



Counter module for XC100/200, 24 V DC, 1x100kHz, 2DO(T)

**Part no.** XIOC-1CNT-100KHZ  
**Catalog No.** 257906  
**EL-Nummer (Norway)** 4519680

## Delivery program

Function			Counter 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			1 input up to 100 kHz, (24 V DC, 5 V DC) 2 digital transistor outputs optocoupled, 24 V DC 30 pole connector required for counter module

## Technical data

### General

Standards			IEC/EN 61131-2 EN 50178
Ambient temperature		°C	0 - +55
Storage	9	°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
Current consumption		mA	200
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 <sub>e</sub>	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 <sub>v</sub>	W	1.2

### Inputs

Counter limits			0 - 4294967295 (32 bit)
Internal current consumption	I <sub>e</sub>	mA	200
Frequency		kHz	100 (25 with four-fold resolution)
Quantity of channels			1
Input voltage		V DC	12 - 24
Voltage for On	I <sub>n</sub>	A	10
Voltage for Off		VA/W	4
Input current		mA	≥ 4
Input voltage differential	U <sub>e</sub>	V DC	± 5
Voltage for On		V DC	2 - 5
Voltage for Off		V DC	-5 - 8
Input current differential		mA	35
Minimum pulse width		µs	On ≥ 4

Potential isolation			Off $\geq$ 4
Connection for external cabling			Opto-isolated
External cabling			30-pole plug: XIOC-TERM30-CNT4
External cabling			Screened, twisted pair cable

## Outputs

Output type			Transistor (open collector)
External power supply			12/24 V DC (30 max.)
Minimum load current		mA	1
Maximum load current	$I_e$	mA	20
Max. leakage current		mA	0.5
Max. voltage dip at On		V	1.5
Debounce OFF			
Off $\rightarrow$ On		ms	
Debounce OFF		ms	1
On $\rightarrow$ Off		ms	
Debounce OFF		ms	1
Output channels		Qty.	2
Potential isolation			Opto-isolated
Connection for external cabling			30-pole plug: XIOC-TERM30-CNT4
External cabling			Screened, twisted pair cable

## 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	1.2
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature min.		$^{\circ}$ C	0
Operating ambient temperature max.		$^{\circ}$ 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.

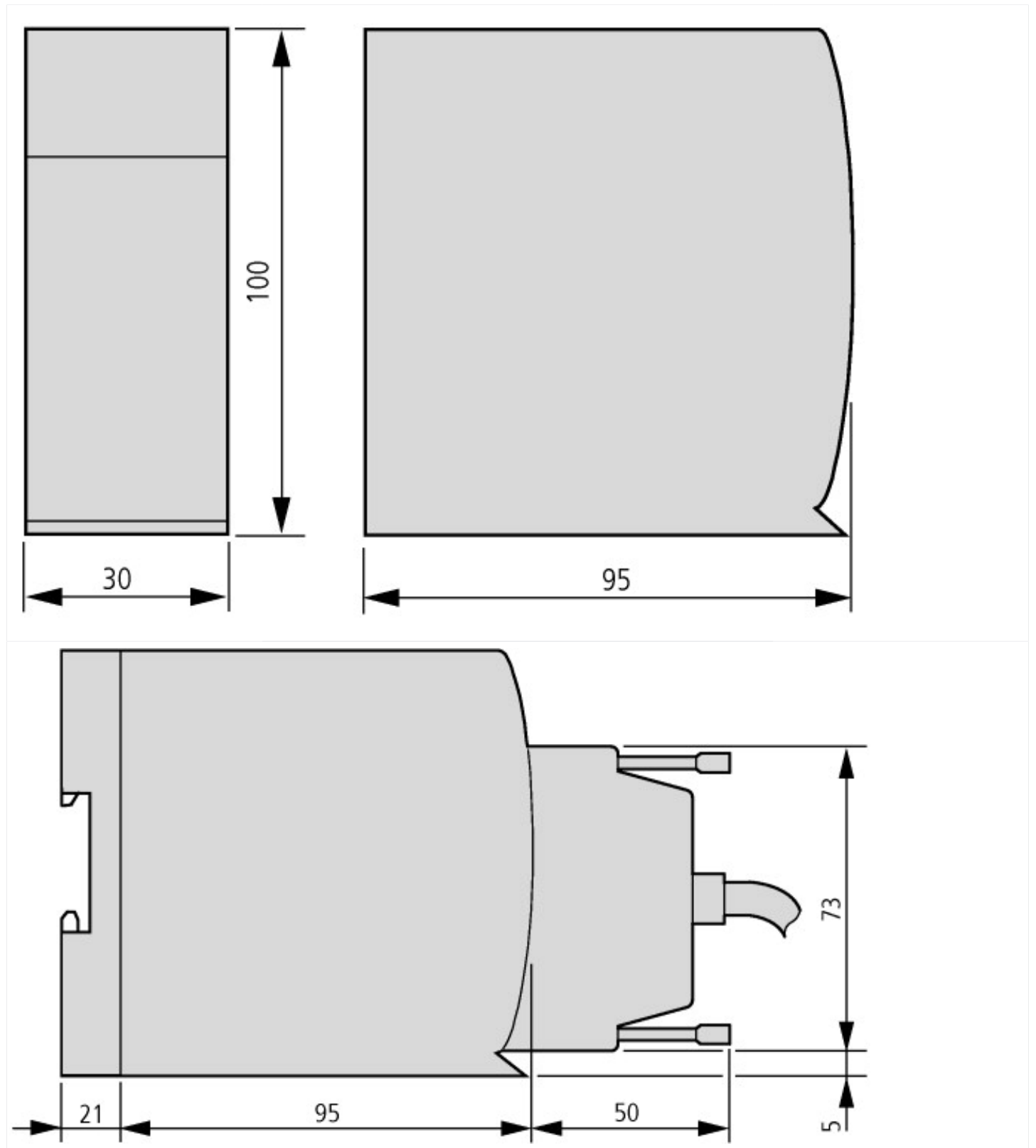
## Technical data ETIM 7.0

PLC's (EG000024) / PLC function/technology module (EC001422)		
Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / SPS functional/technological module (ecl@ss10.0.1-27-24-22-05 [AKE528014])		
Number of functions		1
Redundancy		No
Suitable for counting		Yes
Suitable for weighting		No
Suitable for temperature control		No
Suitable for welding control		No
Suitable for pressure control		No
Suitable for NC		No
Function electronic positioning available		No
Suitable for CNC		No
Suitable for SSI		No
Suitable for incremental data detection		Yes
Suitable for detection absolute value		No
Flux controller possible		No
Suitable for flux measurement		No
Suitable for path controller		No
Suitable for cam controller		No
Suitable for flying saw		No
Suitable for multi-axis control		No
Single-axis controller possible		Yes
Suitable for multi-axis positioning		No
Single-axis positioning possible		Yes
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



## Additional product information (links)

### Manual XIOC signal module MN05002002Z (AWB2725-1452)

Handbuch Signalmodul XIOC MN05002002Z  
(AWB2725-1452) - Deutsch

[https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN05002002Z\\_DE.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN05002002Z_DE.pdf)

Manual XIOC signal module MN05002002Z  
(AWB2725-1452) - English

[https://es-assets.eaton.com/DOCUMENTATION/AWB\\_MANUALS/MN05002002Z\\_EN.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN05002002Z_EN.pdf)