

Specifications



Eaton 199977

Eaton Modular PLC XC204, Micro PLC, programmable CODESYS 3, USB, 2xEthernet, RS485, 2DIO, XN300 IO expandable

General specifications

PRODUCT NAME	Eaton XC200 modular PLC
CATALOG NUMBER	199977
MODEL CODE	XC-204-C20-002
EAN	4015081997640
PRODUCT LENGTH/DEPTH	104.2 mm
PRODUCT HEIGHT	29.3 mm
PRODUCT WIDTH	80.3 mm
PRODUCT WEIGHT	0.11 kg
CERTIFICATIONS	UL listed EN 61131 EAC UL File No.: E205091 CE cULus Listed

Ambient conditions, mechanical

MOUNTING POSITION	Vertical (on horizontal top-hat rail)
SHOCK RESISTANCE	15 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 9 Impacts
VIBRATION RESISTANCE	5 - 8.4 / 8.4 -150 Hz, 3,5 mm / 1 g

Communication

INTERFACES	2 x ETH RS485 DIO XN300
PROTOCOL	EtherNet/IP MODBUS Other bus systems TCP/IP

Climatic environmental conditions

AIR PRESSURE	795 - 1080 hPa (operation)
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-20 °C
AMBIENT STORAGE TEMPERATURE - MIN	-25 °C
RELATIVE HUMIDITY	< 95 % (non-condensing)

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.
HEAT DISSIPATION DETAILS	The max. heat dissipation is specified as the maximum power produced inside the device's housing.
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	6.3 W

Electro magnetic compatibility

EMITTED INTERFERENCE

40 dB (at 30 - 230 MHz, Class A, radiated, high frequency)
47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency)

Features & functions

FEATURES

Short-circuit protection (power supply)

FITTED WITH:

XSOFT-CODESYS 3

FUNCTIONS

Additional program memory possible
Redundancy

General information

CONNECTION TYPE	Push-in spring-cage terminal, Connection design in TOP direction
DEGREE OF PROTECTION	IP20
MODEL	Modular
MOUNTING METHOD	Rail mounting possible
OVERVOLTAGE CATEGORY	II
POLLUTION DEGREE	2
POTENTIAL ISOLATION	Between Digital inputs: no Between Digital outputs: no
VOLTAGE TYPE	DC

Power supply

INPUT VOLTAGE	0 - 5 V (Digital inputs, low level) 24 V DC (Digital inputs) 15 - 30 V (Digital inputs, high level)
OUTPUT CURRENT	0.5 A
SUPPLY VOLTAGE AT DC - MAX	30 VDC
SUPPLY VOLTAGE AT DC - MIN	19.2 VDC
VOLTAGE DIPS	20 ms 10 ms

System

MEMORY CAPACITY	512,000 kByte
------------------------	---------------

Input/Output

DELAY TIME	200 µ s, Digital outputs, Delay on signal change and resistive load, from High to Low signal 200 µ s, Digital outputs, Delay on signal change and resistive load, from Low to High signal
INPUT CURRENT	≤ 1.1 mA (Digital inputs, low level) ≥ 2.0 mA (Digital inputs, high level)
NUMBER OF CHANNELS	2
NUMBER OF INPUTS (ANALOG)	0
NUMBER OF INPUTS (DIGITAL)	2
NUMBER OF OUTPUTS (ANALOG)	0
NUMBER OF OUTPUTS (DIGITAL)	2
NUMBER OF RELAY OUTPUTS	0
RATED OPERATIONAL CURRENT (IE)	2.4 A (supply input)
UTILIZATION FACTOR	100 % ($\Sigma I_{Amax} = 2A$)

Safety

EXPLOSION SAFETY CATEGORY FOR DUST	None
EXPLOSION SAFETY CATEGORY FOR GAS	None

Terminal capacities

TERMINAL CAPACITY	0.25 - 0.75 mm ² , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)
--------------------------	---

TERMINAL CAPACITY (AWG)	24 - 16
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	0.25 - 1.5 mm ² , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 1.5 mm ² , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas- tight)
TERMINAL CAPACITY (FLEXIBLE)	0.2 - 1.5 mm ² , H 07V-K
TERMINAL CAPACITY (SOLID)	0.2 - 1.5 mm ² , H07V-U

Resources

APPLICATION NOTES	eaton-codesys-sae-j1939-first-steps-v3-ap050019en-us
BROCHURES	eaton-starset-xc204-modular-plc-flyer-fl050016en-en eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-modular-plc-declaration-of-conformity-uk251194en.pdf eaton-modular-plc-declaration-of-conformity-eu250711en.pdf
DRAWINGS	eaton-unlock-usb-xcontrol-supplement-mz050017zu.pdf
INSTALLATION INSTRUCTIONS	IL050031ZU
MANUALS AND USER GUIDES	MN050005_EN eaton-xn300-slice-modules-mn050002en-us.pdf
MCAD MODEL	eaton-cpu-modules-mcad-drawings-xc-204-c20-002.dwg eaton-xc-204-c20-002-3d-model.stp
MULTIMEDIA	XC100, XC200, XC300 – Eaton's modular PLC ranges
PRODUCT NOTIFICATIONS	eaton-xc104-xc204-product-cybersecurity-guideline-mz050018en-us.pdf eaton-xc-104-xc-204-end-user-license-agreement-mz050020en-us.pdf

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



Eaton Corporation plc Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

© 2026 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

