Analog input module; 8 current inputs 0/4 up to 20 mA



Part no. XN-322-8AI-I 179288

General specifications	
Product name	Eaton XN-322 Accessory Input module
Part no.	XN-322-8AI-I
EAN	7640130098381
Product Length/Depth	104.2 millimetre
Product height	16.8 millimetre
Product width	80.3 millimetre
Product weight	0.056 kilogram
Certifications	CULus UL File No.: E135462 IEC/EN 61000-6-4 CE IEC/EN 61131-2 IEC/EN 61000-6-2
Product Tradename	XN-322
Product Type	Accessory
Product Sub Type	Input module
Catalog Notes	The max. heat dissipation is specified as the maximum power produced inside the device's housing.
Features & Functions	
Current measurement	$50~\Omega$ typ., input resistance 0 - $20~\text{mA}$ 4 - $20~\text{mA}$
Electric connection type	Plug-in connection
Features	Fieldbus connection over separate bus coupler possible Analog outputs configurable Input, current Analog inputs configurable Input signal, configurable
Fitted with:	Parameterizable Software input filter 1 kHz, third-order low-pass input filter
Value representation	SIGNED16, Current measurement
General information	
Current consumption	30 mA (typ.), for +24 V, Power supply - Input 50 mA (typ.), for +5 V power supply (internal), Power supply - Input
Degree of protection	IP20 NEMA 1
Limit frequency	1 kHz (third-order low-pass filter)
Mounting method	Rail mounting possible
Number of channels	8, Analog Inputs
Overvoltage category	III
Pollution degree	3
Product category	XN-322 analog input module
Resolution	16 Bit (Analog inputs)
Туре	XN300 I/O slice module
Used with	XN-312 XN300
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)
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Ambient operating temperature - min	0 °C
Ambient operating temperature - max	0°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	0.2 - 1.5 mm², flexible without ferrule, H07V-K 0.25 - 1.5 mm², with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 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 24 - 16 AWG
Gauge pin	A1 (according to IEC/EN 60947-1)
Stripping length (main cable)	10 mm
Insulating material group	I I
Electrical rating	
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	18 V DC
Supply voltage at DC - max	30 V DC
Communication	
Connection type	2 conductors, Current measurement Push-in spring-cage terminal (plug-in connection), Connection design in TOP direction
Protocol	Other bus systems
Input/Output	
Accuracy	$\pm0.5\%$ of full scale, Current measurement
Input	8 Analog current inputs (0/4 - 20 mA)
Input current	Max. 100 mA
Load current	Not specified by plug manufacturer
Measured variables	Current
Number of inputs (analog)	8
Number of outputs (analog)	0
Value refresh time/cycle time	Min. 1 / 1 ms (per channel / all channels), Analog Inputs
Safety	
Explosion safety category for dust	None
Explosion safety category for gas	None
Potential isolation	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	0.97 W
Rated operational current for specified heat dissipation (In)	0 A
Static heat dissipation, non-current-dependent Pvs	1.485 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 - analogue I/O module (EC001596)

Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - analogue I/O module (ecl@ss13-27-24-26-01 [BAA061019])

Supply voltage AC 60 Hz V 0 - 0 Supply voltage DC V 18 - 30 Voltage type (supply voltage) DC Power consumption W 0.6 Input, current W 70 Input, voltage No No Input, resistor No No Input, resistance thermometer No No Input, signal, configurable No No Resolution of the analogue inputs Bit 16 Output, voltage No No Resolution of the analogue outputs No No Number of analogue	module (ecl@ss13-27-24-26-01 [BAA061019])		
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Rail mounting possible Wall mounting/direct mounting No Front built-in possible No Rack-assembly possible No Suitable for safety functions No SIL according to IEC 61508 Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) Yes No No No No No No No No No N	Type of electric connection	
Wall mounting/direct mounting Front built-in possible Rack-assembly possible No Suitable for safety functions SIL according to IEC 61508 Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No No		
Front built-in possible Rack-assembly possible No Suitable for safety functions No SIL according to IEC 61508 Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No No	Rail mounting possible	Yes
Rack-assembly possible No Suitable for safety functions No SIL according to IEC 61508 Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No	Wall mounting/direct mounting	No
Suitable for safety functions No SIL according to IEC 61508 Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No	Front built-in possible	No
SIL according to IEC 61508 Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No	Rack-assembly possible	No
Performance level according to EN ISO 13849-1 Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No	Suitable for safety functions	No
Appendant operation agent (Ex ia) Appendant operation agent (Ex ib) No		None
Appendant operation agent (Ex ib)	Performance level according to EN ISO 13849-1	None
		No
Explosion safety category for gas None	Appendant operation agent (Ex ib)	No
	Explosion safety category for gas	None
Explosion safety category for dust None	Explosion safety category for dust	None
Certified for UL hazardous location class I	Certified for UL hazardous location class I	No
Certified for UL hazardous location class II	Certified for UL hazardous location class II	No
Certified for UL hazardous location class III No	Certified for UL hazardous location class III	No
Certified for UL hazardous location division 1	Certified for UL hazardous location division 1	No
Certified for UL hazardous location division 2	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	mn	nm 80.3
Height	mn	nm 16.8
Depth	mn	nm 104.2