

# Specifications



## Eaton 199973

Eaton Modular PLC XC204, Micro PLC, programmable CODESYS 3, USB, Ethernet, XN300 IO expandable

### General specifications

|                             |                                                                            |
|-----------------------------|----------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton XC200 modular PLC                                                    |
| <b>CATALOG NUMBER</b>       | 199973                                                                     |
| <b>MODEL CODE</b>           | XC-204-C10-000                                                             |
| <b>EAN</b>                  | 4015081997619                                                              |
| <b>PRODUCT LENGTH/DEPTH</b> | 104.2 mm                                                                   |
| <b>PRODUCT HEIGHT</b>       | 29.3 mm                                                                    |
| <b>PRODUCT WIDTH</b>        | 80.3 mm                                                                    |
| <b>PRODUCT WEIGHT</b>       | 0.11 kg                                                                    |
| <b>CERTIFICATIONS</b>       | UL listed<br>EN 61131<br>EAC<br>UL File No.: E205091<br>CE<br>cULus Listed |

## Ambient conditions, mechanical

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

## Communication

|                   |                                                      |
|-------------------|------------------------------------------------------|
| <b>INTERFACES</b> | ETH<br>XN300                                         |
| <b>PROTOCOL</b>   | EtherNet/IP<br>MODBUS<br>Other bus systems<br>TCP/IP |

## Climatic environmental conditions

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

## Design verification

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility.                                                                                           |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility.                                                                                           |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.                                                                                       |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.6 MECHANICAL IMPACT</b>                                                         | Does not apply, since the entire switchgear needs to                                                                             |

|                                                                 |                                                                                                   |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
|                                                                 | be evaluated.                                                                                     |
| <b>10.2.7 INSCRIPTIONS</b>                                      | Meets the product standard's requirements.                                                        |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                  | Meets the product standard's requirements.                                                        |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.                                                        |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated.                                |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated.                                |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.                                                            |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.                                                            |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.                                                            |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.                                                            |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.                                                            |
| <b>HEAT DISSIPATION DETAILS</b>                                 | The max. heat dissipation is specified as the maximum power produced inside the device's housing. |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>       | 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

|                     |                                    |
|---------------------|------------------------------------|
| <b>FITTED WITH:</b> | XSOFT-CODESYS 3                    |
| <b>FUNCTIONS</b>    | Additional program memory possible |

## General information

|                             |                                                                  |
|-----------------------------|------------------------------------------------------------------|
| <b>CONNECTION TYPE</b>      | Push-in spring-cage terminal, Connection design in TOP direction |
| <b>DEGREE OF PROTECTION</b> | IP20                                                             |
| <b>MODEL</b>                | Modular                                                          |
| <b>MOUNTING METHOD</b>      | Rail mounting possible                                           |
| <b>OVERVOLTAGE CATEGORY</b> | II                                                               |
| <b>POLLUTION DEGREE</b>     | 2                                                                |
| <b>VOLTAGE TYPE</b>         | DC                                                               |

## Power supply

|                                   |                |
|-----------------------------------|----------------|
| <b>SUPPLY VOLTAGE AT DC - MAX</b> | 30 VDC         |
| <b>SUPPLY VOLTAGE AT DC - MIN</b> | 19.2 VDC       |
| <b>VOLTAGE DIPS</b>               | 20 ms<br>10 ms |

## System

|                        |               |
|------------------------|---------------|
| <b>MEMORY CAPACITY</b> | 512,000 kByte |
|------------------------|---------------|

## Input/Output

|                                       |                      |
|---------------------------------------|----------------------|
| <b>NUMBER OF CHANNELS</b>             | 0                    |
| <b>NUMBER OF INPUTS (ANALOG)</b>      | 0                    |
| <b>NUMBER OF INPUTS (DIGITAL)</b>     | 0                    |
| <b>NUMBER OF OUTPUTS (ANALOG)</b>     | 0                    |
| <b>NUMBER OF OUTPUTS (DIGITAL)</b>    | 0                    |
| <b>NUMBER OF RELAY OUTPUTS</b>        | 0                    |
| <b>RATED OPERATIONAL CURRENT (IE)</b> | 1.4 A (supply input) |

## Safety

|                                           |      |
|-------------------------------------------|------|
| <b>EXPLOSION SAFETY CATEGORY FOR DUST</b> | None |
| <b>EXPLOSION SAFETY CATEGORY FOR GAS</b>  | None |

## Terminal capacities

|                                                  |                                                                                                                                                                                                                                                 |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TERMINAL CAPACITY</b>                         | 0.25 - 0.75 mm <sup>2</sup> , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)                                                                                                                           |
| <b>TERMINAL CAPACITY (AWG)</b>                   | 24 - 16                                                                                                                                                                                                                                         |
| <b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b> | 0.25 - 1.5 mm <sup>2</sup> , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)<br>0.25 - 1.5 mm <sup>2</sup> , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) |
| <b>TERMINAL CAPACITY (FLEXIBLE)</b>              | 0.2 - 1.5 mm <sup>2</sup> , H 07V-K                                                                                                                                                                                                             |
| <b>TERMINAL CAPACITY (SOLID)</b>                 | 0.2 - 1.5 mm <sup>2</sup> , H07V-U                                                                                                                                                                                                              |

## Resources

|                            |                                                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APPLICATION NOTES          | <a href="#">eaton-codesys-sae-j1939-first-steps-v3-ap050019en-us</a>                                                                                                      |
| BROCHURES                  | <a href="#">eaton-starset-xc204-modular-plc-flyer-fl050016en-en</a><br><a href="#">eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf</a>                              |
| CATALOGUES                 | <a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a>                                                                                    |
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-modular-plc-declaration-of-conformity-eu250711en.pdf</a><br><a href="#">eaton-modular-plc-declaration-of-conformity-uk251194en.pdf</a>                  |
| DRAWINGS                   | <a href="#">eaton-unlock-usb-xcontrol-supplement-mz050017zu.pdf</a>                                                                                                       |
| INSTALLATION INSTRUCTIONS  | <a href="#">IL050031ZU</a>                                                                                                                                                |
| MANUALS AND USER GUIDES    | <a href="#">eaton-xn300-slice-modules-mn050002-en-us.pdf</a><br><a href="#">MN050005_EN</a>                                                                               |
| MCAD MODEL                 | <a href="#">eaton-cpu-modules-mcad-drawings-xc-204-c10-000.dwg</a><br><a href="#">eaton-xc-204-c10-000-3d-model.stp</a>                                                   |
| MULTIMEDIA                 | <a href="#">XC100, XC200, XC300 – Eaton's modular PLC ranges</a>                                                                                                          |
| PRODUCT NOTIFICATIONS      | <a href="#">eaton-xc-104-xc-204-end-user-license-agreement-mz050020-en-us.pdf</a><br><a href="#">eaton-xc104-xc204-product-cybersecurity-guideline-mz050018-en-us.pdf</a> |

|                 |
|-----------------|
| PROJECT NAME:   |
| PROJECT NUMBER: |
| PREPARED BY:    |
| DATE:           |



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