DATASHEET - XN-16DO-24VDC-0.5A-P

Digital output block module XI/ON, 24 V DC, 16DO, 0.5A, pulse-switching

Part no.	**XN-16DO-24VDC-0.5A-P**
	140141
EL Number (Norway)	**4520659**

General specifications

Product name	Eaton XN Output block module
Part no.	XN-16DO-24VDC-0.5A-P
EAN	7640130120020
Product Length/Depth	100.8 millimetre
Product height	55.4 millimetre
Product width	74.1 millimetre
Product weight	0.103 kilogram
Certifications	IEC/EN 6113-2 UL File No.: E205091 CSA-C22.2 No. 142 UL Recognized UL report applies to both US and Canada CE Certified by UL for use in Canada CSA Class No.: 2252-01, 2252-81 CULus UL 508 UL Category Control No.: NRAQ, NRAQ7 IEC/EN 61000-6-4 IEC/EN 61000-6-2 IEC/EN 61131-2
Product Tradename	XN
Product Type	Output block module
Product Sub Type	None

Features & Functions

Electric connection type	Screw-/spring clamp connection
Features	Fieldbus connection over separate bus coupler possible
Fitted with:	Connectable sensors for lamp loads Connectable sensors for inductive loads Connectable sensors for resistive loads
Functions	Positive switching Diagnosis function Short-circuit protection, outputs available

General information

Current consumption	120 mA, from module bus, Analog input modules 30 mA, from supply terminal
Degree of protection	IP20
Mounting method	Rail mounting possible
Number of channels	16
Product category	XN Block module
Suitable for	Base modules with C-connection: 2-wire/3-wire
Switching frequency	100 Hz, with resistive load RLO < 1 kΩ, Digital outputs 100 Hz, with resistive load, Digital outputs
Type	XI/ON I/O module
Used with	XN-B3S-SBC XN-B3T-SBC
Voltage type	DC

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 Continuous according to IEC/EN 60068-2-29
Vibration resistance	According to IEC/EN 60068-2-6

Climatic environmental conditions

Ambient operating temperature - min	0 °C
Ambient operating temperature - max	55 °C

Ambient storage temperature - min	-25 °C
Ambient storage temperature - max	85 °C
Environmental conditions	Harmful gases - SO2: 10 ppm (relative humidity < 75%, no condensation) Harmful gases - H2S: 1 ppm (relative humidity < 75%, no condensation)
Relative humidity	5 - 95 % (indoor, Level RH-2, non-condensing for storage at 45°C)
Electro magnetic compatibility	
Air discharge	According to EN 61100-4-2
Burst impulse	According to IEC/EN 61000-4-4
Contact discharge	According to EN 61100-4-2
Electromagnetic fields	According to IEC EN 61100-4-2
Emitted interference	30 - 230 MHz (radiated, high frequency, according to EN 55016-2-3) 230 - 1000 MHz (radiated, high frequency, according to EN 55016-2-3)
Radiated RFI	IEC/EN 61100-4-6
Surge rating	According to IEC/EN 61000-4-5 Level 4
Voltage dips	According to EN 61131-2 (Voltage fluctuations/voltage dips)
Electrical rating	
Power loss	4 W
Rated operational voltage	24 V DC (supply terminal)
Short-circuit protection	Short-circuit proof, Short-circuit rating, Digital outputs
Short-circuit release	Automatic, Ii, Reset after short-circuit rectified, 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	
Interfaces	Terminating resistor: > 48 Ω
Number of bytes	4 diagnostic bytes
Protocol	Other bus systems
Input/Output	
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
Input voltage	Min. L+ 1 V (Digital inputs, high level)
Lamp load	≤ 3 W (at RLL)
Load resistance	1.2 h (inductive load) ≥ 48 Ω
Number of inputs (digital)	0
Number of outputs (digital)	16
Output	16 Digital Outputs (24 V DC, 0.5 A)
Output current	8 A, Module total current, Digital outputs < 0.6 A (high level, permissible range) 0.5 A
Output voltage	23 V DC (Digital outputs)
Utilization factor	100 %
Safety	
Explosion safety category for dust	None
Explosion safety category for gas	None
Potential isolation	Through optocoupler: yes
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	4 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 (ecl@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)		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 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		Screw-/spring clamp connection
Time delay at signal change	ms	0.1 - 0.3
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	74.1

Height		mm	55.4
Depth		mm	100.8

© 04/2023 by Eaton Industries GmbH