

# Specifications



Photo is representative

## Eaton 257902

Eaton XIOC Analog output module for XC100/200, 24 V DC, 4AO(2x0-10V, 2x4-20mA)

### General specifications

|                             |                                                                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton XIOC Output module                                                                                                                                                                                      |
| <b>CATALOG NUMBER</b>       | 257902                                                                                                                                                                                                        |
| <b>MODEL CODE</b>           | XIOC-2AO-U1-2AO-I2                                                                                                                                                                                            |
| <b>EAN</b>                  | 4015082579029                                                                                                                                                                                                 |
| <b>PRODUCT LENGTH/DEPTH</b> | 100 mm                                                                                                                                                                                                        |
| <b>PRODUCT HEIGHT</b>       | 95 mm                                                                                                                                                                                                         |
| <b>PRODUCT WIDTH</b>        | 30 mm                                                                                                                                                                                                         |
| <b>PRODUCT WEIGHT</b>       | 0.135 kg                                                                                                                                                                                                      |
| <b>CERTIFICATIONS</b>       | UL508<br>EN 50178<br>UL Category Control No.: NRAQ<br>UL File No.: E135462<br>CSA Class No.: 2252-01<br>UL<br>CE<br>CSA-C22.2 No. 0-M<br>CSA-C22.2 No. 142-M<br>CSA<br>CSA File No.: 012528<br>IEC/EN 61131-2 |

## Ambient conditions, mechanical

|                             |                                                |
|-----------------------------|------------------------------------------------|
| <b>IMPACT RESISTANCE</b>    | 500 g/□ 50 mm ±25 g                            |
| <b>SHOCK RESISTANCE</b>     | 15 g, Mechanical, Shock duration 11 ms         |
| <b>VIBRATION RESISTANCE</b> | 57 - 150 Hz ± 1.0 mm<br>10 - 57 Hz, ± 0.075 mm |

## Communication

|                        |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| <b>CONNECTION TYPE</b> | Plug-in terminal block, Outputs<br>2-core screened cable (≤ 20 m), Outputs |
|------------------------|----------------------------------------------------------------------------|

## Climatic environmental conditions

|                                            |        |
|--------------------------------------------|--------|
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b> | 55 °C  |
| <b>AMBIENT STORAGE TEMPERATURE - MAX</b>   | 70 °C  |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b> | 0 °C   |
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>   | -25 °C |

## 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>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 0 W                                                                |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W                                                                |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 0 W                                                                |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 0 A                                                                |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>            | 0.5 W                                                              |

## Electrical rating

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| <b>POWER LOSS</b>                 | Max. 0.5 W                          |
| <b>POWER SUPPLY</b>               | 24 V DC (-15/+20 %), approx. 150 mA |
| <b>RATED OPERATIONAL VOLTAGE</b>  | 24 (12) V DC                        |
| <b>SUPPLY VOLTAGE AT DC - MAX</b> | 24 VDC                              |

## Electro magnetic compatibility

|                             |                                        |
|-----------------------------|----------------------------------------|
| <b>EMITTED INTERFERENCE</b> | Class A (according to DIN/EN 55011/22) |
| <b>VOLTAGE DIPS</b>         | 10 ms                                  |

## Features & functions

|                                 |                                                                                                 |
|---------------------------------|-------------------------------------------------------------------------------------------------|
| <b>ELECTRIC CONNECTION TYPE</b> | Screw-/spring clamp connection                                                                  |
| <b>FEATURES</b>                 | Output, voltage<br>Output, current<br>Analog outputs configurable<br>Analog inputs configurable |

## Input/Output

|                                   |                                                          |
|-----------------------------------|----------------------------------------------------------|
| <b>CONVERSIONS</b>                | ≤ 5 ms, Inputs                                           |
| <b>LOAD RESISTANCE</b>            | ≤ 10 kΩ                                                  |
| <b>NUMBER OF INPUTS (ANALOG)</b>  | 0                                                        |
| <b>NUMBER OF OUTPUTS (ANALOG)</b> | 4                                                        |
| <b>OUTPUT</b>                     | 2 Outputs (0 - 10 V)<br>2 Outputs (4 - 20 mA)<br>Outputs |
| <b>OUTPUT CURRENT</b>             | 0.004 - 0.02 A                                           |
| <b>OUTPUT VOLTAGE</b>             | 0 - 10 V DC<br>2 (channels 0 and 1)                      |
| <b>TOTAL ERROR</b>                | ≤ ±1 % (of the full-scale value), Outputs                |

## Terminal capacities

|                  |                                                                                   |
|------------------|-----------------------------------------------------------------------------------|
| <b>TERMINALS</b> | Optionally, screw terminals or spring-loaded terminals for digital/analog modules |
|------------------|-----------------------------------------------------------------------------------|

## General information

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| <b>ADMISSIBLE RANGE</b>     | 20.4 – 28.8 V (11.8 – 14.4 V), Power supply        |
| <b>CURRENT CONSUMPTION</b>  | 100 mA, external, Outputs                          |
| <b>DEGREE OF PROTECTION</b> | IP20                                               |
| <b>OVERVOLTAGE CATEGORY</b> | II                                                 |
| <b>POLLUTION DEGREE</b>     | 2                                                  |
| <b>PROTECTION CLASS</b>     | 1                                                  |
| <b>REPETITION RATE</b>      | 1 s                                                |
| <b>RESIDUAL RIPPLE</b>      | ≤ 5 %                                              |
| <b>RESISTANCE</b>           | 0 - 500 Ω (external load, current output)          |
| <b>RESOLUTION</b>           | 12 Bit                                             |
| <b>TYPE</b>                 | Analog module                                      |
| <b>USED WITH</b>            | XC100/200 (expandable with up to 15 XI/OC modules) |

## Safety

|                                           |                                            |
|-------------------------------------------|--------------------------------------------|
| <b>EXPLOSION SAFETY CATEGORY FOR DUST</b> | None                                       |
| <b>EXPLOSION SAFETY CATEGORY FOR GAS</b>  | None                                       |
| <b>POTENTIAL ISOLATION</b>                | Circuit within each channel: Opto-isolated |

## Resources

|                  |                                                                                                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BROCHURES</b> | <a href="#">eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf</a><br><a href="#">Slice card modular I/O system for the machine building industry XN300 - brochure</a> |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                         |                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------|
| DRAWINGS                | <a href="#">eaton-electronic-devices-local-inputoutput-xioc-output-module-3d-drawing.eps</a> |
|                         | <a href="#">eaton-electronic-devices-in-out-module-xioc-output-module-dimensions.eps</a>     |
|                         | <a href="#">eaton-electronic-devices-dimensions-xioc-output-module-dimensions.eps</a>        |
| ECAD MODEL              | <a href="#">DA-CE-ETN.XIOC-2AO-U1-2AO-I2</a>                                                 |
| MANUALS AND USER GUIDES | <a href="#">MN05002002Z_EN</a>                                                               |
| MCAD MODEL              | <a href="#">DA-CS-xioc</a>                                                                   |
|                         | <a href="#">eaton-modular-i-o-system-mcad-drawings-xioc.dwg</a>                              |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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