

Specifications



Eaton 257907

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

General specifications

PRODUCT NAME	Eaton XIOC Counter module
CATALOG NUMBER	257907
MODEL CODE	XIOC-2CNT-100KHZ
EAN	4015082579074
PRODUCT LENGTH/DEPTH	100 mm
PRODUCT HEIGHT	95 mm
PRODUCT WIDTH	30 mm
PRODUCT WEIGHT	0.155 kg
CERTIFICATIONS	IEC/EN 61131-2 UL CSA File No.: 012528 UL508 EN 50178 UL File No.: E135462 CSA-C22.2 No. 142-M UL Category Control No.: NRAQ CSA-C22.2 No. 0-M CSA CE CSA Class No.: 2252-01



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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

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
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Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	0 °C
AMBIENT STORAGE TEMPERATURE - MIN	-25 °C

Design verification

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.
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.
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

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 - MAX	5 VDC
SUPPLY VOLTAGE AT DC - MIN	2 VDC

Features & functions

FUNCTIONS	Single-axis positioning possible Single-axis controller possible
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Electro magnetic compatibility

EMITTED INTERFERENCE	Class A (according to DIN/EN 55011/22)
VOLTAGE DIPS	10 ms

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
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)
NUMBER OF CHANNELS	4, Output

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 $\geq 4 \mu s$ (minimum pulse width)
VOLTAGE DROP (UD)	1.5 V

Terminal capacities

TERMINALS	Optionally, screw terminals or spring-loaded terminals for digital/analog modules
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Safety

EXPLOSION SAFETY CATEGORY FOR DUST	None
EXPLOSION SAFETY CATEGORY FOR GAS	None
POTENTIAL ISOLATION	Outputs: Opto-isolated Opto-isolated (Inputs)

Resources

BROCHURES	Slice card modular I/O system for the machine building industry XN300 - brochure
	eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf
DRAWINGS	eaton-electronic-devices-dimensions-xioc-output-module-dimensions.eps
	eaton-electronic-devices-in-out-module-xioc-output-module-dimensions.eps
	eaton-electronic-devices-local-inputoutput-xioc-output-module-3d-drawing.eps
ECAD MODEL	DA-CE-ETN.XIOC-2CNT-100KHZ
MANUALS AND USER GUIDES	MN05002002Z_EN
MCAD MODEL	DA-CS-xioc
	eaton-modular-i-o-system-mcad-drawings-xioc.dwg

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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