

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 |