



Digital relay module; 4 digital relay outputs; N/O

**Part no. XN-322-4DO-RNO
178779**

General specifications	
Product name	Eaton XN-322 Relay module
Part no.	XN-322-4DO-RNO
EAN	7640130098411
Product Length/Depth	104.2 millimetre
Product height	29.3 millimetre
Product width	80.3 millimetre
Product weight	0.118 kilogram
Certifications	IEC/EN 61000-6-2 CE IEC/EN 61131-2 IEC/EN 61000-6-4 CULus UL File No.: E135462
Product Tradename	XN-322
Product Type	Relay module
Product Sub Type	None
Catalog Notes	The max. heat dissipation is specified as the maximum power produced inside the device's housing.
Features & Functions	
Electric connection type	Plug-in connection
Features	Fieldbus connection over separate bus coupler possible
General information	
Current consumption	50 mA (typ.), for +24 V, Power supply - Input 35 mA (typ.), for +5 V power supply (internal), Power supply - Input
Degree of protection	IP20
Mounting method	Rail mounting possible
Number of channels	4, Digital Outputs
Overvoltage category	III
Pollution degree	3
Product category	XN-322 digital relay module
Type	Digital I/O module with four relay outputs, each with an N/O for 230 V AC / 6 A or 24 V DC / 6 A. XN300 I/O slice module
Used with	XN300 XN-312-...
Voltage type	AC/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	-25 °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 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
Burst impulse		2 kV, Supply cable 1 kV, Signal cable
Contact discharge		4 kV
Electromagnetic fields		10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3) 1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3)
Emitted interference		40 dB (at 30 - 230 MHz, Class A, radiated, high frequency) 47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency)
Radiated RFI		10 V
Surge rating		1 kV, Signal cable, unbalanced, EMC 0.5/0.5 kV, Supply cable, balanced/unbalanced, EMC
Voltage dips		Voltage dips: 10 ms/Voltage fluctuations: Yes
Terminal capacities		
Terminal capacity		0.25 - 2.5 mm ² , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 2.5 mm ² , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 24 - 12 AWG 0.2 - 2.5 mm ² , solid, H07V-U 0.2 - 2.5 mm ² , flexible without ferrule, H07V-K
Gauge pin		A1 (according to IEC/EN 60947-1)
Stripping length (main cable)		10 mm
Insulating material group		I
Electrical rating		
Rated operational voltage		160 V (terminations)
Short-circuit protection		Yes, Short-circuit rating, Digital outputs
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		18 V DC
Supply voltage at DC - max		30 V DC
Communication		
Connection type		Push-in spring-cage terminal (plug-in connection), Connection design in TOP direction
Protocol		Other bus systems
Input/Output		
Delay time		≤ 10000 μs, Digital outputs, Delay on signal change and resistive load, from Low to High signal ≤ 10000 μs, Digital outputs, Delay on signal change and resistive load, from High to Low signal
Input current at signal 1		0 mA
Load current		Not specified by plug manufacturer
Load resistance		> 38.3 Ω (at 230 V DC) > 4 Ω (at 24 V DC)
Number of inputs (digital)		0
Number of outputs (digital)		4
Output		4 Digital Relay Outputs (N/O) Protective devices must be installed directly at the inductive load in order to prevent interference.
Output current		6 A
Output voltage		< 24 V DC (High level, digital outputs) 24 V DC / 230V AC (digital outputs) Low level = load dependent
Utilization factor		100 %
Safety		
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Between Digital outputs: yes Power supply, Input: yes, to Relay outputs
Design verification		
Equipment heat dissipation, current-dependent Pvid		1.188 W
Heat dissipation capacity Pdis		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		4.016 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 - digital I/O module (EC001599)		
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ec1@ss13-27-24-26-04 [BAA055019])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	18 - 30
Voltage type (supply voltage)		AC/DC
Number of digital inputs		0
Number of digital outputs		4
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)		AC/DC
Type of digital output		Relay
Output current	A	6
Permitted voltage at output	V	0 - 250
Type of output voltage		AC/DC
Short-circuit protection, outputs available		No
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 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
Degree of protection (IP)			IP20
Type of electric connection			Plug-in connection
Time delay at signal change		ms	1 - 10
Fieldbus connection over separate bus coupler possible			Yes
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	29.3
Depth		mm	104.2