DATASHEET - XN-1SSI



Serial interface module XI/ON, SSI

XN-1SSI Part no. Catalog No. 140153

EL-Nummer (Norway)

0004520689



Delivery program

71 0	
Function	XI/ON technology modules
Short Description	Connection of SSI encoders up to max. 32-bit. Transmission rate selectable up to 1MBit/s
For use with	XN-S4T-SBBS XN-S4S-SBBS

Technical data

Standards				
Ambient temperature Ambient temperature Ambient temperature, operation Storage, transport Relative humidity Relative humidity Relative humidity Ambient conditions, mechanical Degree of Protection Harmful gases Vibration resistance, operating conditions Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields Quo. 11) V/m (1.42)/(2 2,7) GHz Radiated RFI Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3				EN 61000-6-4
Ambient temperature, operation Storage, transport Relative humidity Relative humidity Ambient conditions, mechanical Degree of Protection Harmful gases Wiration resistance, operating conditions Mechanical shock resistance Continuous shock resistance Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz Burst Surge Radiated RFI Emitted interference (radiated, high frequency) 80 °C -25 · +85 % (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for storage at 45 °C) FSD (indoor), Level RH-2, no condensation (for	lation			Yes, through optocoupler
Storage, transport Relative humidity Relative humidity Ambient conditions, mechanical Degree of Protection Harmful gases Vibration resistance, operating conditions Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (D.081)/(1.42)/(22,7) GHz Burst Surge Relative humidity 5 - 95 % (indoor), Level RH-2, no condensation (for storage at 45°C) 1P20 Ppm SO ₂ : 10 (rel. humidity < 75%, no condensation) + 25: 1.0 (rel. humidity < 75%, no condensation) according to IEC 60068-2-6 g according to IEC 60068-2-7 According to IEC 60068-2-7 According to IEC 60068-2-7 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61000-4-2 EN 61000-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	perature			
Relative humidity Relative humidity Ambient conditions, mechanical Degree of Protection Harmful gases Vibration resistance, operating conditions Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (D.081)/ (1.42)/(2 2.7) GHz Burst Surge Relative humidity 5 - 95 % (indoor), Level RH-2, no condensation (for storage at 45°C) FSD (IP20 PPM SO2: 10 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75%, no condensation) according to IEC/EN 60068-2-6 g according to IEC 60068-2-7 According to IEC 60068-2-7 According to IEC 60068-2-7 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61100-4-2 EN 61100-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	temperature, operation		°C	0 - +55
Relative humidity Ambient conditions, mechanical Degree of Protection Harmful gases Vibration resistance, operating conditions Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-9) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields Air/contact discharge Electromagnetic fields Air/contact kV (1,4,2) / (22,7) GHz Burst Surge Radiated RFI Emitted interference (radiated, high frequency) SO2: 10 (rel. humidity < 75%, no condensation) H2S: 1.0 (rel. humidity < 75%, no condensation) H2S: 1.0 (rel. humidity < 75%, no condensation) According to IEC 60068-2-6 According to IEC 60068-2-7 According to IEC 60068-2-27 According to IEC 60068-2-29 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61100-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) GO230 dB EN 55016-2-3	transport	9	°C	-25 - +85
Ambient conditions, mechanical Degree of Protection Harmful gases Wibration resistance, operating conditions Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields Burst Surge Radiated RFI Emitted interference (radiated, high frequency) Ppm S02: 10 (rel. humidity < 75%, no condensation) H2S: 1.0 (rel. humidity < 75%, no condensation) according to IEC 60068-2-6 According to IEC 60068-2-27 According to IEC 60068-2-27 According to IEC 60068-2-29 According to IEC 60068-2-29 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61100-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-6 En 61100-4-6 Emitted interference (radiated, high frequency) Gould Be EN 55016-2-3	nidity			
Degree of Protection Harmful gases Ppm S02: 10 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75%, no condensation) according to IEC/EN 60068-2-6 Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (0.081)/ (1.42)/(2 2,7) GHz Fin 61100-4-2 EN 61100-4-5 Radiated RFI Emitted interference (radiated, high frequency) IP20 Ppm S02: 10 (rel. humidity < 75%, no condensation) H ₂ S: 1.0 (rel. humidity < 75%, no condensation) according to IEC 60068-2-6 According to IEC 60068-2-7 According to IEC 60068-2-29 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61100-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	humidity			5 - $95~\%$ (indoor), Level RH-2, no condensation (for storage at $45^{\circ}\text{C})$
Harmful gases Popt SO ₂ : 10 (rel. humidity < 75%, no condensation)	ditions, mechanical			
Vibration resistance, operating conditions Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz Burst Surge Radiated RFI Emitted interference (radiated, high frequency) H2S: 1.0 (rel. humidity < 75 %,no condensation) according to IEC 60068-2-6 according to IEC 60068-2-27 According to IEC 60068-2-29 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61100-4-2 EN 61100-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	of Protection			IP20
Mechanical shock resistance Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz EN 61100-4-2 EN 61100-4-5 Radiated RFI Emitted interference (radiated, high frequency) g according to IEC 60068-2-27 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EV EN 61000-4-2 EN 61100-4-2 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) g according to IEC 60068-2-29 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EV EN 61100-4-2 EN 61100-4-2 EN 61100-4-6 Emitted interference (radiated, high frequency) G 30230 G B EN 55016-2-3	gases		ppm	-
Continuous shock resistance (IEC/EN 60068-2-29) Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz EN 61100-4-2 EN 61100-4-5 Radiated RFI Emitted interference (radiated, high frequency) According to IEC 60068-2-29 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61000-4-2 EN 61100-4-2 EN 61100-4-2 EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	sistance, operating conditions			according to IEC/EN 60068-2-6
Drop and topple Electromagnetic compatibility (EMC) ESD Air/contact discharge Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz Burst Burst Radiated RFI Emitted interference (radiated, high frequency) According to IEC 60068-2-31, free fall according to IEC 60068-2-32 According to IEC 60068-2-31, free fall according to IEC 60068-2-32 EN 61000-4-2 EN 61000-4-2 EN 61100-4-5 EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	shock resistance		g	according to IEC 60068-2-27
Electromagnetic compatibility (EMC) Air/contact discharge kV EN 61000-4-2 Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz V/m EN 61100-4-2 Burst EN 61100-4-4 EN 61100-4-5 Surge EN 61100-4-5 Radiated RFI V EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	shock resistance (IEC/EN 60068-2-29)			According to IEC 60068-2-29
Air/contact discharge kV EN 61000-4-2	pple			According to IEC 60068-2-31, free fall according to IEC 60068-2-32
Electromagnetic fields (0.081) / (1,42) / (2 2,7) GHz EN 61100-4-2	etic compatibility (EMC)			
(1,42) / (2 2,7) GHz EN 61100-4-4			kV	EN 61000-4-2
Surge EN 61100-4-5 Radiated RFI V EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3	agnetic fields	(1,42) / (2		EN 61100-4-2
Radiated RFI V EN 61100-4-6 Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3				EN 61100-4-4
Emitted interference (radiated, high frequency) (30230 dB EN 55016-2-3				EN 61100-4-5
	RFI		V	EN 61100-4-6
MHz) / (2301000 MHz)	nterference (radiated, high frequency)	MHz) / (2301000	dB	EN 55016-2-3
Voltage fluctuations/voltage dips EN 61131-2	luctuations/voltage dips			EN 61131-2
Type test to EN 61131-2	i e			to EN 61131-2
Approvals CE, cULus				CE, cULus
Other technical data (sheet catalogue) Technical Data	cal data (sheet catalogue)			Technical Data
Analog input modules	put modules			
Rated voltage through supply terminal U _L 24 V DC	e through supply terminal	U_{L}		24 V DC
Rated current consumption from supply terminal I _L mA 25	nt consumption from supply terminal	IL	mA	25

Rated current consumption from module bus	I _{MB}	mA	≦ 50
Diagnostics			1
Base modules			
without C connection, for sensor feeding			4-wire XN-S4x-SBBS
Analog output modules			
Rated voltage through supply terminal	UL		24 V DC
Rated current consumption from supply terminal	IL	mA	25
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Digital outputs			041/00
Rated voltage through supply terminal	U _L		24 V DC
Rated current consumption from the supply terminal (at load current = 0 mA)	IL	mA	25
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Power loss	Р	W	Normally 1
Number of diagnostic bytes			1
Digital inputs Rated voltage through supply terminal	11.		24 V DC
	U _L	m A	
Rated current consumption from supply terminal	l _L	mA	25
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Relay modules Rated voltage through supply terminal	U_{L}		24 V DC
Rated current consumption from supply terminal		mA	25 25
	l _L		
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Power loss	Р	W	Normally 1
Power supply module Rated voltage through supply terminal	U_{L}		24 V DC
		mΛ	25
Rated current consumption from supply terminal	l _L	mA	
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Diagnostics			1
Insulation voltage		V 66	F00
between interface and module bus/system voltage	D	Veff	500
Power loss Counter module	Р	W	1
Rated voltage through supply terminal	U_L		24 V DC
Rated current consumption from supply terminal	IL	mA	25
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Measuring modes	IMB	IIIA	= 50
Diagnostics			1
parameters			4
Base modules			
without C connection, for sensor feeding			4-wire XN-S4x-SBBS
Interfaces			
Type			SSI
Rated voltage through supply terminal	UL		24 V DC
Rated current consumption from supply terminal	IL	mA	25
Rated current consumption from module bus	I _{MB}	mA	≦ 50
Power loss	Р	W	Normally 1
Transmission channels			CL, D
Basic unit			
RS422			4-wire, full-duplex (clock output/signal input)
Bit transfer rate			Max. 1 MHz (parameterizable), default settings: 500 kBit/s
Insulation voltage			
between interface and module bus/system voltage		Veff	500
between interface and field voltage		Veff	500
Conductor impedance		Ω	120

Bus termination		Internal
Cable length RS232	m	max. 30
Number of diagnostic bytes		1
Number of parameter bytes		4
Base modules		
without C connection, for sensor feeding		4-wire XN-S4x-SBBS
Note for table header		The figures for nominal current from the supply terminal apply when there is no sensor/transmitter current.

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		W	0
	P _{vid}		
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	1
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.
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 7.0

PLC's (EG000024) / Fieldbus, decentr. periphery - communication module (EC001604)

Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - communications module

(ecl@ss10.0.1-27-24-26-08 [BAA073013])		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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
Supporting protocol for TCP/IP		No

Supporting protocol for PROFIBUS		No
		No
Supporting protocol for CAN		
Supporting protocol for INTERBUS		No No
Supporting protocol for ASI		No 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 SERCOS		No
Supporting protocol for PROFINET IO		No
Supporting protocol for PROFINET CBA		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		No
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
10 link master		No
System accessory		Yes
Degree of protection (IP)		IP20
With potential separation		Yes
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. 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	12.6
Height	mm	74.1
Depth	mm	55.4

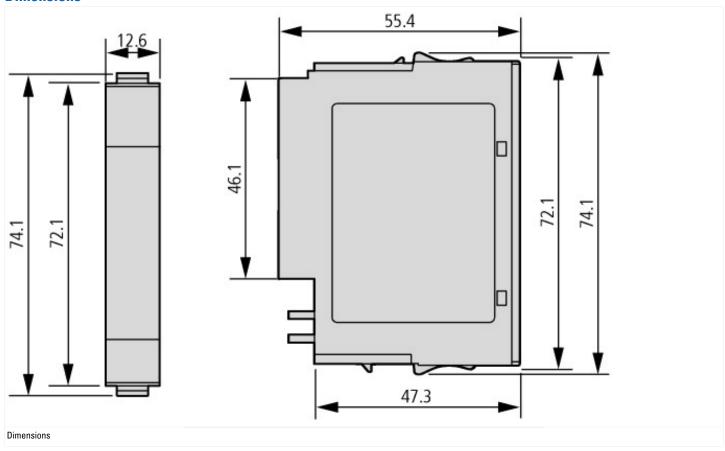
Approvals

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



Assets (links)

Declaration of CE Conformity

00002416

Manuals

MN05002015Z_DE (German) MN05002015Z_EN (English)

Additional product information (links)

User manual XI/ON technology module XN-1SSI MN05002015Z		
Benutzerhandbuch XI/ON Technologiemodul XN-1SSI MN05002015Z - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002015Z_DE.pdf	
User manual XI/ON technology module XN-1SSI MN05002015Z - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002015Z_EN.pdf	
Technical Data	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=14.111	