



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

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

Delivery program

Function			XI/ON I/O modules
Function			XNE Slice module
Short Description			4 Analog outputs -10/0 to +10 V DC 0/4 to 20 mA Switchable as channels

Technical data

General

Standards			EN 61000-6-2 EN 61000-6-4 EN 61131-2
Potential isolation			Yes, through optocoupler
Ambient temperature			
Ambient temperature, operation		°C	0 - +55
Storage, transport	ø	°C	-25 - +85
Relative humidity			
Relative humidity			5 - 95 % (indoor), Level RH-2, no condensation (for storage at 45°C)
Ambient conditions, mechanical			
Degree of Protection			IP20
Harmful gases		ppm	SO ₂ : 10 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75 %,no condensation)
Vibration resistance, operating conditions			according to IEC/EN 60068-2-6
Mechanical shock resistance		g	according to IEC 60068-2-27
Continuous shock resistance (IEC/EN 60068-2-29)			According to IEC 60068-2-29
Drop and topple			According to IEC 60068-2-31, free fall according to IEC 60068-2-32
Electromagnetic compatibility (EMC)			
ESD	Air/contact discharge	kV	EN 61000-4-2
Electromagnetic fields	(0.08...1) / (1,4...2) / (2...2,7) GHz	V/m	EN 61100-4-2
Burst			EN 61100-4-4
Surge			EN 61100-4-5
Radiated RFI		V	EN 61100-4-6
Emitted interference (radiated, high frequency)	(30...230 MHz) / (230...1000 MHz)	dB	EN 55016-2-3
Voltage fluctuations/voltage dips			EN 61131-2

Type test			to EN 61131-2
Approvals			CE, cULus EAC
Other technical data (sheet catalogue)			Technical Data

Terminations

Rated data			according to VDE 0611 Part 1/8.92 / IEC/EN 60947-7-1
Connection design in TOP direction			Push-In spring-cage terminals
Stripping length		mm	8
Clamping range			max. 0.14 - 1.5 mm ²
Connectable conductors			
"e" solid H07V-U		mm ²	0.25 - 1.5
"f" flexible H 07V-K		mm ²	0.25 - 1.5
"f" with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm ²	0.25 - 1.5
"f" with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm ²	0.25 - 0.75
Connectable conductors			
"e" solid H07V-U		mm ²	0.25 - 1.5
"f" flexible H 07V-K		mm ²	0.25 - 1.5
"f" with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm ²	0.25 - 1.5
"f" with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm ²	0.25 - 0.75
Gauge pin IEC/EN 60947-1			A1

Analog input modules

Measured variables			Voltage, Current
Channels		Number	4
Rated voltage through supply terminal	U _L		24 V DC
Rated current consumption from supply terminal	I _L	mA	150
Rated current consumption from module bus	I _{MB}	mA	≤ 40
Heat dissipation		W	< 3
Offset error		%	0.1
Basic error limit at 23 °C		%	0.2
Temperature coefficient			200 ppm/°C of full-scale value
Measured value representation			16-bit signed integer 12-bit full range, flush left Standard/extended range/PA (NE43)

Analog output modules

Measured variables			Voltage, Current
Channels		Number	4
Rated voltage through supply terminal	U _L		24 V DC
Rated current consumption from supply terminal	I _L	mA	150
Rated current consumption from module bus	I _{MB}	mA	≤ 40
Heat dissipation		W	< 3
Output voltage		V DC	-10/0...+10
Output current		mA	0/4 - 20
Load resistance			
Resistive load		Ω	< 450 (Strom), > 1000 (Spannung)
Inductive load		h	< 0.001
Capacitive load		μF	>1
Short-circuit current		mA	40
Transfer frequency		Hz	20
Offset error		%	0.1
Basic error limit at 23 °C		%	0.2
Temperature coefficient			200 ppm/°C of full-scale value
Settling time			
Resistive load		ms	1

Inductive load		ms	2
Capacitive load		ms	2
Measured value representation			16-bit signed integer 12-bit full range, flush left Standard/extended range/PA (NE43)

Digital outputs

Channels		Number	4
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from the supply terminal (at load current = 0 mA)	I_L	mA	150
Rated current consumption from module bus	I_{MB}	mA	≤ 40
Power loss	P	W	Normally 3
Resistive load		Ω	< 450 (Strom), > 1000 (Spannung)
Inductive load		h	< 0.001

Digital inputs

Channels		Number	4
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	150
Rated current consumption from module bus	I_{MB}	mA	≤ 40
Heat dissipation		W	< 3

Relay modules

Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	150
Rated current consumption from module bus	I_{MB}	mA	≤ 40
Power loss	P	W	Normally 3

Power supply module

Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	150
Rated current consumption from module bus	I_{MB}	mA	≤ 40
Power loss	P	W	3

Counter module

Channels		Number	4
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	150
Rated current consumption from module bus	I_{MB}	mA	≤ 40
Heat dissipation		W	< 3

Measuring modes

Temperature coefficient			200 ppm/°C of full-scale value
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Interfaces

Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	150
Rated current consumption from module bus	I_{MB}	mA	≤ 40
Power loss	P	W	Normally 3

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	3
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	55
Degree of Protection			IP20
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties		
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 7.0

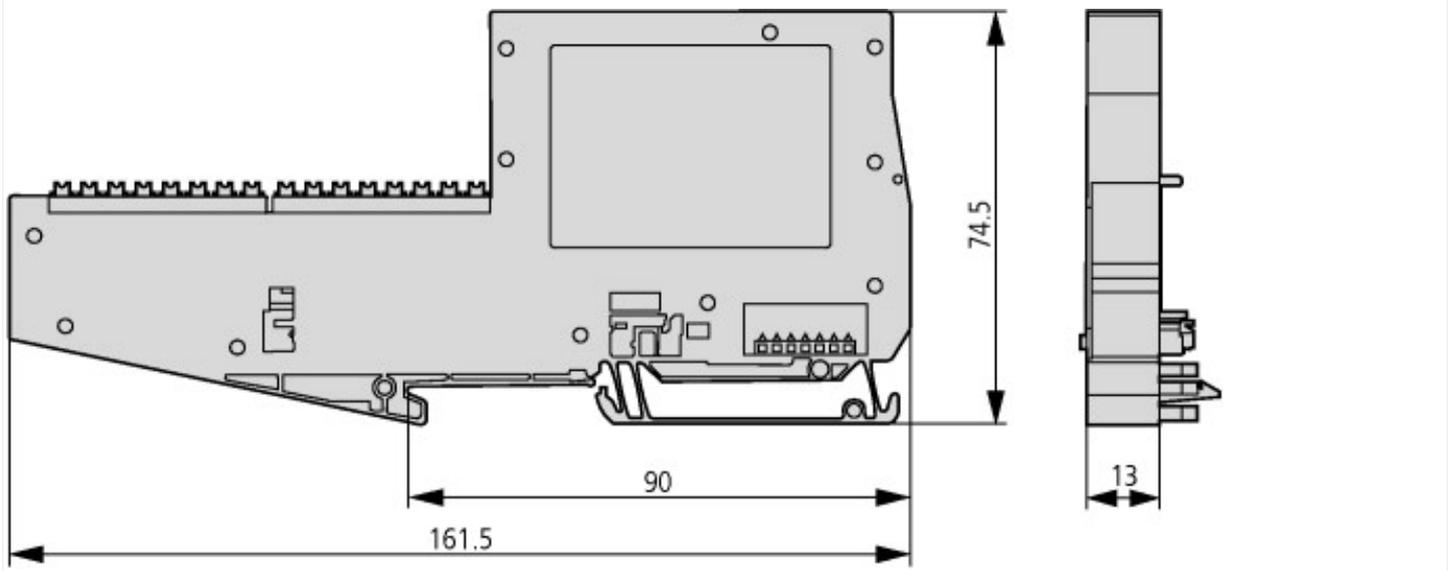
PLC's (EG000024) / Fieldbus, decentr. periphery - analogue I/O module (EC001596)		
Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - analogue I/O module (ecl@ss10.0.1-27-24-26-01 [BAA061014])		
Supply 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 of supply voltage		DC
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		Yes
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 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			No
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)			
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 build in possible			No
Rack-assembly possible			No
Suitable for safety functions			No
Category according to EN 954-1			
SIL according to IEC 61508			None
Performance level acc. 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
Width		mm	13
Height		mm	161.5
Depth		mm	74.5

Approvals

Product Standards			IEC/EN 6113-2; CE marking
North America Certification			Request filed for UL and CSA
Specially designed for North America			No
Current Limiting Circuit-Breaker			No

Dimensions



Dimensions