



Serial interface module XI/ON, SSI

Part no. XN-1SSI
Catalog No. 140153
EL-Nummer (Norway) 0004520689

Delivery program

| | | | |
|-------------------|--|--|--|
| Function | | | XI/ON technology modules |
| Short Description | | | Connection of SSI encoders up to max. 32-bit. Transmission rate selectable up to 1MBit/s |
| For use with | | | XN-S4T-SBBS XN-S4S-SBBS |

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 | θ | °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 |
| Other technical data (sheet catalogue) | | | Technical Data |

Analog input modules

| | | | |
|--|----------------|----|---------|
| Rated voltage through supply terminal | U _L | | 24 V DC |
| Rated current consumption from supply terminal | I _L | mA | 25 |

| | | | |
|---|----------|----|-----------------------|
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |
| Diagnostics | | | 1 |
| Base modules | | | |
| without C connection, for sensor feeding | | | 4-wire XN-S4x-SBBS |

Analog output modules

| | | | |
|--|----------|----|-----------|
| Rated voltage through supply terminal | U_L | | 24 V DC |
| Rated current consumption from supply terminal | I_L | mA | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |

Digital outputs

| | | | |
|---|----------|----|------------|
| 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 | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |
| Power loss | P | W | Normally 1 |
| Number of diagnostic bytes | | | 1 |

Digital inputs

| | | | |
|--|----------|----|-----------|
| Rated voltage through supply terminal | U_L | | 24 V DC |
| Rated current consumption from supply terminal | I_L | mA | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |

Relay modules

| | | | |
|--|----------|----|------------|
| Rated voltage through supply terminal | U_L | | 24 V DC |
| Rated current consumption from supply terminal | I_L | mA | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |
| Power loss | P | W | Normally 1 |

Power supply module

| | | | |
|---|----------|-----------|-----------|
| Rated voltage through supply terminal | U_L | | 24 V DC |
| Rated current consumption from supply terminal | I_L | mA | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |
| Diagnostics | | | 1 |
| Insulation voltage | | | |
| between interface and module bus/system voltage | | V_{eff} | 500 |
| Power loss | P | W | 1 |

Counter module

| | | | |
|--|----------|----|-----------|
| Rated voltage through supply terminal | U_L | | 24 V DC |
| Rated current consumption from supply terminal | I_L | mA | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |

Measuring modes

| | | | |
|-------------|--|--|---|
| Diagnostics | | | 1 |
| parameters | | | 4 |

Base modules

| | | | |
|--|--|--|-----------------------|
| without C connection, for sensor feeding | | | 4-wire XN-S4x-SBBS |
|--|--|--|-----------------------|

Interfaces

| | | | |
|---|----------|-----------|--|
| Type | | | SSI |
| Rated voltage through supply terminal | U_L | | 24 V DC |
| Rated current consumption from supply terminal | I_L | mA | 25 |
| Rated current consumption from module bus | I_{MB} | mA | ≤ 50 |
| Power loss | P | W | Normally 1 |
| Transmission channels | | | CL, D |
| Basic unit | | | |
| RS422 | | | 4-wire, full-duplex (clock output/signal input) |
| Bit transfer rate | | | Max. 1 MHz (parameterizable), default settings: 500 kBit/s |
| Insulation voltage | | | |
| between interface and module bus/system voltage | | V_{eff} | 500 |
| between interface and field voltage | | V_{eff} | 500 |
| Conductor impedance | | Ω | 120 |

| | | | |
|--|--|---|---|
| Bus termination | | | Internal |
| Cable length RS232 | | m | max. 30 |
| Number of diagnostic bytes | | | 1 |
| Number of parameter bytes | | | 4 |
| Base modules | | | |
| without C connection, for sensor feeding | | | 4-wire XN-S4x-SBBS |
| Note for table header | | | The figures for nominal current from the supply terminal apply when there is no sensor/transmitter current. |

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 |
| 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

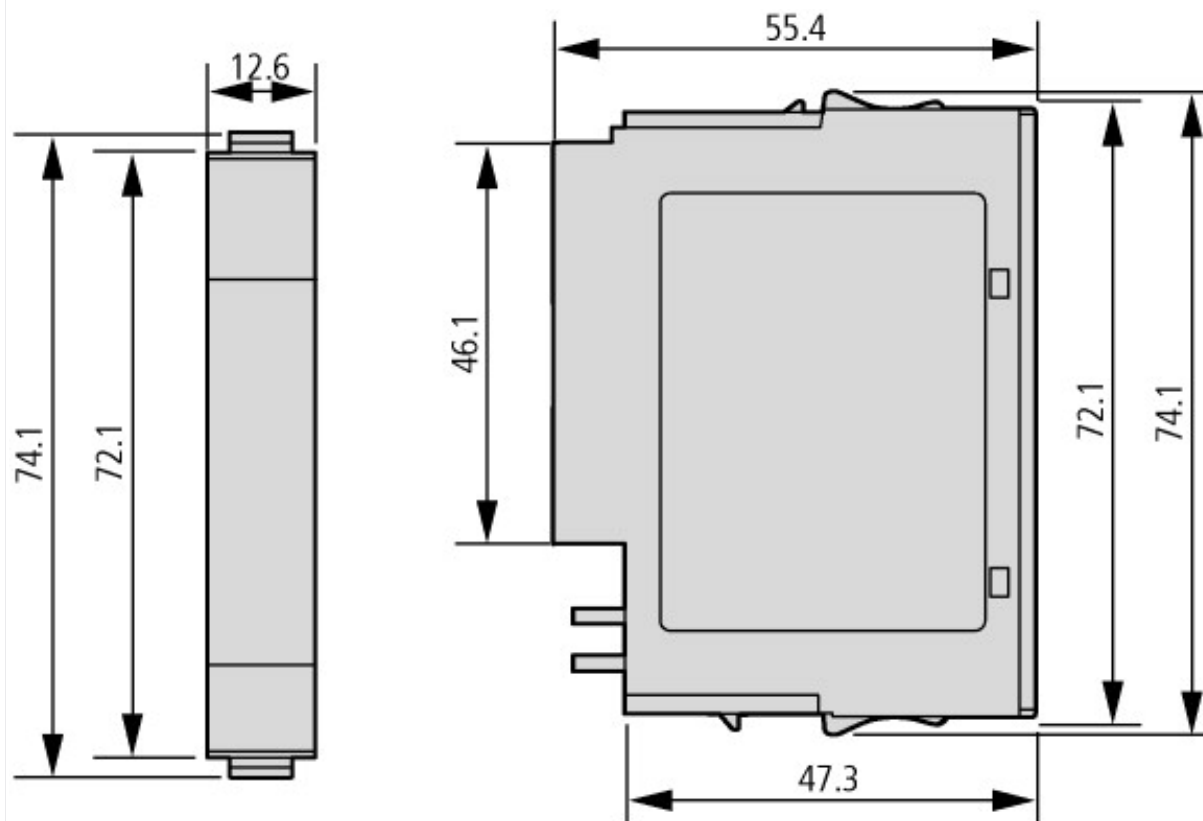
| | | | |
|--|--|---|---------|
| PLC's (EG000024) / Fieldbus, decentr. periphery - communication module (EC001604) | | | |
| Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - communications module (ecl@ss10.0.1-27-24-26-08 [BAA073013]) | | | |
| 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 |
| Supporting protocol for TCP/IP | | | No |

| | | | |
|--|--|----|------|
| Supporting protocol for PROFIBUS | | | No |
| Supporting protocol for CAN | | | No |
| 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 SERCOS | | | No |
| Supporting protocol for PROFINET IO | | | No |
| Supporting protocol for PROFINET CBA | | | 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 | | | No |
| 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 |
| With potential separation | | | Yes |
| 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 | | | |
| 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 | 12.6 |
| Height | | mm | 74.1 |
| Depth | | mm | 55.4 |

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 |

Dimensions



Dimensions

Assets (links)

Declaration of CE Conformity

00002416

Manuals

MN05002015Z_DE (German)

MN05002015Z_EN (English)

Additional product information (links)

User manual XI/ON technology module XN-1SSI MN05002015Z

Benutzerhandbuch XI/ON Technologiemodul XN-1SSI MN05002015Z - Deutsch ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002015Z_DE.pdf

User manual XI/ON technology module XN-1SSI MN05002015Z - English ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002015Z_EN.pdf

Technical Data <http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=14.111>