current consumption	40 mA, from module bus, Analog input modules 150 mA, from supply terminal
Degree of protection	IP20 NEMA 1
Mounting method	Rail mounting possible
Number of channels	4
Product category	XNE Slice module
Type	XI/ON I/O 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	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

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

Terminal capacities

Terminal capacity		0.25 - 1.5 mm², with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 1.5 mm², flexible without ferrule, H07V-K 0.25 - 1.5 mm², solid, H07V-U 0.25 - 0.75 mm², with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)
Gauge pin		A1 (according to IEC/EN 60947-1)
Stripping length (main cable)		8 mm

Electrical rating

Power loss		3 W
Rated operational voltage		24 V DC (supply terminal)
Short-circuit current		40 mA, Analog output modules
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

Connection type		Push-In spring-cage terminals, Connection design in TOP direction
Protocol		Other bus systems

Input/Output

Frequency		20 Hz (Transfer)
Load resistance		< 450 Ω (Current) > 1 µF (capacitive load) < 0.001 h (inductive load) > 1000 Ω (Voltage)
Measured value representation		Standard/extended range/PA (NE43) 16-bit signed integer 12-bit full range, flush left
Measured variables		Current Voltage
Number of inputs (analog)		0
Number of outputs (analog)		4
Output		4 Analog Outputs
Output current		0/4 - 20 mA
Output voltage		-10 - 10 V DC
Settling time		2 ms, Inductive load, Analog output modules 1 ms, Resistive load, Analog output modules 2 ms, Capacitive load, Analog output modules
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		3 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		3 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 - 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		Yes
Output signal configurable		Yes
Resolution of the analogue outputs	Bit	16
Number of analogue inputs		0
Number of analogue outputs		4
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		Plug-in 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	13
Height		mm	74.5
Depth		mm	161.5