UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Escola Superior d'Enginyeries Industrial, Aeroespacial i Audiovisual de Terrassa

INGENIERÍA ELECTRÓNICA INDUSTRIAL Y AUTOMÁTICA

TRABAJO DE FINAL DE GRADO - Anexo

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ESTUDIO DE LAS ESTAPAS DE AUTOMATIZACIÓN DE UN PROCESO INDUSTRIAL

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Compare Products

	 STBNDP2212 standard Network Interface Module STB - Profibus DP - 9.6 kbit/s View Details	 **STBNIP2311** standard Network Interface Module STB - Ethernet modbus TCP/IP - 10...100 Mbits View Details
range of product	Modicon STB distributed I/O solution	Modicon STB distributed I/O solution
product or component type	Standard Network Interface Module	Standard Network Interface Module
integrated connection type	Profibus DP conforming to DIN 19245 part 1 and 3 8-way female (RS232 port) Profibus DP conforming to DIN 19245 part 1 and 3 9-way female RS485 SUB-D 1 twisted shielded pair (bus) Profibus DP conforming to DIN 19245 part 1 and 3 HE-13 (RS232 port)	Ethernet Modbus TCP/IP conforming to IEEE 802.3 2 female RJ45 double shielded twisted pair via Ethernet (network) Ethernet Modbus TCP/IP conforming to IEEE 802.3 8-way female (RS232 port) Ethernet Modbus TCP/IP conforming to IEEE 802.3 HE-13 (RS232 port)
number of segments	1 primary, maximum 6 extensions	1 primary, maximum 6 extensions
number of slave	125	
transmission rate	12 Mbit/s for bus length of 0…200 m 12 Mbit/s for bus length of 0…800 m with 3 repeaters 9.6 kbit/s for bus length of 0…1200 m 9.6 kbit/s for bus length of 0…4800 m with 3 repeaters	10/100 Mbit/s for bus length of 0…100 m per segment
structure type	Industrial field bus DP V.0	Ethernet Modbus TCP/IP network Industrial LAN
number of addressable I/O module	0…32 per island	0…32 per island
communication service	Configuration control Diagnostics Read/write DP slave I/O data Slave configuration	BootP/DHCP protocol Embedded web (configuration,diagnostics and access to variable) Modbus TCP/IP messaging SNMP agent
[Us] rated supply voltage	24 V DC	24 V DC
power supply type	SELV	SELV
maximum supply current	700 A	700 A
supply voltage limits	19.2…30 V	19.2…30 V
input current	430 mA for supply circuit	550 mA for supply circuit
nominal output current	0.575 A at 60…70 °C 1.2 A	0.575 A at 60…70 °C 1.2 A
maximum output impedance	0.05 Ohm at 100000 kHz	
output voltage	5.25 V DC (tolerance: +/- 0.21 %) for logic bus	5.25 V DC (tolerance: +/- 0.21 %) for logic bus
marking	CE	CE
overvoltage category	II	II

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.

status LED	1 LED (green)BUSFLT: 1 LED (green)island state (RUN): 1 LED (green)power supply (PWR): 1 LED (red)module error (ERR): 1 LED (yellow)test mode:	1 LEDACT: 1 LEDMS: 1 LEDNS: 1 LEDisland state (RUN): 1 LEDmodule error (ERR): 1 LEDpower supply (PWR): 1 LEDtest mode (TEST):
depth	70 mm	70 mm
height	40 mm	40.5 mm
width	128.3 mm	130 mm
electromagnetic compatibility	Immunity to electromagnetic interference conforming to IEC 61131-2	
product certifications	ATEX Cat 3G C-Tick CSA FM Class 1 Division 2 UL	ATEX Cat 3G C-Tick CSA ODVA UL
pollution degree	2 conforming to IEC 60664-1	2 conforming to IEC 60664-1
operating altitude	<= 2000 m	<= 2000 m
IP degree of protection	IP20 conforming to EN 61131-2 class 1	IP20 conforming to EN 61131-2 class 1
ambient air temperature for operation	-25…70 °C (with derating factor) 0…60 °C (without derating)	-25…70 °C (with derating factor) 0…60 °C (without derating)
ambient air temperature for storage	-40…85 °C	-40…85 °C
relative humidity	95 % at 60 °C without condensation	95 % at 60 °C without condensation
vibration resistance	+/-0.35 mm at 10…58 Hz 3 gn at 58…150 Hz on 35 x 7.5 mm symmetrical DIN rail 5 gn at 58…150 Hz on 35 x 15 mm symmetrical DIN rail	+/-0.35 mm at 10…58 Hz 3 gn at 58…150 Hz on 35 x 7.5 mm symmetrical DIN rail 5 gn at 58…150 Hz on 35 x 15 mm symmetrical DIN rail
shock resistance	30 gn for 11 ms conforming to IEC 88 reference 2-27	30 gn for 11 ms conforming to IEC 88 reference 2-27
Unit Type of Package 1	PCE	PCE
Number of Units in Package 1	1	1
Package 1 Weight	179 g	179 g
Package 1 Height	4.7 cm	2.5 cm
Package 1 width	7 cm	8 cm
Package 1 Length	13 cm	13 cm
Unit Type of Package 2	S02	
Number of Units in Package 2	30	
Package 2 Weight	5.6 kg	
Package 2 Height	15 cm	
Package 2 width	30 cm	
Package 2 Length	40 cm	
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes	Yes
RoHS exemption information	Yes	Yes

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China RoHS Regulation	China RoHS declaration	China RoHS declaration
Environmental Disclosure	Product Environmental Profile	Product Environmental Profile
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Warranty	18 months	18 months
port Ethernet		10BASE-T/100BASE-T
exchange mode		Half or full duplex
net weight		0.145 kg
standards		FM Class 1 division 2, groups A, B, C and D T4A with 70 °C IEC 61131-2 : 2003

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Product data sheet
Characteristics

STBNDP2212
standard Network Interface Module STB - Profibus DP - 9.6 kbit/s

Main

Range of product	Modicon STB distributed I/O solution
Product or component type	Standard Network Interface Module
Integrated connection type	Profibus DP conforming to DIN 19245 part 1 and 3 9-way female RS485 SUB-D 1 twisted shielded pair (bus) Profibus DP conforming to DIN 19245 part 1 and 3 HE-13 (RS232 port) Profibus DP conforming to DIN 19245 part 1 and 3 8-way female (RS232 port)
Number of segments	1 primary, maximum 6 extensions
Number of slave	125
Transmission rate	12 Mbit/s for bus length of 0…800 m with 3 repeaters 9.6 kbit/s for bus length of 0…4800 m with 3 repeaters 12 Mbit/s for bus length of 0…200 m 9.6 kbit/s for bus length of 0…1200 m
Structure type	Industrial field bus DP V.0

Complementary

Number of addressable I/O module	0…32 per island
Communication service	Diagnostics Read/write DP slave I/O data Configuration control Slave configuration
[Us] rated supply voltage	24 V DC
Power supply type	SELV
Maximum supply current	700 A
Supply voltage limits	19.2…30 V
Input current	430 mA for supply circuit
Nominal output current	0.575 A at 60…70 °C 1.2 A
Maximum output impedance	0.05 Ohm at 100000 kHz
Output voltage	5.25 V DC (tolerance: +/- 0.21 %) for logic bus
Marking	CE
Overvoltage category	II
Status LED	1 LED (green)BUSFLT: 1 LED (green)island state (RUN): 1 LED (green)power supply (PWR): 1 LED (red)module error (ERR):

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	1 LED (yellow)test mode:
Depth	70 mm
Height	40 mm
Width	128.3 mm

Environment

Electromagnetic compatibility	Immunity to electromagnetic interference conforming to IEC 61131-2
Product certifications	C-Tick CSA ATEX Cat 3G FM Class 1 Division 2 UL
Pollution degree	2 conforming to IEC 60664-1
Operating altitude	<= 2000 m
IP degree of protection	IP20 conforming to EN 61131-2 class 1
Ambient air temperature for operation	0…60 °C (without derating) -25…70 °C (with derating factor)
Ambient air temperature for storage	-40…85 °C
Relative humidity	95 % at 60 °C without condensation
Vibration resistance	3 gn at 58…150 Hz on 35 x 7.5 mm symmetrical DIN rail 5 gn at 58…150 Hz on 35 x 15 mm symmetrical DIN rail +/-0.35 mm at 10…58 Hz
Shock resistance	30 gn for 11 ms conforming to IEC 88 reference 2-27

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	179 g
Package 1 Height	4.7 cm
Package 1 width	7 cm
Package 1 Length	13 cm
Unit Type of Package 2	S02
Number of Units in Package 2	30
Package 2 Weight	5.6 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

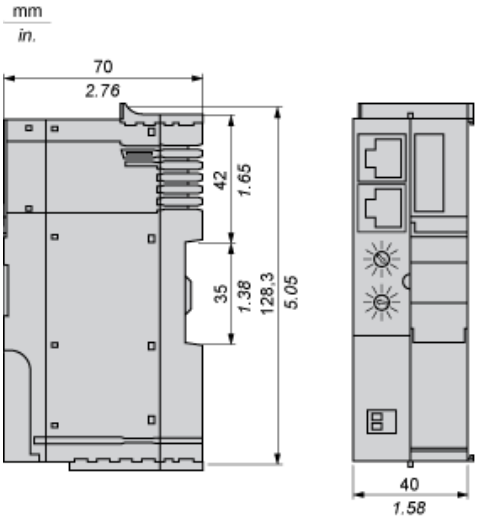
Offer Sustainability

EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Contractual warranty

Warranty	18 months

Dimensions



Product data sheet
Characteristics

STBNIP2311
standard Network Interface Module STB - Ethernet modbus TCP/IP - 10...100 Mbits

Main

Range of product	Modicon STB distributed I/O solution
Product or component type	Standard Network Interface Module
Integrated connection type	Ethernet Modbus TCP/IP conforming to IEEE 802.3 2 female RJ45 double shielded twisted pair via Ethernet (network) Ethernet Modbus TCP/IP conforming to IEEE 802.3 HE-13 (RS232 port) Ethernet Modbus TCP/IP conforming to IEEE 802.3 8-way female (RS232 port)
Port Ethernet	10BASE-T/100BASE-T
Exchange mode	Half or full duplex
Number of segments	1 primary, maximum 6 extensions
Transmission rate	10/100 Mbit/s for bus length of 0…100 m per segment
Structure type	Industrial LAN Ethernet Modbus TCP/IP network

Complementary

Number of addressable I/O module	0…32 per island
Communication service	SNMP agent BootP/DHCP protocol Modbus TCP/IP messaging Embedded web (configuration,diagnostics and access to variable)
[Us] rated supply voltage	24 V DC
Power supply type	SELV
Maximum supply current	700 A
Supply voltage limits	19.2…30 V
Input current	550 mA for supply circuit
Nominal output current	0.575 A at 60…70 °C 1.2 A
Output voltage	5.25 V DC (tolerance: +/- 0.21 %) for logic bus
Marking	CE
Overvoltage category	II
Status LED	1 LEDACT: 1 LEDisland state (RUN): 1 LEDmodule error (ERR): 1 LEDMS: 1 LEDNS: 1 LEDpower supply (PWR):

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	1 LEDtest mode (TEST):
Depth	70 mm
Height	40.5 mm
Width	130 mm
Net weight	0.145 kg

Environment

Standards	IEC 61131-2 : 2003 FM Class 1 division 2, groups A, B, C and D T4A with 70 °C
Product certifications	UL ODVA C-Tick ATEX Cat 3G CSA
Pollution degree	2 conforming to IEC 60664-1
Operating altitude	<= 2000 m
IP degree of protection	IP20 conforming to EN 61131-2 class 1
Ambient air temperature for operation	0…60 °C (without derating) -25…70 °C (with derating factor)
Ambient air temperature for storage	-40…85 °C
Relative humidity	95 % at 60 °C without condensation
Vibration resistance	3 gn at 58…150 Hz on 35 x 7.5 mm symmetrical DIN rail 5 gn at 58…150 Hz on 35 x 15 mm symmetrical DIN rail +/-0.35 mm at 10…58 Hz
Shock resistance	30 gn for 11 ms conforming to IEC 88 reference 2-27

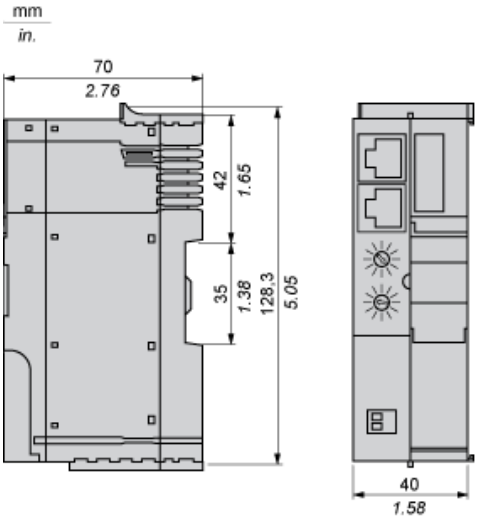
Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	179 g
Package 1 Height	2.5 cm
Package 1 width	8 cm
Package 1 Length	13 cm

Offer Sustainability

EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Contractual warranty

Warranty	18 months

Dimensions