Digital input card XI/ON ECO, 24 V DC, 8DI

Part no.	**XNE-8DI-24VDC-P**
Article no.	**140035**

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Powering Business Worldwide™

Delivery program

Function		I/O modules
		Digital input modules
Function		XNE Slice module
Short Description		8 Digital inputs, 24 V DC Positive switching

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Technical data

General

Standards			EN 61000-6-2 EN 61000-6-4 EN 61131-2
Potential isolation			Yes, through optocoupler
Ambient temperature			
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	Air/contact discharge	kV	EN 61100-4-2
Electromagnetic fields	(0.08…1) / (1,4…2) / (2… 2,7) GHz	V/m	EN 61100-4-2
Burst			EN 61100-4-4
Surge			EN 61100-4-5
Radiated RFI		V	EN 61100-4-6
Emitted interference (radiated, high frequency)	(30…230 MHz) / (230…1000 MHz)	dB	EN 55016-2-3
Voltage fluctuations/voltage dips			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

Channels		Number	8
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	1.5
Rated current consumption from module bus	I_{MB}	mA	⫤ 15
Heat dissipation		W	< 1.5
Base modules			
without C connection			Already built in

Analog output modules

Channels		Number	8
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	1.5
Rated current consumption from module bus	I_{MB}	mA	⫤ 15
Heat dissipation		W	< 1.5
Base modules			
without C connection			Already built in

Digital outputs

Channels		Number	8
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	1.5
Rated current consumption from module bus	I_{MB}	mA	⫤ 15

Digital inputs

Channels		Number	8
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	I_L	mA	1.5
Rated current consumption from module bus	I_{MB}	mA	⫤ 15
Rated insulation voltage	U_i	V AC	500
Heat dissipation		W	< 1.5
Input voltage			
Nominal input voltage	U_e	V DC	24 V DC
Low level	$U_e L$	V	$-U_L$ - +5 V
High level	$U_e H$	V	11 - 30 V
Input current			
Low level/active level	$I_e L$	mA	-1 mA - 1.5 mA
High level/active level	$I_e H$	mA	2 mA - 5 mA
Input delay			

t$_{Rising\ edge}$		μs	< 100
t$_{Falling\ edge}$		μs	< 200
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	1.5
Rated current consumption from module bus	I$_{MB}$	mA	≦ 15
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	1.5
Rated current consumption from module bus	I$_{MB}$	mA	≦ 15

Counter module

Channels		Number	8
Rated voltage through supply terminal	U$_L$		24 V DC
Rated current consumption from supply terminal	I$_L$	mA	1.5
Rated current consumption from module bus	I$_{MB}$	mA	≦ 15
Heat dissipation		W	< 1.5

Digital inputs

Input voltage			
Nominal input voltage	U$_e$	V DC	24 V DC
Low level	U$_e$L	V	-U$_L$ - +5 V
High level	U$_e$H	V	11 - 30 V
Input current			
Low level	I$_e$L	mA	-1 mA - 1.5 mA
High level	I$_e$H	mA	2 mA - 5 mA

Interfaces

Rated voltage through supply terminal	U$_L$		24 V DC
Rated current consumption from supply terminal	I$_L$	mA	1.5
Rated current consumption from module bus	I$_{MB}$	mA	≦ 15

Notes

The supply terminal (U$_L$) supplies power for the card's electronics and for the sensors at the inputs. The total current required for each card is the sum of all partial currents.

Part of the XI/ON card's electronics is supplied with module bus voltage (5 V DC), the other part through the supply terminal (U$_L$).

Max. permissible capacity: 141 nF at 79 V AC/50 Hz; 23 nF at 265 V AC/50 Hz

Design verification as per 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
Operating ambient temperature min.		°C	0
Operating ambient temperature max.		°C	55
Degree of Protection			IP20
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.

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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.

Technical data ETIM 6.0

PLC's (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@ss8.1-27-24-26-04 [BAA055011])		
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		8
Number of digital outputs		0
Digital inputs configurable		No
Digital outputs configurable		No
Input current at signal 1	mA	2
Permitted voltage at input	V	-30 - 30
Type of voltage (input voltage)		DC
Type of digital output		None
Output current	A	0
Permitted voltage at output	V	0 - 0
Type of output voltage		DC
Short-circuit protection, outputs available		No
Number of HW-interfaces industrial Ethernet		0
Number of HW-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 other		1
With optical interface		No
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		Yes
Supporting protocol for CAN		Yes
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 exchange		ms	0 - 0
Fieldbus connection over separate bus coupler possible			Yes
Rail mounting possible			Yes
Wall mounting/direct mounting			No
Front build in possible			No
Rack-assembly possible			No
Suitable for safety functions			No
Category according to EN 954-1			
SIL according to IEC 61508			None
Performance level acc. 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	13
Height		mm	129.5
Depth		mm	74.5

Approvals

Product Standards		UL 508; CSA-C22.2 No. 142; IEC/EN 6113-2; CE marking
UL File No.		E205091
UL Category Control No.		NRAQ, NRAQ7
CSA File No.		UL report applies to both US and Canada
CSA Class No.		2252-01, 2252-81
North America Certification		UL recognized, certified by UL for use in Canada
Specially designed for North America		No
Current Limiting Circuit-Breaker		No
Degree of Protection		IEC: IP20, UL/CSA Type: -

Dimensions
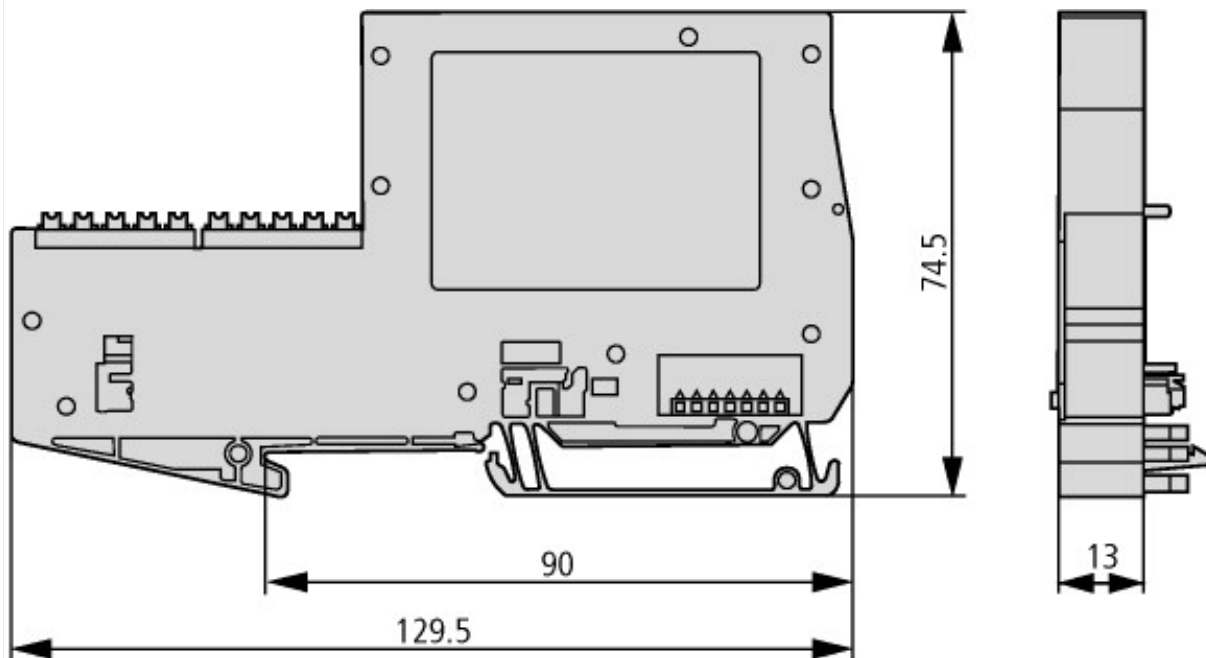
Dimensions

Additional product information (links)

MN05002010Z Manual Digital XI/ON modules, power supply modules

MN05002010Z Handbuch Digitale XI/ON-Module Versorgungsmodule - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002010Z_DE.pdf
MN05002010Z Manual Digital XI/ON modules, power supply modules - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002010Z_EN.pdf
Technical Data	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=14.111

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140035 - HPL-ED2016 V27.0 EN
6 / 6