



Main

Range of product	Modicon STB distributed I/O solution
Product or component type	Standard analog input kit
Kit composition	STBART0200 module STBXBA1000 base STBXTS1100, 6-terminal screw type connector STBXTS2100, 6-terminal spring clamp connector
Analogue input type	Voltage +/- 80 mV Temperature probe -100...+260 °C Cu 10 2, 3 or 4 wires IEC Temperature probe -100...+450 °C Pt 100 2, 3 or 4 wires US/JIS Temperature probe -100...+450 °C Pt 1000 2, 3 or 4 wires US/JIS Temperature probe -200...+850 °C Pt 100 2, 3 or 4 wires IEC Temperature probe -200...+850 °C Pt 1000 2, 3 or 4 wires IEC Temperature probe -60...+180 °C Ni 100 2, 3 or 4 wires IEC Temperature probe -60...+180 °C Ni 1000 2, 3 or 4 wires IEC Thermocouple +130...+1820 °C thermocouple B Thermocouple -200...+760 °C thermocouple J Thermocouple -270...+1000 °C thermocouple E Thermocouple -270...+1370 °C thermocouple K Thermocouple -270...+400 °C thermocouple T Thermocouple -50...+1665 °C thermocouple R Thermocouple -50...+1665 °C thermocouple S
Analogue input number	2
Analogue input resolution	15 bits + sign
Type of filter	Single low pass input filter 25 Hz

Complementary

Absolute maximum input	+/- 7.5 V DC
Cold swapping	Yes
Hot swapping fallback	Yes for standard NIMs
Fallback status	State 0 basic NIMs User configurable standard NIMs
Data format	EN 61131-2 IEC 61131-2
Input impedance	10 MOhm +/- 80 mV
Supply current for sensors	100 mA per input channels
Protection type	Short-circuit protection
Absolute accuracy error	+/- 0.1 % of full scale 25 °C internal +/- 0.15 % of full scale 25 °C external
Insulation between channels and logic bus	1500 V for 1 minute
Addressing requirement	1 word for cold-junction compensation 2 input words
Product compatibility	Mounting base STBXBA1000 Power distribution module STBPDT3100/3105
[Us] rated supply voltage	24 V DC
Supply	Power distribution module
Current consumption	30 mA 5 V DC logic bus
Measurement resolution	0.01 mV voltage 0.1 °C or 0.1 °F temperature probe 0.1 °C or 0.1 °F thermocouple

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Conversion time	150 ms voltage 60 Hz 170 ms voltage 50 Hz 180 ms temperature probe 60 Hz 2 or 4 wires 200 ms temperature probe 50 Hz 2 or 4 wires 210 ms thermocouple with internal cold-junction compensation 60 Hz 230 ms thermocouple with internal cold-junction compensation 50 Hz 300 ms temperature probe 60 Hz 3 wires 340 ms temperature probe 50 Hz 3 wires 360 ms thermocouple with external cold-junction compensation 60 Hz 400 ms thermocouple with external cold-junction compensation 50 Hz
Maximum wiring resistance	20 Ohm Cu 10 IEC/US/JIS 2 or 3 wires 20 Ohm Ni 100 IEC/US/JIS 2 or 3 wires 20 Ohm Pt 100 IEC/US/JIS 2 or 3 wires 200 Ohm Ni 1000 IEC/US/JIS 2 or 3 wires 200 Ohm Pt 1000 IEC/US/JIS 2 or 3 wires 50 Ohm Cu 10 IEC/US/JIS 4 wires 50 Ohm Ni 100 IEC/US/JIS 4 wires 50 Ohm Pt 100 IEC/US/JIS 4 wires 500 Ohm Ni 1000 IEC/US/JIS 4 wires 500 Ohm Pt 1000 IEC/US/JIS 4 wires
Measurement accuracy	+/- 1 °C Ni 100 25 °C external +/- 1 °C Ni 100 25 °C internal +/- 1 °C Ni 1000 25 °C external +/- 1 °C Ni 1000 25 °C internal +/- 1 °C Pt 100 25 °C internal +/- 1 °C Pt 1000 25 °C internal +/- 1.75 °C thermocouple B with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple E with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple J with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple K with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple R with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple S with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple T with external cold-junction compensation 25 °C +/- 2 °C Pt 100 25 °C external +/- 2 °C Pt 1000 25 °C external +/- 2.85 °C thermocouple B with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple E with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple J with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple K with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple R with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple S with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple T with external cold-junction compensation 60 °C +/- 3.6 °C thermocouple R with internal cold-junction compensation 25 °C +/- 4 °C Cu 10 25 °C external +/- 4 °C Cu 10 25 °C internal +/- 4 °C thermocouple K with internal cold-junction compensation 25 °C +/- 4.1 °C thermocouple S with internal cold-junction compensation 25 °C +/- 4.2 °C thermocouple R with internal cold-junction compensation 60 °C +/- 4.4 °C thermocouple T with internal cold-junction compensation 25 °C +/- 4.6 °C thermocouple B with internal cold-junction compensation 25 °C +/- 4.6 °C thermocouple E with internal cold-junction compensation 25 °C +/- 5 °C thermocouple S with internal cold-junction compensation 60 °C +/- 5.1 °C thermocouple J with internal cold-junction compensation 25 °C +/- 5.5 °C thermocouple K with internal cold-junction compensation 60 °C +/- 6.4 °C thermocouple T with internal cold-junction compensation 60 °C +/- 6.8 °C thermocouple B with internal cold-junction compensation 60 °C +/- 6.8 °C thermocouple E with internal cold-junction compensation 60 °C +/- 7 °C thermocouple J with internal cold-junction compensation 60 °C
Marking	CE
Overvoltage category	II
Status LED	1 LED green module status (RDY) 1 LED red module error (ERR)

Environment

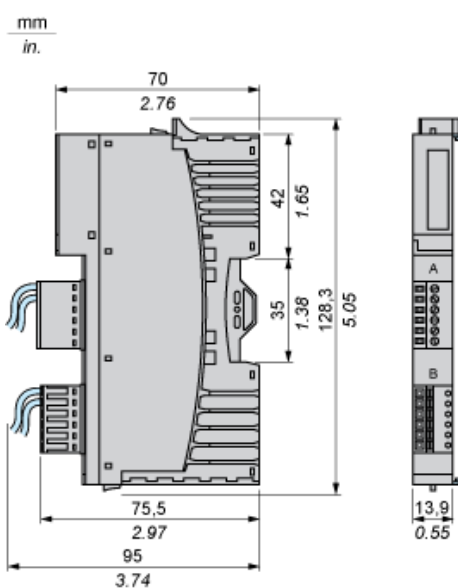
product certifications	ATEX Cat 3G CSA C-Tick FM Class 1 Division 2 UL
pollution degree	2 IEC 60664-1
operating altitude	<= 2000 m
IP degree of protection	IP20 EN 61131-2 class 1
ambient air temperature for operation	0...70 °C

ambient air temperature for operation	32...140 °F without
ambient air temperature for storage	-40...85 °C without
ambient air temperature for storage	-40...185 °F without
relative humidity	95 % 60 °C without condensation
vibration resistance	+/-0.35 mm 10...58 Hz 3 gn 58...150 Hz 35 x 7.5 mm symmetrical DIN rail 5 gn 58...150 Hz 35 x 15 mm symmetrical DIN rail
shock resistance	30 gn 11 ms IEC 88 reference 2-27

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0825 - Schneider Electric declaration of conformity
REACH	Reference contains SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

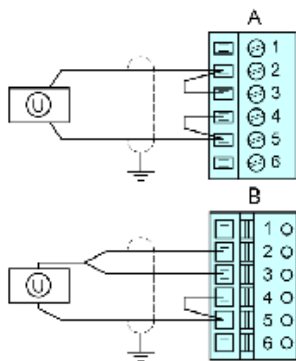
Dimensions



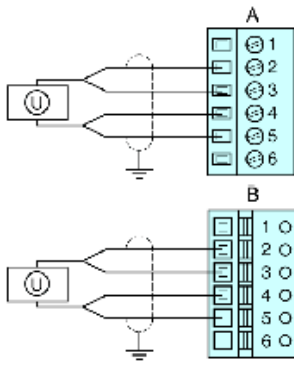
Wiring Diagrams

Examples

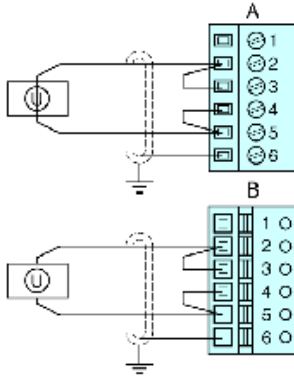
2 and 3-wire temperature probes



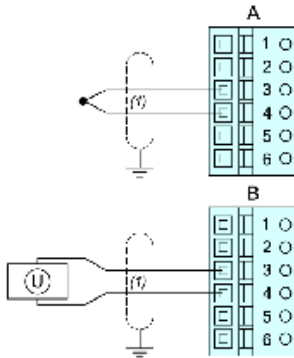
4-wire temperature probes



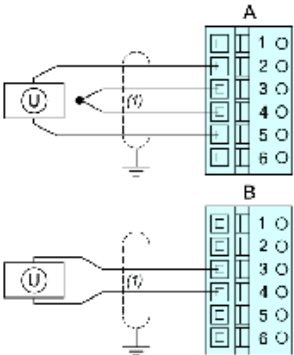
2-wire temperature probes in highly disturbed environments



2-wire thermocouple and voltage sensor (mV)



2-wire thermocouple and voltage sensor (mV) with cold-junction compensation



Pin	Top Connections	Bottom Connections
1	no connection	no connection

2	Always used for RTD +	Always used for RTD +
	RTD + connection for external cold-junction compensation on a TC sensor	
	no connection for TC or mV	
3	TC + or mV + connection	TC + or mV + connection
	Either used or jumpered for a two-, three-, or four-wire RTD	Either used or jumpered for a two-, three-, or four-wire RTD
4	TC - or mV - connection	TC - or mV - connection
	Either used or jumpered for a two-, three-, or four-wire RTD	Either used or jumpered for a two-, three-, or four-wire RTD
5	Always used for RTD -	Always used for RTD -
	RTD - connection for external cold-junction compensation on a TC sensor	
	no connection for TC or mV	
6	inner double-shield cable	cable shield