

Analog input card XI/ON ECO, 24 V DC, 8AI(voltage, current)/4(PT, ni, R)

Part no. XNE-8AI-U/I-4PT/NI
Article no. 140037

Powering Business Worldwide

Delivery programme

			I/O modules
			Analog input modules
Function			XNE Slice module
Short Description			8 Analog input U/I or 4 Analog inputs PT/NI -10/0 to +10 V DC 0/4 to 20 mA Acquisition of normalized signals for temperature measurement Connection of sensor types Pt100, Pt200, Pt500, Pt1000 and Ni100, Ni1000, NI1000TK5000 in 2- or 3-wire circuit

Technical data

General

Standards			EN 61000-6-2 EN 61000-6-4 EN 61131-2
Potential isolation			Yes, through optocoupler
Ambient temperature		°C	
Ambient temperature, operation		°C	0 - +55
Storage, transport	ϑ	°C	-25 - +85
Relative humidity		%	
Relative humidity			5 - 95 % (indoor), Level RH-2, no condensation (for storage at 45°C)
Ambient conditions, mechanical			
Degree of Protection			IP20
Harmful gases		ppm	SO_2: 10 (rel. humidity < 75%, no condensation) H_2S: 1.0 (rel. humidity < 75 %,no condensation)
Vibration resistance, operating conditions			according to IEC/EN 60068-2-6
Mechanical shock resistance		g	according to IEC 60068-2-27
Continuous shock resistance (IEC/EN 60068-2-29)			According to IEC 60068-2-29
Drop and topple			According to IEC 60068-2-31, free fall according to IEC 60068-2-32
Electromagnetic compatibility (EMC)			
ESD			EN 61100-4-2
Electromagnetic fields			EN 61100-4-2
Burst			EN 61100-4-4
Surge			EN 61100-4-5
HF unsymmetric			EN 61100-4-6
Emitted interference (radiated, high frequency)			EN 55016-2-3
Voltage fluctuations			EN 61131-2
Type test			to EN 61131-2
Approvals			CE, cULus
Other technical data (sheet catalogue)			Technical Data

Terminations

Rated data			according to VDE 0611 Part 1/8.92 / IEC/EN 60947-7-1
Connection design in TOP direction			Push-In spring-cage terminals
Stripping length		mm	8
Clamping range			max. 0.14 - 1.5 mm^2
Connectable conductors			
"e" solid H07V-U		mm^2	0.25 - 1.5
"f" flexible H 07V-K		mm^2	0.25 - 1.5
"f" with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm^2	0.25 - 1.5
"f" with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm^2	0.25 - 0.75
Connectable conductors			
"e" solid H07V-U		mm^2	0.25 - 1.5
"f" flexible H 07V-K		mm^2	0.25 - 1.5
"f" with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm^2	0.25 - 1.5
"f" with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)		mm^2	0.25 - 0.75
Gauge pin IEC/EN 60947-1			A1

Analog input modules

Measured variables			Voltage, current, temperature (PT, NI), resistance R
Channels		Number	8 (U/I), 4 (PT/NI/R)
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	⎓ 30
Heat dissipation		W	< 1.5
Input current		mA	0/4 - 20
Maximum input current		mA	40 (Max. input voltage: < 17 V)
Input voltage			-10/0 to +10 V DC
Maximum input voltage		V DC	± 20
Input impedance			< 62 Ω/⎓ 200 kΩ
Limit frequency (-3 db)		Hz	1.5
Offset error		%	0.1
Basic error limit at 23 °C		%	0.2
Temperature coefficient			200 ppm/°C of full-scale value
Measured value representation			16-bit signed integer 12-bit full range, flush left Standard/extended range/PA (NE43)
Connectable sensors			Platinum sensors: Pt100, Pt500, Pt1000 (as per IEC 751) Nickel sensors: Ni100, Ni1000 (as per DIN 43760)
Temperature range		°C, (°F)	PT: -200 - +850 (-328 - +1562)/-200 - +150 (-328 - +302) Ni: -60 - +250 (-76 - +482)/-60 - +150 (-76 - +302)
Diagnostics			Yes
Base modules			
without C connection			Already built in

Analog output modules

Measured variables			Voltage, current, temperature (PT, NI), resistance R
Channels		Number	8 (U/I), 4 (PT/NI/R)
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	⎓ 30
Heat dissipation		W	< 1.5
Offset error		%	0.1
Basic error limit at 23 °C		%	0.2
Temperature coefficient			200 ppm/°C of full-scale value

Measured value representation			16-bit signed integer 12-bit full range, flush left Standard/extended range/PA (NE43)
Base modules			
without C connection			Already built in

Digital output modules

Channels		Number	8 (U/I), 4 (PT/NI/R)
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from the supply terminal (at load current = 0 mA)	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	30
Can be connected			Platinum sensors: Pt100, Pt500, Pt1000 (as per IEC 751) Nickel sensors: Ni100, Ni1000 (as per DIN 43760)
Diagnostics			Yes

Digital input modules

Channels		Number	8 (U/I), 4 (PT/NI/R)
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	30
Heat dissipation		W	< 1.5
Base modules			
without C connection			Already built in

Relay modules

Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	30
Can be connected			Platinum sensors: Pt100, Pt500, Pt1000 (as per IEC 751) Nickel sensors: Ni100, Ni1000 (as per DIN 43760)
Base modules			
without C connection			Already built in

Power supply module

Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	30

Counter module

Channels		Number	8 (U/I), 4 (PT/NI/R)
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	30
Heat dissipation		W	< 1.5

Measuring modes

Temperature coefficient			200 ppm/°C of full-scale value

Interfaces

Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	35
Rated current consumption from module bus	I_{MB}	mA	30

Data for design verification according to IEC/EN 61439

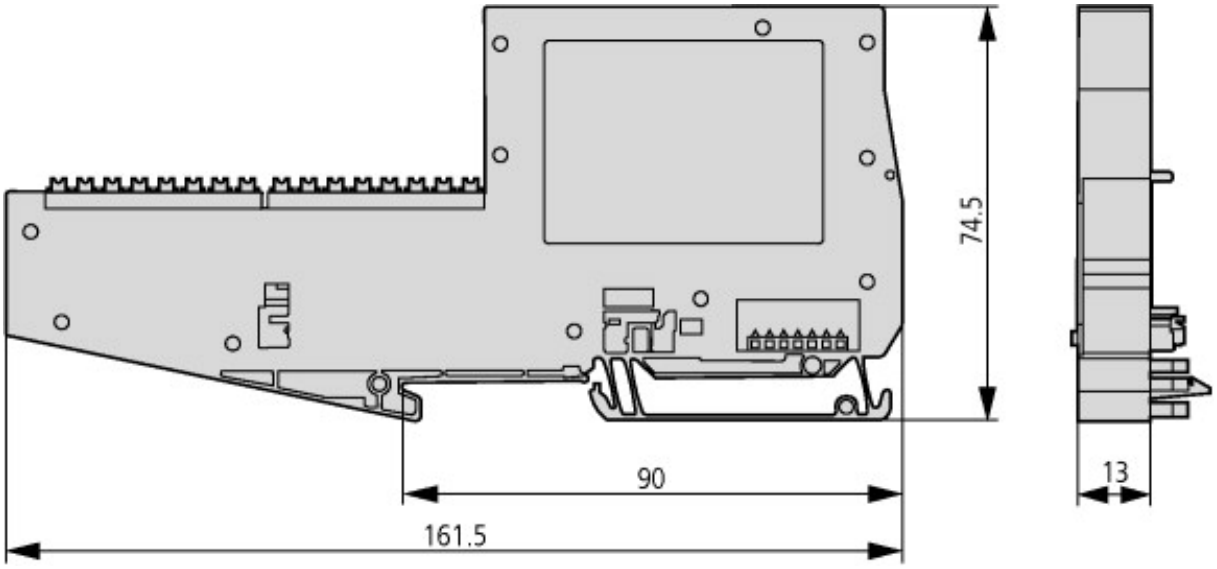
Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	1.5
Heat dissipation capacity	P_{diss}	W	0
IEC/EN 61439 design verification			

10.2 Strength of materials and parts	
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties	
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.

Approvals

Product Standards	IEC/EN 6113-2; CE marking
North America Certification	Request filed for UL and CSA
Specially designed for North America	No
Current Limiting Circuit-Breaker	No
Degree of Protection	IEC: IP20, UL/CSA Type: -

Dimensions



Dimensions

Additional product information (links)

MN05002011Z Manual XI/ON analog I/O modules

MN05002011Z Handbuch XI/ON Analoge I/O-Module - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002011Z_DE.pdf

MN05002011Z Manual XI/ON analog I/O modules - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002011Z_EN.pdf
Technical Data	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=14.111

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