DATASHEET - XIOC-2CNT-100KHZ

Counter module for XC100/200, 24 V DC, 2x100kHz, 4DO(T)

Part no.	**XIOC-2CNT-100KHZ**	
	257907	
EL Number (Norway)	**4519681**	

General specifications

Product name		Eaton XIOC Counter module
Part no.		XIOC-2CNT-100KHZ
EAN		4015082579074
Product Length/Depth		100 millimetre
Product height		95 millimetre
Product width		30 millimetre
Product weight		0.155 kilogram
Certifications		UL508 CSA-C22.2 No. 142-M CE EN 50178 UL UL Category Control No.: NRAQ CSA Class No.: 2252-01 UL File No.: E135462 CSA-C22.2 No. 0-M IEC/EN 61131-2 CSA File No.: 012528 CSA
Product Tradename		XIOC
Product Type		Counter module
Product Sub Type		None
Catalog Notes		4 VA/W, Voltage for Off optocoupled, 24 V DC

Features & Functions

Functions		Single-axis positioning possible Single-axis controller possible

General information

Admissible range		20.4 – 28.8 V (11.8 – 14.4 V), Power supply
Current consumption		200 mA (Ie), internal current consumption, Inputs 200 mA, Outputs
Degree of protection		IP20
Number of channels		4, Output
Overvoltage category		II
Pollution degree		2
Protection class		1
Rated frequency		100 (25 with four-fold resolution)
Repetition rate		1 s
Residual ripple		≤ 5 %
Suitable for		Counting Incremental data detection
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		10 - 57 Hz, ± 0.075 mm 57 - 150 Hz ± 1.0 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

Leakage current	0.5 A
Power loss	1.2 W
Rated control voltage (Uc)	-5 - 8 V DC
Rated operational current (Ie)	10 A
Rated operational voltage	24 (12) V DC
Supply voltage at DC - min	2 V DC
Supply voltage at DC - max	5 V DC

Communication

Connection	30-pole plug: XIOC-TERM30-CNT4, Connection of external input (max. 30 m cable length), Inputs Of external output: 30-pole plug XIOC-TERM30-CNT4 30 pole connector required for counter module Screened, twisted pair cable, Output termination Screened, twisted pair cable, Inputs

Input/Output

Counter limits	0 - 4294967295 (32 bit)
Delay time	1 ms, Outputs, Delay time from 0 to 1, Debounce OFF 1 ms, Outputs, Delay time from 1 to 0, Debounce OFF
Input	2 inputs (up to 100 kHz, 24 V DC or 5 V diff) 2 Analog inputs
Input current	4 mA (high signal) Input B1-C: max. 35 A
Input voltage	12 - 24 V DC ± 5 V DC (differential)
Load current	Max. 20 mA (Ie) Min. 1 mA
Output	Transistor (open collector) 4 Digital Transistor Outputs
Pulse characteristics	On ≥ 4 µs (minimum pulse width)
Voltage drop (Ud)	1.5 V

Safety

Explosion safety category for dust	None
Explosion safety category for gas	None
Potential isolation	Outputs: Opto-isolated Opto-isolated (Inputs)

Design verification

Equipment heat dissipation, current-dependent Pvid	0 W
Heat dissipation capacity Pdiss	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	1.2 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) / PLC function/technology module (EC001422)

Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Programmable logic control (SPS) / SPS functional/technological module (ecl@ss13-27-24-22-05 [AKE528019])

Number of functions		2
Redundancy		No
Suitable for counting		Yes
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		No
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		No
Suitable for single-axis controller		Yes
Suitable for multi-axis positioning		No
Suitable for single-axis positioning		Yes
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