

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 Ω typ., input resistance 0 - 20 mA 4 - 20 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
Oversupply category	III
Pollution degree	3
Product category	XN-322 analog input module
Resolution	16 Bit (Analog inputs)
Type	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)

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)
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 mm ² , flexible without ferrule, H07V-K 0.25 - 1.5 mm ² , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 1.5 mm ² , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.2 - 1.5 mm ² , 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
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	± 0.5 % 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 50 Hz	V	0 - 0
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		Yes
Input, voltage		No
Input, resistor		No
Input, resistance thermometer		No
Input, thermocouple		No
Input signal, configurable		Yes
Resolution of the analogue inputs	Bit	16
Output, current		No
Output, voltage		No
Output signal configurable		No
Resolution of the analogue outputs	Bit	0
Number of analogue inputs		8
Number of analogue outputs		0
Analogue inputs configurable		Yes
Analogue outputs configurable		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
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
Degree of protection (NEMA)	1
Type of electric connection	Plug-in connection
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	16.8
Depth	mm	104.2