DATASHEET - XIOC-2AI-1AO-U1-I1

Analog I/O module for XC100/200, 24 V DC, 2AI, 1AO(0-10V, 0-20mA)

Part no.	**XIOC-2AI-1AO-U1-I1**
Catalog No.	**281545**
EL-Nummer (Norway)	**4519688**

Delivery program

Function		Analog modules
		Compact I/O system for connection to XC100/200 Modular PLCs XC100/200 expandable with up to 15 XI/OC modules Optionally, screw terminals or spring-loaded terminals for digital/analog modules
Description		Combination modules 2 Inputs and 1 Output 0 - 10 V, 0 - 20 mA 1 ms conversion time individual changeover

Technical data

General

Standards			IEC/EN 61131-2 EN 50178
Ambient temperature		°C	0 - +55
Storage	ϑ	°C	-25 - +70
Vibration resistance			10 - 57 Hz ±0.075 mm 57 - 150 Hz ±1.0 mm
Mechanical shock resistance		g	15 Shock duration 11 ms
Impact resistance			500 g/$\varnothing$ 50 mm ±25 g
Overvoltage category/pollution degree			II/2
Protection class			1
Degree of Protection			IP20
Emitted interference			DIN/EN 55011/22, Class A
Weight		kg	0.16

Power supply

Rated voltage	U_e	V DC	24 (12)
Admissible range			20.4 – 28.8 (11.8 – 14.4)
Residual ripple		%	$\leqq 5$
Neutral poles			
Duration of dip		ms	10
Repetition rate		s	1
Maximum power loss	P_v	W	1.4

Inputs

Input voltage		V DC	0 - 10
Input current		mA	0 - 20
Resolution		Bit	14
Conversion time			< 1 ms
Total error		%	Normally 0.4
Input impedance		kΩ	40
Potential isolation			
Circuit within each channel			No
Between the input channels			No
Between input/output channels			No
Input channels		Qty.	2
Internal current consumption (5 V DC)		mA	Normally 100

Terminations			Plug-in terminal block
Resolution		Bit	12

Outputs

Output voltage		V DC	0 - 10
Output current		A	0 up to 0.020
Resolution		Bit	12
Error			Normally 0.4
Potential isolation			
Circuit within each channel			No
between channels			No
Quantity of channels			1
External load resistance			≦ 2 kΩ
Terminations			Plug-in terminal block
Short-circuit rating			Yes
Internal current consumption (5 V DC)		mA	200

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	1.4
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	55
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) / PLC analogue I/O-module (EC001420)
Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / SPS analog input/output module (ecl@ss10.0.1-27-24-22-01 [AKE524014])

Number of analogue inputs			2
Number of analogue outputs			1
Analogue inputs configurable			Yes
Analogue outputs configurable			Yes
Input, current			Yes
Input, voltage			Yes
Input, resistor			No
Input, resistance thermometer			No
Input, thermocouple			No
Input signal, configurable			No
Resolution of the analogue inputs		Bit	14
Output, current			Yes
Output, voltage			Yes
Output signal configurable			Yes
Resolution of the analogue outputs		Bit	12
Type of electric connection			Screw-/spring clamp connection
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	30
Height		mm	100
Depth		mm	95

Approvals

Product Standards			IEC: see Technical Data; UL508; CSA-C22.2 No. 0-M; CSA-C22.2 No. 142-M; CE marking
UL File No.			E135462
UL Category Control No.			NRAQ
CSA File No.			012528
CSA Class No.			2252-01
North America Certification			UL listed, CSA certified
Specially designed for North America			No
Current Limiting Circuit-Breaker			No
Degree of Protection			IEC: IP20, UL/CSA Type: -

Dimensions