

**Digital output module; 16 digital outputs short-circuit proof 24 V DC/0.5 A each; pulse-switching**

Powering Business Worldwide™

**Part no.**                    **XN-322-16DO-P05**  
**178787**

Product name	Eaton XN-322 Output module
Part no.	XN-322-16DO-P05
EAN	7640130098114
Product Length/Depth	104.2 millimetre
Product height	16.8 millimetre
Product width	80.3 millimetre
Product weight	0.061 kilogram
Certifications	IEC/EN 61131-2 UL File No.: E135462 IEC/EN 61000-6-4 CE CULus IEC/EN 61000-6-2
Product Tradename	XN-322
Product Type	Output module
Product Sub Type	None
Catalog Notes	The max. heat dissipation is specified as the maximum power produced inside the device's housing.
Electric connection type	Plug-in connection
Features	Fieldbus connection over separate bus coupler possible
Functions	Short-circuit protection, outputs available
Current consumption	None mA (typ.), for +24 V, Power supply - Input 45 mA (typ.), for +5 V power supply (internal), Power supply - Input
Degree of protection	IP20
Mounting method	Rail mounting possible
Number of channels	16, Digital Outputs
Overvoltage category	III
Pollution degree	3
Product category	XN-322 digital output module
Type	Digital I/O module with sixteen 24 V DC / 0.5 A short-circuit proof outputs, featuring undervoltage diagnostics for the two power supply rails. XN300 I/O slice module
Used with	XN-312-... XN300
Voltage type	DC
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
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 Damp heat, constant, to IEC 60068-2-3
Environmental conditions	Condensation: prevent with appropriate measures
Relative humidity	0 - 95 % (non-condensing)

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		47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency) 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 1 kV, Signal cable, unbalanced, EMC
Voltage dips		Voltage dips: 10 ms/Voltage fluctuations: Yes
Terminal capacity		0.25 - 1.5 mm <sup>2</sup> , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.2 - 1.5 mm <sup>2</sup> , solid, H07V-U 0.25 - 1.5 mm <sup>2</sup> , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.2 - 1.5 mm <sup>2</sup> , flexible without ferrule, H07V-K 24 - 16 AWG
Gauge pin		A1 (according to IEC/EN 60947-1)
Stripping length (main cable)		10 mm
Insulating material group		I
Rated operational current (I <sub>e</sub> )		4 A (supply input)
Rated operational voltage		24 V (terminal + 2) 160 V (terminations) 24 V (terminal +1)
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
Connection type		Push-in spring-cage terminal (plug-in connection), Connection design in TOP direction
Protocol		Other bus systems
Delay time		< 100 μs, Digital outputs, Delay on signal change and resistive load, from Low to High signal < 100 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		> 48 Ω
Number of inputs (digital)		0
Number of outputs (digital)		16
Output		16 Digital Outputs (short-circuit proof, 24 V DC, 0.5 A, pulse-switching) Protective devices must be installed directly at the inductive load in order to prevent interference.
Output current		0.5 A < 0.5 mA (low level) ≤ 500 mA (high level, Digital outputs)
Output voltage		24 V DC (digital outputs) < 24 V DC (High level, digital outputs) < 1 V DC (Low level, digital outputs)
Utilization factor		100 % (# I <sub>Amax</sub> = 8A)
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Power supply, Input: no Between Digital outputs: no

Equipment heat dissipation, current-dependent Pvid		0.25 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		2.745 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 8.0

Programmable logic controllers PLC (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		16
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		Transistor
Output current	A	0.5
Permitted voltage at output	V	0 - 30
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		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 Wi-Fi 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 exchange	ms	0.05 - 0.1
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
Width	mm	80.3
Height	mm	16.8
Depth	mm	104.2