Specifications







Eaton 178782

Eaton XN-312 Gateway to bus system CANopen

General specifications	
PRODUCT NAME	Eaton XN-312 Gateway
CATALOG NUMBER	178782
MODEL CODE	XN-312-GW-CAN
EAN	7640130098442
PRODUCT LENGTH/DEPTH	104.2 mm
PRODUCT HEIGHT	16.8 mm
PRODUCT WIDTH	80.3 mm
PRODUCT WEIGHT	0.061 kg
CERTIFICATIONS	CE DNV GL IEC/EN 61000-6-2 cULus IEC/EN 61131-2 UL File No.: E135462 IEC/EN 61000-6-4 UL508 Rated data for terminations according to IEC/EN 60947-7-1

Powering Business Worldwide

Ambient conditions, mechanical

DROP AND TOPPLE	According to IEC 60068-2-31, free fall according to IEC 60068-2-32
SHOCK RESISTANCE	Mechanical, According to IEC/EN 60068-2-27
VIBRATION RESISTANCE	According to IEC/EN 60068-2-6

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	85 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
RELATIVE HUMIDITY	5 - 95 % (non-condensing)

Communication

ADDRESSING	Address set via DIP switch
BUS TERMINATION	Via DIP switch, Networking
CONNECTION TYPE	Push-In spring-cage terminals, Field bus Push-In spring-cage terminals, Connection design in TOP direction
DATA TRANSFER RATE	Setting through DIP switch or automatically 1000 kBit/s, Networking 10 kBit/s, Networking 125 kBit/s, Networking 20 kBit/s, Networking 500 kBit/s, Networking 50 kBit/s, Networking 250 kBit/s, Networking 800 kBit/s, Networking
FIELD VOLTAGE	24 V DC (UL)
INTERFACES	CANopen®, Field bus connection Mini-USB Type B (Service interface)
PROTOCOL	CAN CANopen® Other bus systems

Design verification

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.
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.
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	2.4 W

Electrical rating

SUPPLY VOLTAGE	4.7 - 5.3 V DC
SUPPLY VOLTAGE AT DC - MAX	30 V
SUPPLY VOLTAGE AT DC - MIN	18 V

Electro magnetic compatibility

AIR DISCHARGE	According to EN 61131-2
BURST IMPULSE	According to IEC/EN 61131-2
CONTACT DISCHARGE	According to EN 61131-2
ELECTROMAGNETIC FIELDS	According to EN 61131-2
EMITTED INTERFERENCE	30 - 230 MHz (radiated, high frequency, according to EN 61131-2) 230 - 1000 MHz (radiated, high frequency, according to EN 61131-2)
RADIATED RFI	IEC/EN 61131-2
SURGE RATING	According to IEC/EN 61131-2
VOLTAGE DIPS	According to EN 61131-2 (Voltage fluctuations/voltage dips)

Features & functions

FEATURES	Fieldbus connection over separate bus coupler possible Fieldbus connection over separate bus coupler possible
FITTED WITH:	Potential separation

General information

ADMISSIBLE RANGE	18 - 30 V DC, Networking 19.2 - 30 V DC, Networking
CONFIGURATION	Maximum station configuration: 32 modules (XN-322) in slice design
DEGREE OF PROTECTION	IP20
MOUNTING METHOD	Rail mounting possible
RESIDUAL RIPPLE	According to EN 61131-2
TYPE	• CANopen XN-312 gateway for XN300 • Digital gateway for CANopen field bus in the form of an XN300 I/O system slice module • XN300 CANopen gateway for running XN300 slice modules on a CANopen field bus • XN300 gateway
USED WITH	XN-322-... XN300
VOLTAGE TYPE	DC

Safety

EXPLOSION SAFETY CATEGORY FOR DUST	None
EXPLOSION SAFETY CATEGORY FOR GAS	None
POTENTIAL ISOLATION	Yes

Terminal capacities

GAUGE PIN	A1 (according to IEC/EN 60947-1)
STRIPPING LENGTH (MAIN CABLE)	10 mm
TERMINAL CAPACITY	0.2 - 1.5 mm², flexible without ferrule, H07V-K 0.25 - 1.5 mm², with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.2 - 1.5 mm², solid, H07V-U 0.25 - 1.5 mm², with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)

Resources

BROCHURES	Slice card modular I/O system for the machine building industry XN300 - brochure eaton-xc300-modular-plc-brochure-br050008en-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-gateway-declaration-of-conformity-uk250934en.pdf eaton-gateway-declaration-of-conformity-eu250451en.pdf
DRAWINGS	eaton-modular-plc-xn-input-module-dimensions.eps eaton-general-xv-touch-panel-symbol.eps eaton-modular-plc-xn-gateway-3d-drawing.eps
ECAD MODEL	DA-CE-ETN.XN-312-GW-CAN
INSTALLATION INSTRUCTIONS	IL050017ZU
MANUALS AND USER GUIDES	eaton-xn300-slice-modules-mn050002-en-us.pdf eaton-xn-312-gw-can-canopen-gateway-mn050003-en-us.pdf
MCAD MODEL	eaton-communication-modules-mcad-drawings-xn-312-gw-can.dwg eaton-communication-modules-mcad-3d-models-xn-312-gw-can.stp
MULTIMEDIA	System solutions based on EtherCAT XC100, XC200, XC300 – Eaton's modular PLC ranges
PRODUCT NOTIFICATIONS	eaton-xn-312-gw-can-end-user-license-agreement-mz050022-en-us.pdf

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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