# DATASHEET - XN-322-2DMS-WM

**Weigh module, 2 DMS, 24 bits**

**Part no.**   **XN-322-2DMS-WM**
**178793**

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**Powering Business Worldwide™**

## General specifications

| | | |
|---|---|---|
| Product name | | Eaton XN-322 Weigh module |
| Part no. | | XN-322-2DMS-WM |
| EAN | | 7640130098275 |
| Product Length/Depth | | 104.2 millimetre |
| Product height | | 16.8 millimetre |
| Product width | | 80.3 millimetre |
| Product weight | | 0.061 kilogram |
| Certifications | | UL File No.: E135462<br>IEC/EN 61000-6-4<br>IEC/EN 61000-6-2<br>CULus<br>CE<br>IEC/EN 61131-2 |
| Product Tradename | | XN-322 |
| Product Type | | Weigh module |
| Product Sub Type | | None |
| Catalog Notes | | 4 / 4<br>The max. heat dissipation is specified as the maximum power produced inside the device's housing.<br>Voltage<br>Weigh module, 2DMS, 24Bit<br>Weigh slice module for connecting two Wheatstone bridges (strain gauge load cells). With a 24-bit resolution, readings will be available with an accuracy of ±0.035%.<br>Wheatstone bridge, configurable measurement range |

## Features & Functions

| | | |
|---|---|---|
| Features | | Fieldbus connection over separate bus coupler possible |
| Fitted with: | | Parameterizable Software input filter |

## General information

| | | |
|---|---|---|
| Current consumption | | 50 mA (typ.), for +5 V power supply (internal), Power supply - Input<br>34 mA (typ.), for +24 V, Power supply - Input |
| Degree of protection | | IP20<br>NEMA 1 |
| Mounting method | | Rail mounting possible |
| Number of channels | | 2, Analog Inputs |
| Overvoltage category | | III |
| Pollution degree | | 3 |
| Product category | | XN-322 weigh module |
| Resolution | | 24 Bit (Analog inputs) |
| Suitable for | | Weighting |
| Type | | XN300 technology module |
| Used with | | XN300<br>XN-312-… |
| Voltage type | | DC |

## Ambient conditions, mechanical

| | | |
|---|---|---|
| Height of fall (IEC/EN 60068-2-32) - max | | 1 m |
| Mounting position | | Horizontal |
| Shock resistance | | 15 g, Mechanical, Half-sinusoidal shock 11 ms, 18 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 | | 0 °C |
| Ambient operating temperature - max | | 60 °C |
| Ambient storage temperature - min | | -20 °C |

| | | |
|---|---|---|
| Ambient storage temperature - max | | 85 °C |
| Climatic proofing | | Dry heat to IEC 60068-2-2<br>Damp heat, constant, to IEC 60068-2-3 |
| Environmental conditions | | Condensation: prevent with appropriate measures |
| Relative humidity | | 0 - 95 % (non-condensing) |

## Electro magnetic compatibility

| | | |
|---|---|---|
| Air discharge | | 8 kV/4 kV, Air/contact discharge, ESD |
| Burst impulse | | 1 kV, Signal cable<br>2 kV, Supply cable |
| Electromagnetic fields | | 10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3)<br>1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3)<br>3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3) |
| Emitted interference | | 47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency)<br>40 dB (at 30 - 230 MHz, Class A, radiated, high frequency) |
| Radiated RFI | | 10 V |
| Surge rating | | 0.5/0.5 kV, Supply cable, balanced/unbalanced), EMC<br>1 kV, Signal cable, unbalanced, EMC |
| Voltage dips | | Voltage dips: 10 ms/Voltage fluctuations: Yes |

## Terminal capacities

| | | |
|---|---|---|
| Terminal capacity | | 0.2 - 1.5 mm², flexible without ferrule, H07V-K<br>0.25 - 1.5 mm², with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)<br>0.25 - 1.5 mm², with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)<br>0.2 - 1.5 mm², solid, H07V-U<br>24 - 16 AWG |
| Gauge pin | | A1 (according to IEC/EN 60947-1) |
| Stripping length (main cable) | | 10 mm |
| Insulating material group | | I |

## Electrical rating

| | | |
|---|---|---|
| Rated control supply voltage | | 5 V (X1, X2, Sensor/transmitter supply) |
| Rated operational current (Ie) | | Max. 66.3 A (supply output) |
| Rated operational voltage | | 160 V (terminations) |
| Supply voltage at AC, 50 Hz - min | | 0 V AC |
| Supply voltage at AC, 50 Hz - max | | 0 V AC |
| Supply voltage at DC - min | | 0 V DC |
| Supply voltage at DC - max | | 0 V DC |

## Communication

| | | |
|---|---|---|
| Connection | | Push-in spring-cage terminal (plug-in connection) in TOP direction |
| Protocol | | Other bus systems |

## Input/Output

| | | |
|---|---|---|
| Load current | | Not specified by plug manufacturer |

## Safety

| | | |
|---|---|---|
| Explosion safety category for dust | | None |
| Explosion safety category for gas | | None |
| Potential isolation | | Sensor/transmitter supply: no<br>Analog inputs: no |

## Design verification

| | | |
|---|---|---|
| Equipment heat dissipation, current-dependent Pvid | | 0 W |
| Heat dissipation capacity Pdiss | | 0 W |
| Heat dissipation per pole, current-dependent Pvid | | 0 W |
| Rated operational current for specified heat dissipation (In) | | 0 A |
| Static heat dissipation, non-current-dependent Pvs | | 1.295 W |
| 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) / Fieldbus, decentr. periphery - function-/technology module (EC001601)

Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - function-/technology module (ecl@ss13-27-24-26-05 [BAA066019])

| | | | |
|---|---|---|---|
| Supply voltage AC 50 Hz | | V | 0 - 0 |
| Supply voltage AC 60 Hz | | V | 0 - 0 |
| Supply voltage DC | | V | 0 - 0 |
| Voltage type (supply voltage) | | | DC |
| Number of functions | | | 0 |
| 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 | | | 2 |
| With optical interface | | | No |
| Supporting protocol for EtherCAT | | | No |
| 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 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 |
| Suitable for counting | | No |
| Suitable for weighing | | Yes |
| Suitable for temperature control | | No |
| Suitable for welding control | | No |
| Suitable for pressure control | | No |
| Suitable for NC | | No |
| Suitable for electronic positioning | | No |
| Suitable for CNC | | No |
| Suitable for SSI | | No |
| Suitable for incremental data detection | | No |
| Suitable for detection absolute value | | No |
| Suitable for flux controller | | No |
| Suitable for flux measurement | | No |
| Suitable for path controller | | No |
| Suitable for cam controller | | No |
| Suitable for flying saw | | No |
| Suitable for multi-axis control | | No |
| Suitable for single-axis controller | | No |
| Suitable for multi-axis positioning | | No |
| Suitable for single-axis positioning | | No |
| Function block restart blockage | | No |
| Function block automatic reset | | No |
| Contactor control function block | | No |
| Function block emergency stop | | No |
| Function block contactless working protection installation | | No |
| Function block affirm pushbutton | | No |
| Function block 2-hand switching | | No |
| Function block operating mode selection | | No |
| Function block access control | | No |
| Degree of protection (IP) | | IP20 |
| Degree of protection (NEMA) | | 1 |
| Fieldbus connection over separate bus coupler possible | | Yes |
| Frequency measurement | | No |
| 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 | 80.3 |
| Height | | mm | 16.8 |
| Depth | | mm | 104.2 |