

XC303 modular PLC, small PLC, programmable CODESYS 3, SD Slot, USB, 3x Ethernet, 2x CAN, RS485, four digital inputs/outputs



Powering Business Worldwide™

**Part no. XC-303-C32-002
191080**

General specifications		
Product name		Eaton XC Modular PLC
Part no.		XC-303-C32-002
EAN		4015081915668
Product Length/Depth		108 millimetre
Product height		65 millimetre
Product width		85 millimetre
Product weight		0.28 kilogram
Certifications		CE EN 61131 EAC UL File No.: E205091 UL listed cULus Listed
Product Tradename		XC
Product Type		Modular PLC
Product Sub Type		None
Catalog Notes		Protective devices must be installed directly at the inductive load in order to prevent interference.
Features & Functions		
Features		Short-circuit protection (digital outputs)
Functions		Redundancy Additional program memory possible
General information		
Connection type		Push-in spring-cage terminal, Connection design in TOP direction
Degree of protection		IP20
Memory capacity		512,000 kByte
Model		Modular
Mounting method		Rail mounting possible
Overvoltage category		II
Pollution degree		2
Protocol		MODBUS TCP/IP CAN Other bus systems EtherNet/IP
Rated operational voltage		24 V 160 V (terminations)
Voltage type		DC
Ambient conditions, mechanical		
Height of fall (IEC/EN 60068-2-32) - max		1 m
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
Climatic environmental conditions		
Air pressure		795 - 1080 hPa (operation)
Ambient operating temperature - min		-20 °C
Ambient operating temperature - max		55 °C
Ambient storage temperature - min		-40 °C
Ambient storage temperature - max		80 °C
Climatic proofing		Dry heat to IEC 60068-2-2 Damp heat, constant, to IEC 60068-2-3

Environmental conditions		Condensation: prevent with appropriate measures
Relative humidity		< 95 % (non-condensing)
Electro magnetic compatibility		
Air discharge		8 kV/4 kV, Air/contact discharge, ESD
Burst impulse		1 kV, Signal cable 2 kV, Supply cable
Electromagnetic fields		10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3) 1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3)
Emitted interference		40 dB (at 30 - 230 MHz, Class A, radiated, high frequency) 47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency)
Radiated RFI		10 V
Surge rating		0.5/0.5 kV, Supply cable, balanced/unbalanced, EMC 1 kV, Signal cable, unbalanced, EMC
Terminal capacities		
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
Stripping length (main cable)		10 mm
Gauge pin		A1 (according to IEC/EN 60947-1)
Insulating material group		I
Power supply		
Heat dissipation		0.05 W (Digital inputs according to EN61131-2 Type 1, per active channel) 0.1 W (Digital outputs, internal, per active channel)
Input voltage		0 - 5 V (Digital inputs, low level) 24 V DC (Digital inputs) 15 - 30 V (Digital inputs, high level)
Supply voltage at AC, 50 Hz - max		0 V AC
Output current		0.5 A
Supply voltage at DC - max		30 V DC
Supply voltage at AC, 50 Hz - min		0 V AC
Supply voltage at DC - min		18 V DC
Voltage dips		Voltage dips: 10 ms/Voltage fluctuations: Yes
Input/Output		
Delay time		200 µs, Digital outputs, Delay on signal change and resistive load, from High to Low signal 200 µs, Digital outputs, Delay on signal change and resistive load, from Low to High signal
Digital outputs		Note: Protective devices must be installed directly at the inductive load in order to prevent interference.
Input current		≤ 1.1 mA (Digital inputs, low level) 2 mA (Ie) ≥ 2.3 mA (Digital inputs, high level)
Input delay		300 µs (rising edge) 300 µs (falling edge)
Load current		Max. 6 A per 1.5 mm ² (cross-sectional area)
Number of channels		4, Digital Outputs
Number of inputs (analog)		0
Number of inputs (digital)		4
Number of outputs (analog)		0
Number of outputs (digital)		4
Number of relay outputs		5
Rated operational current (Ie)		2.8 A (supply input)
Utilization factor		100 % (# I _{Amax} = 2A)
Safety		
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Between Digital inputs: no

		Between Digital outputs: no
Design verification		
Static heat dissipation, non-current-dependent Pvs		8 W
Heat dissipation details		The max. heat dissipation is specified as the maximum power produced inside the device's housing.
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 CPU-module (EC000236)		
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Programmable logic control (SPS) / SPS - basic device (ecl@ss13-27-24-22-07 [AKE530019])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	18 - 30
Voltage type (supply voltage)		DC
Number of relay outputs		5
Max. number of time switches		1000
Model		Modular
Processing time (1K, binary operation)	ms	0.001
Number of HW-interfaces industrial Ethernet		3
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		1
Number of HW-interfaces USB		1
Number of HW-interfaces parallel		0
Number of HW-interfaces wireless		0
Number of HW-interfaces other		2
Number of analogue outputs		0
Number of analogue inputs		0
Number of digital inputs		4
Number of digital outputs		4
With optical interface		No
Supporting protocol for TCP/IP		Yes
Supporting protocol for PROFIBUS		No

Supporting protocol for CAN			Yes
Supporting protocol for EtherCAT			No
Supporting protocol for INTERBUS			No
Supporting protocol for ASI			No
Supporting protocol for KNX			No
Supporting protocol for Modbus			Yes
Supporting protocol for Data-Highway			No
Supporting protocol for DeviceNet			No
Supporting protocol for SUCONET			No
Supporting protocol for LON			No
Supporting protocol for PROFINET IO			No
Supporting protocol for PROFINET CBA			No
Supporting protocol for SERCOS			No
Supporting protocol for Foundation Fieldbus			No
Supporting protocol for EtherNet/IP			Yes
Supporting protocol for AS-Interface Safety at Work			No
Supporting protocol for DeviceNet Safety			No
Supporting protocol for INTERBUS-Safety			No
Supporting protocol for PROFIsafe			No
Supporting protocol for SafetyBUS p			No
Supporting protocol for other bus systems			Yes
Supporting protocol for DNP3			No
Supporting protocol for IEC 60870			No
Supporting protocol for IEC 61850 Ethernet			No
Radio standard Bluetooth			No
Radio standard WLAN 802.11			No
Radio standard GPRS			No
Radio standard GSM			No
Radio standard UMTS			No
Long-Term Evolution (LTE)			No
IO link master			No
System accessory			Yes
Redundancy			Yes
With display			No
Type of memory			RAM
Memory size		kByte	512000
Additional program memory possible			Yes
Rail mounting possible			Yes
Wall mounting/direct mounting			No
Front built-in possible			No
Rack-assembly possible			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
Certified for UL hazardous location class I			No
Certified for UL hazardous location class II			No
Certified for UL hazardous location class III			No
Certified for UL hazardous location division 1			No
Certified for UL hazardous location division 2			No
Certified for UL hazardous location group A (acetylene)			No
Certified for UL hazardous location group B (hydrogen)			No

Certified for UL hazardous location group C (ethylene)			No
Certified for UL hazardous location group D (propane)			No
Certified for UL hazardous location group E (metal dusts)			No
Certified for UL hazardous location group F (carbonaceous dusts)			No
Certified for UL hazardous location group G (non-conductive dusts)			No
Width		mm	85
Height		mm	65
Depth		mm	108