



Counter module (incremental encoder) for XC100/200, 24 V DC, 2x400kHz, 2AO(+/-10V)



**Part no. XIOC-2CNT-2AO-INC
262417**

General specifications	
Product name	Eaton XIOC Counter module
Part no.	XIOC-2CNT-2AO-INC
EAN	4015082624170
Product Length/Depth	100 millimetre
Product height	95 millimetre
Product width	30 millimetre
Product weight	0.12 kilogram
Certifications	CSA-C22.2 No. 0-M CSA-C22.2 No. 142-M UL File No.: E135462 UL Category Control No.: NRAQ IEC/EN 61131-2 UL CSA CE CSA File No.: 012528 CSA Class No.: 2252-01 UL508 EN 50178
Product Tradename	XIOC
Product Type	Counter module
Product Sub Type	None
Catalog Notes	≤ 1 ms 2 incremental encoders up to 400 kHz, 5 V DC, 2 analog outputs, ±10 V Normally 0.4
Features & Functions	
Functions	Electronic positioning available
General information	
Admissible range	20.4 – 28.8 V (11.8 – 14.4 V), Power supply
Current consumption	450 mA max., Outputs 300 mA, at 5 V DC, Current consumption of encoders, Outputs 450 mA (Ie), internal current consumption, Inputs
Degree of protection	IP20
Number of channels	2, Output
Overvoltage category	II
Pollution degree	2
Protection class	1
Rated frequency	400 (100 with four-fold resolution)
Repetition rate	1 s
Residual ripple	≤ 5 %
Resolution	12 Bit
Suitable for	Incremental data detection Multi-axis control Multi-axis positioning
Type	Counter module
Used with	XC100/200 (expandable with up to 15 XI/OC modules)
Ambient conditions, mechanical	
Impact resistance	500 g/∅ 50 mm ±25 g
Shock resistance	15 g, Mechanical, Shock duration 11 ms
Vibration resistance	57 - 150 Hz ± 1.0 mm 10 - 57 Hz, ± 0.075 mm
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		70 °C
Electro magnetic compatibility		
Emitted interference		Class A (according to DIN/EN 55011/22)
Voltage dips		10 ms
Terminal capacities		
Terminals		Optionally, screw terminals or spring-loaded terminals for digital/analog modules
Electrical rating		
Power loss		2.25 W
Power supply		5 V DC
Rated control voltage (Uc)		-5 to -0.2 V DC
Rated operational voltage		24 (12) V DC
Supply voltage at DC - min		0.2 V DC
Supply voltage at DC - max		5 V DC
Communication		
Connection		2-core, screened cable, Output termination Plug-in terminal block, Connection of external input (max. 30 m cable length), Inputs Screened, twisted pair cable, Inputs Of external output: Plug-in terminal block
Input/Output		
Counter limits		0 - 4294967295 (32 bit)
Input		2 Analog inputs
Input current		Input B1-C: max. 5 A
Input voltage		± 5 V DC (differential)
Load resistance		≥ 1 kΩ
Output		Analog
Output voltage		-10 - 10 V DC
Safety		
Explosion safety category for dust		None
Explosion safety category for gas		None
Design verification		
Equipment heat dissipation, current-dependent Pvid		0 W
Heat dissipation capacity Pdis		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		2.25 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) / SPS-Funktions-/Technologie-Modul (EC001422)		
Elektro-, Automatisierungs- und Prozessleittechnik / Steuerung / Speicherprogrammierbare Steuerung (SPS) / SPS-Funktions-/Technologie-Modul (ecl@ss13-27-24-22-05 [AKE528019])		
Number of functions		2
Redundancy		No
Suitable for counting		No
Suitable for weighing		No
Suitable for temperature control		No
Suitable for welding control		No
Suitable for pressure control		No
Suitable for NC		No
Suitable for electronic positioning		Yes
Suitable for CNC		No
Suitable for SSI		No
Suitable for incremental data detection		Yes
Suitable for detection absolute value		No
Suitable for flux controller		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		Yes
Suitable for single-axis controller		No
Suitable for multi-axis positioning		Yes
Suitable for single-axis positioning		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
Width	mm	30
Height	mm	95
Depth	mm	100