



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

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

<b>General specifications</b>		
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		cULus Listed UL listed UL File No.: E205091 EAC EN 61131 CE
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.
<b>Features &amp; Functions</b>		
Features		Short-circuit protection (digital outputs)
Functions		Additional program memory possible Redundancy
<b>General information</b>		
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		EtherNet/IP Other bus systems CAN TCP/IP MODBUS
Rated operational voltage		160 V (terminations) 24 V
Voltage type		DC
<b>Ambient conditions, mechanical</b>		
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
<b>Climatic environmental conditions</b>		
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		Damp heat, constant, to IEC 60068-2-3 Dry heat to IEC 60068-2-2

Environmental conditions		Condensation: prevent with appropriate measures
Relative humidity		< 95 % (non-condensing)
<b>Electro magnetic compatibility</b>		
Air discharge		8 kV/4 kV, Air/contact discharge, ESD
Burst impulse		2 kV, Supply cable 1 kV, Signal cable
Electromagnetic fields		3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3) 1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3)
Emitted interference		47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency) 40 dB (at 30 - 230 MHz, Class A, radiated, high frequency)
Radiated RFI		10 V
Surge rating		1 kV, Signal cable, unbalanced, EMC 0.5/0.5 kV, Supply cable, balanced/unbalanced, EMC
<b>Terminal capacities</b>		
Terminal capacity (AWG)		24 - 16
Terminal capacity (flexible with ferrule)		0.25 - 1.5 mm <sup>2</sup> , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 1.5 mm <sup>2</sup> , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)
Terminal capacity (flexible)		0.2 - 1.5 mm <sup>2</sup> , H 07V-K
Terminal capacity (solid)		0.2 - 1.5 mm <sup>2</sup> , H07V-U
Stripping length (main cable)		10 mm
Gauge pin		A1 (according to IEC/EN 60947-1)
Insulating material group		I
<b>Power supply</b>		
Heat dissipation		0.1 W (Digital outputs, internal, per active channel) 0.05 W (Digital inputs according to EN61131-2 Type 1, per active channel)
Input voltage		15 - 30 V (Digital inputs, high level) 24 V DC (Digital inputs) 0 - 5 V (Digital inputs, low 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
<b>Input/Output</b>		
Delay time		200 µs, Digital outputs, Delay on signal change and resistive load, from Low to High signal 200 µs, Digital outputs, Delay on signal change and resistive load, from High to Low signal
Digital outputs		Note: Protective devices must be installed directly at the inductive load in order to prevent interference.
Input current		≥ 2.3 mA (Digital inputs, high level) 2 mA (Ie) ≤ 1.1 mA (Digital inputs, low level)
Input delay		300 µs (falling edge) 300 µs (rising edge)
Load current		Max. 6 A per 1.5 mm <sup>2</sup> (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 <sub>Amax</sub> = 2A)
<b>Safety</b>		
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Between Digital outputs: no

		Between Digital inputs: no
<b>Design verification</b>		
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