



Digital output module XI/ON ECO, 24 V DC, 8DO

Part no. XNE-8DO-24VDC-0.5A-P
Catalog No. 140036

EL-Nummer (Norway) 0004520691

Delivery program

| | | | |
|-------------------|--|--|---|
| Function | | | XI/ON I/O modules |
| Function | | | XNE Slice module |
| Short Description | | | 8 Digital output, 24 V DC/0.5 A Positive switching |

Technical data

General

| | | | |
|---|--|-----|---|
| Standards | | | EN 61000-6-2 EN 61000-6-4 EN 61131-2 |
| Potential isolation | | | Yes, through optocoupler |
| Ambient temperature | | | |
| Ambient temperature, operation | | °C | 0 - +55 |
| Storage, transport | ø | °C | -25 - +85 |
| Relative humidity | | | |
| Relative humidity | | | 5 - 95 % (indoor), Level RH-2, no condensation (for storage at 45°C) |
| Ambient conditions, mechanical | | | |
| Degree of Protection | | | IP20 |
| Harmful gases | | ppm | SO ₂ : 10 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75 %,no condensation) |
| Vibration resistance, operating conditions | | | according to IEC/EN 60068-2-6 |
| Mechanical shock resistance | | g | according to IEC 60068-2-27 |
| Continuous shock resistance (IEC/EN 60068-2-29) | | | According to IEC 60068-2-29 |
| Drop and topple | | | According to IEC 60068-2-31, free fall according to IEC 60068-2-32 |
| Electromagnetic compatibility (EMC) | | | |
| ESD | Air/contact discharge | kV | EN 61000-4-2 |
| Electromagnetic fields | (0.08...1) / (1,4...2) / (2...2,7) GHz | V/m | EN 61100-4-2 |
| Burst | | | EN 61100-4-4 |
| Surge | | | EN 61100-4-5 |
| Radiated RFI | | V | EN 61100-4-6 |
| Emitted interference (radiated, high frequency) | (30...230 MHz) / (230...1000 MHz) | dB | EN 55016-2-3 |
| Voltage fluctuations/voltage dips | | | EN 61131-2 |
| Type test | | | to EN 61131-2 |
| Approvals | | | CE, cULus EAC |
| Other technical data (sheet catalogue) | | | Technical Data |

Terminations

| | | | |
|------------|--|--|-------------------------------------|
| Rated data | | | according to VDE 0611 Part 1/8.92 / |
|------------|--|--|-------------------------------------|

| | | | |
|--|-----------------|--|---------------------------------|
| | | | IEC/EN 60947-7-1 |
| Connection design in TOP direction | | | Push-In spring-cage terminals |
| Stripping length | mm | | 8 |
| Clamping range | | | max. 0.14 - 1.5 mm ² |
| Connectable conductors | | | |
| Outputs to EN 61131-2 | mm ² | | 0.25 - 1.5 |
| Reset after short-circuit rectified | mm ² | | 0.25 - 1.5 |
| Vibration resistance, operating conditions | mm ² | | 0.25 - 1.5 |
| "f" with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) | mm ² | | 0.25 - 0.75 |
| Connectable conductors | | | |
| "e" solid H07V-U | mm ² | | 0.25 - 1.5 |
| "f" flexible H 07V-K | mm ² | | 0.25 - 1.5 |
| "f" with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) | mm ² | | 0.25 - 1.5 |
| "f" with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) | mm ² | | 0.25 - 0.75 |
| Gauge pin IEC/EN 60947-1 | | | A1 |

Analog input modules

| | | | |
|--|-----------------|--------|--|
| Channels | | Number | 8 |
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |
| Connectable sensors | | | Resistive loads Inductive loads Lamp loads |

Analog output modules

| | | | |
|--|-----------------|--------|------------------------------|
| Channels | | Number | 8 |
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |
| Load resistance | | | |
| Resistive load | | Ω | ≥ 48 |
| Inductive load | | h | As per DC13 to IEC 60947-5-1 |

Digital outputs

| | | | |
|---|--------------------------------|--------|--|
| Channels | | Number | 8 |
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from the supply terminal (at load current = 0 mA) | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |
| Power loss | P | W | Normally 1.5 |
| Output voltage | | | |
| High level | U _H /U _A | | > U _L - 1 V DC |
| Output current | | A | |
| High level (rated value) | I _H | | 0.5 A |
| High level (permissible range) | I _H | A | < 1.0 |
| Delay on signal change and resistive load | | | |
| from Low to High level | | μs | 300 |
| From High to Low signal | | μs | 300 |
| Utilization factor | % | g | 100 |
| Can be connected | | | Resistive loads Inductive loads Lamp loads |
| Resistive load | | Ω | ≥ 48 |
| Inductive load | | h | As per DC13 to IEC 60947-5-1 |
| Lamp load | R _{LL} | W | ≤ 6 |
| Switching frequency | | | |
| With resistive load | f | Hz | 100 |

| | | | |
|-------------------------------------|----------------|----|------------------------------|
| with inductive load | | | As per DC13 to IEC 60947-5-1 |
| Switching frequency with lamp load | f | Hz | 10 |
| Outputs to EN 61131-2 | | | short-circuit proof |
| Reset after short-circuit rectified | I _i | | Automatic |

Digital inputs

| | | | |
|--|-----------------|--------|---------|
| Channels | | Number | 8 |
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |

Relay modules

| | | | |
|--|-----------------|----|--|
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |
| Power loss | P | W | Normally 1.5 |
| Can be connected | | | Resistive loads Inductive loads Lamp loads |
| Utilization factor | g | % | 100 |

Power supply module

| | | | |
|--|-----------------|----|---------|
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |
| Power loss | P | W | 1.5 |

Counter module

| | | | |
|--|-----------------|--------|---------|
| Channels | | Number | 8 |
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |

Digital outputs

| | | | |
|------------------------------------|-----------------|----|---------------------|
| Output current | | A | |
| High level (permissible range) | I _H | A | < 1.0 |
| High level (rated value) | I _H | | 0.5 A |
| Switching frequency | | | |
| Switching frequency with lamp load | f | Hz | 10 |
| Lamp load | R _{LL} | W | ≤ 6 |
| Short-circuit rating | | | short-circuit proof |

Interfaces

| | | | |
|--|-----------------|----|--------------|
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 3 |
| Rated current consumption from module bus | I _{MB} | mA | ≤ 15 |
| Power loss | P | W | Normally 1.5 |

Notes

The supply terminal (U_L) provides power for the module electronics and for the consumers at the outputs. The total current required for each module consists of the sum of all partial currents.

Part of the XI/ON module's electronics is supplied with module bus voltage (5 V DC), the other part through the supply terminal (U_L).

To increase the maximum output current to up to 1 A, two outputs can be connected in parallel.

| | | | |
|-----------------------|--|--|--|
| Note for table header | | | The rated current from supply terminal data apply at zero load current. Applies for resistive load: RLO < 1kΩ |
|-----------------------|--|--|--|

Design verification as per IEC/EN 61439

| | | | |
|--|------------------|---|---|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I _n | A | 0 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 0 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 0 |

| | | | |
|--|-------------------|----|--|
| Static heat dissipation, non-current-dependent | P _{vs} | W | 1.5 |
| Heat dissipation capacity | P _{diss} | W | 0 |
| Operating ambient temperature min. | | °C | 0 |
| Operating ambient temperature max. | | °C | 55 |
| Degree of Protection | | | IP20 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties | | | |
| 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 7.0

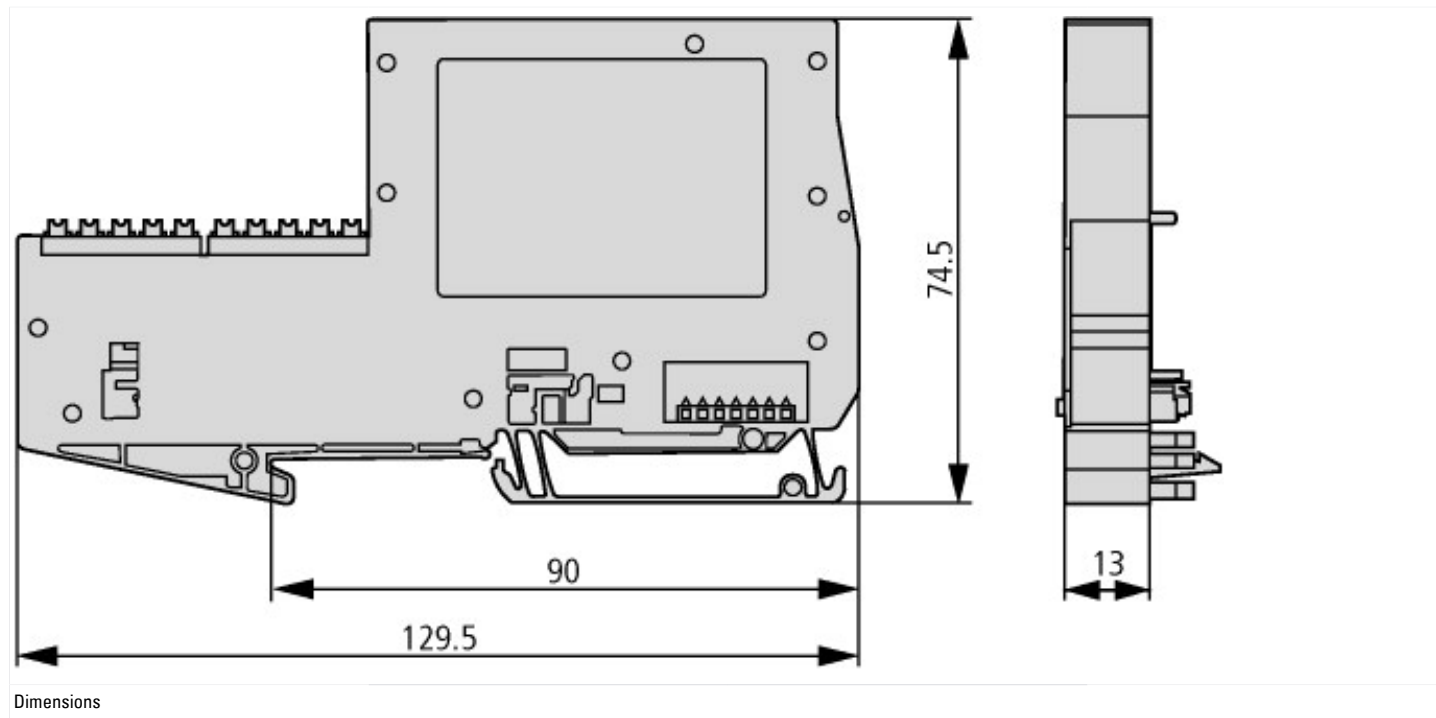
| | | | |
|---|--|----|---------|
| PLC's (EG000024) / Fieldbus, decentr. periphery - digital I/O module (EC001599) | | | |
| Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ecl@ss10.0.1-27-24-26-04 [BAA055014]) | | | |
| Supply voltage AC 50 Hz | | V | 0 - 0 |
| Supply voltage AC 60 Hz | | V | 0 - 0 |
| Supply voltage DC | | V | 18 - 30 |
| Voltage type of supply voltage | | | DC |
| Number of digital inputs | | | 0 |
| Number of digital outputs | | | 8 |
| Digital inputs configurable | | | No |
| Digital outputs configurable | | | No |
| Input current at signal 1 | | mA | 0 |
| Permitted voltage at input | | V | 0 - 0 |
| Type of voltage (input voltage) | | | DC |
| Type of digital output | | | Other |
| Output current | | A | 0.5 |
| Permitted voltage at output | | V | 0 - 29 |
| Type of output voltage | | | DC |
| Short-circuit protection, outputs available | | | Yes |
| Number of HW-interfaces industrial Ethernet | | | 0 |
| 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 | | 0 |
| Number of HW-interfaces serial TTY | | 0 |
| Number of HW-interfaces parallel | | 0 |
| Number of HW-interfaces Wireless | | 0 |
| Number of HW-interfaces USB | | 0 |
| Number of HW-interfaces other | | 1 |
| With optical interface | | No |
| Supporting protocol for TCP/IP | | No |
| Supporting protocol for PROFIBUS | | Yes |
| Supporting protocol for CAN | | Yes |
| Supporting protocol for INTERBUS | | No |
| Supporting protocol for ASI | | No |
| Supporting protocol for KNX | | No |
| Supporting protocol for MODBUS | | No |
| 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 | | No |
| 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 |
| Radio standard Bluetooth | | No |
| Radio standard WLAN 802.11 | | No |
| Radio standard GPRS | | No |
| Radio standard GSM | | No |
| Radio standard UMTS | | No |
| IO link master | | No |
| System accessory | | Yes |
| Degree of protection (IP) | | IP20 |
| Type of electric connection | | Screw-/spring clamp connection |
| Time delay at signal exchange | ms | 0 - 0.3 |
| Fieldbus connection over separate bus coupler possible | | Yes |
| Rail mounting possible | | Yes |
| Wall mounting/direct mounting | | No |
| Front build in possible | | No |
| Rack-assembly possible | | No |
| Suitable for safety functions | | No |
| Category according to EN 954-1 | | None |
| SIL according to IEC 61508 | | None |
| Performance level acc. 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 |
| Width | mm | 13 |
| Height | mm | 129.5 |
| Depth | mm | 74.5 |

Approvals

| | | |
|--------------------------------------|--|--|
| Product Standards | | UL 508; CSA-C22.2 No. 142; IEC/EN 6113-2; CE marking |
| UL File No. | | E205091 |
| UL Category Control No. | | NRAQ, NRAQ7 |
| CSA File No. | | UL report applies to both US and Canada |
| CSA Class No. | | 2252-01, 2252-81 |
| North America Certification | | UL recognized, certified by UL for use in Canada |
| Specially designed for North America | | No |
| Current Limiting Circuit-Breaker | | No |
| Degree of Protection | | IEC: IP20, UL/CSA Type: - |

Dimensions



Additional product information (links)

| | |
|--|---|
| Manual Digital XI/ON modules, power supply module MN05002010Z | |
| Benutzerhandbuch XI/ON-Module, Stromversorgungsmodul MN05002010Z - Deutsch | https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN05002010Z_DE.pdf |
| Manual Digital XI/ON modules, power supply module MN05002010Z - English | https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN05002010Z_EN.pdf |
| Technical Data | http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=14.111 |