

Analog output module for XC100/200, 24 V DC, 4A0(2x0-10V, 2x4-20mA)

Powering Business Worldwide*

Part no. XIOC-2AO-U1-2AO-I2 Article no. 257902

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	Outputs 2 Outputs 0 - 10 V 2 outputs 4 - 20 mA

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/ [©] 50 mm ±25 g
Overvoltage category/pollution degree			11/2
Protection class			1
Degree of Protection			IP20
Emitted interference			DIN/EN 55011/22, Class A
Weight		kg	0.18

Power supply

Rated voltage	U _e	V DC	24 (12)
Admissible range			20.4 – 28.8 (11.8 – 14.4)
Residual ripple		%	≤ ₅
Neutral poles			
Duration of dip		ms	10
Repetition rate		s	1
Maximum power loss	P_{v}	W	0.5

Inputs

External power supply		24 V DC (-15/+20 %), approx. 150 mA
Resolution	Bit	12
Conversion time		≦ _{5 ms}

Outputs

Outhars			
Output voltage	V	DC	0 - 10
Output current	А		0.004 to 0.020
Resolution	Ві	it	12
Potential isolation			
Circuit within each channel			Opto-isolated
between channels			No
Terminations			Plug-in terminal block
Internal current consumption (5 V DC)	m	nΑ	100

Conversion time		≦ _{5 ms}
Total error	%	≦ ±1 (of the full-scale value)
External load resistance		
Voltage output		≦ _{10 kΩ}
Current output	Ω	0 to 500 Ω
Quantity of outputs		
Output voltage		2 (channels 0 and 1)
Output current		2 (channels 2 and 3)
External power supply		24 V DC (-15/+20 %), approx. 150 mA
Connection type		2-core screened cable (≦20 m)

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	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	0.5
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 6.0

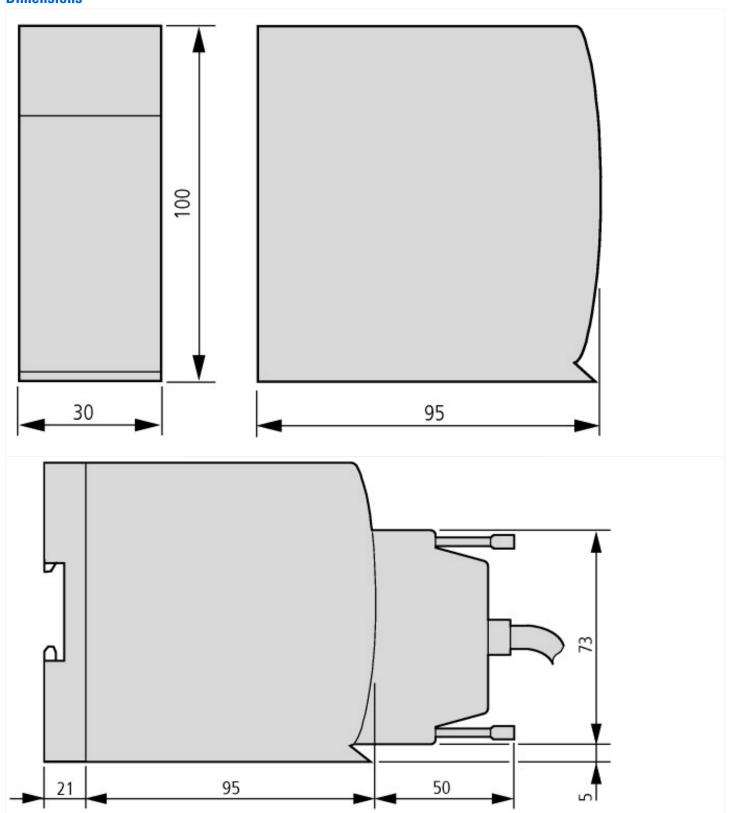
PLC's (EG000024) / PLC analogue I/O-module (EC001420)	
Electric engineering, automation, process control engineering / Control / Programm	nable logic control (SPS) / SPS analog input/output module (ecl@ss8.1-27-24-22-01 [AKE524011])
Number of analogue inputs	0
Number of analogue outputs	4
Analog inputs configurable	Yes

Input, current Mo 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 Yes Output, voltage No No Output, voltage No No Output, voltage Yes Yes Output, voltage No No Resolution of the analogue outputs Secondary No Resolution of the analogue outputs Secondary Screw-/spring clamp connection Suitable for safery functions Secondary secording to EN 954-1 No Suitable for safety functions No No Category according to EN 954-1 No No Suitable for safety functions No No Appendant operation agent (Ex ia) No No Appendant operation agent (Ex ia) No No Explosion safety category for dust <td< th=""><th></th><th></th><th></th></td<>			
Input, voltage No Input, resistor 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 Yes Output, voltage No No Output signal configurable No Yes Resolution of the analogue outputs No No Type of electric connection Serew-/spring clamp connection Suitable for safety functions No Serew-/spring clamp connection Suitable for safety functions No No Category according to EN 954-1 No No Sil. according to IEC 81508 No None Performance level acc. to EN ISO 13849-1 No No Appendant operation agent (Ex ia) No No Explosion safety category for gas No No Explosion safety category for dust No No	Analog outputs configurable		Yes
Input, resistance thermometer Mo Input, teststator Mo Input, teststatore thermometer Mo Input, thermocouple Mo Input signal, configurable Mo Resolution of the analogue inputs Bit 0 Output, current Yes Yes Output, put signal configurable Mo No Resolution of the analogue outputs Bit 12 Type of electric connection Bit 12 Suitable for safety functions No Screw-/spring clamp connection Suitable for safety functions No No Category according to EN 954-1 No None SIL according to IEC 61508 None None Performance level acc. to EN ISO 13849-1 None None Appendant operation agent (Ex ia) No No Explosion safety category for gas None None Explosion safety category for dust Mone None Width Mone None Explosion safety category for dust None None	Input, current		No
Input, resistance thermometer	Input, voltage		No
Input, thermocouple Input signal, configurable Resolution of the analogue inputs Output, current Output, current Output, voltage Output, current Output, voltage Output signal configurable Resolution of the analogue outputs Res	Input, resistor		No
Input signal, configurable Resolution of the analogue inputs Output, current Output, voltage Output, voltage Output signal configurable Resolution of the analogue outputs Suitable for safety functions Category according to EN 954-1 SIL according to EN 954-1 SIL according to EC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Rooe Explosion safety category for gas Explosion safety category for dust Width mm 30	Input, resistance thermometer		No
Resolution of the analogue inputs Output, current Output, voltage Output, voltage Output signal configurable Resolution of the analogue outputs Resolution o	Input, thermocouple		No
Output, current Output, voltage Output, voltage Output signal configurable Resolution of the analogue outputs Type of electric connection Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width Width Width Yes Yes Yes Yes No No No No No No No No No N	Input signal, configurable		No
Output, voltage Output signal configurable Resolution of the analogue outputs Type of electric connection Suitable for safety functions Category according to EN 954-1 SIL according to EC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for dust Width Width Yes No Serew-/spring clamp connection No No None None None None None None N	Resolution of the analogue inputs	Bit	0
Output signal configurable Resolution of the analogue outputs Resolution of the analogue of the Assert of the Assert outputs Resolution of the analogue of the Assert outputs Resolution of the Assert outputs	Output, current		Yes
Resolution of the analogue outputs Type of electric connection Suitable for safety functions No Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width Bit 12 Screw-/spring clamp connection No	Output, voltage		Yes
Type of electric connection Suitable for safety functions No Category according to EN 954-1 SIL according to IEC 61508 None Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Width mm Screw-/spring clamp connection No No No None None	Output signal configurable		No
Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width No No No No No No No No No N	Resolution of the analogue outputs	Bit	12
Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width Mo Mo None None None None None			
SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width Moe Moe None None None None	Type of electric connection		Screw-/spring clamp connection
Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width Mo None None None None	Type of electric connection Suitable for safety functions		
Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Appendant operation agent (Ex ia) Append			
Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust Width Mo No No No No No No No No No	Suitable for safety functions		No
Explosion safety category for gas Explosion safety category for dust None Width mm 30	Suitable for safety functions Category according to EN 954-1		No None
Explosion safety category for dust Width None 30	Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508		None None
Width mm 30	Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1		None None No
	Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia)		None None No No
Height mm 100	Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib)		None None No No No No
	Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas	mm	None None No No No No No No None
Depth mm 95	Suitable for safety functions Category according to EN 954-1 SIL according to IEC 61508 Performance level acc. to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Explosion safety category for gas Explosion safety category for dust		None None No No No No No None None None

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



Additional product information (links)

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MN05002002Z (AWB2725-1452) XIOC signal mo	dules
MN05002002Z (AWB2725-1452) XIOC- Signalmodule - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002002Z_DE.pdf
MN05002002Z (AWB2725-1452) XIOC signal modules - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002002Z_EN.pdf