

STBART0200K

standard analog input kit STB - 2 I - 15 bits + sign



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	Thermocouple -50...+1665 °C thermocouple S Thermocouple -50...+1665 °C thermocouple R Thermocouple -270...+400 °C thermocouple T Thermocouple -270...+1370 °C thermocouple K Thermocouple -270...+1000 °C thermocouple E Thermocouple -200...+760 °C thermocouple J Thermocouple +130...+1820 °C thermocouple B Temperature probe -60...+180 °C Ni 1000 2, 3 or 4 wires IEC Temperature probe -60...+180 °C Ni 100 2, 3 or 4 wires IEC Temperature probe -200...+850 °C Pt 1000 2, 3 or 4 wires IEC Temperature probe -200...+850 °C Pt 100 2, 3 or 4 wires IEC Temperature probe -100...+450 °C Pt 1000 2, 3 or 4 wires US/JIS Temperature probe -100...+450 °C Pt 100 2, 3 or 4 wires US/JIS Temperature probe -100...+260 °C Cu 10 2, 3 or 4 wires IEC Voltage +/- 80 mV
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	User configurable standard NIMs State 0 basic 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	+/- 0.15 % of full scale 25 °C external +/- 0.1 % of full scale 25 °C internal
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

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Measurement resolution	0.1 °C or 0.1 °F thermocouple 0.1 °C or 0.1 °F temperature probe 0.01 mV voltage
Conversion time	400 ms thermocouple with external cold-junction compensation 50 Hz 360 ms thermocouple with external cold-junction compensation 60 Hz 340 ms temperature probe 50 Hz 3 wires 300 ms temperature probe 60 Hz 3 wires 230 ms thermocouple with internal cold-junction compensation 50 Hz 210 ms thermocouple with internal cold-junction compensation 60 Hz 200 ms temperature probe 50 Hz 2 or 4 wires 180 ms temperature probe 60 Hz 2 or 4 wires 170 ms voltage 50 Hz 150 ms voltage 60 Hz
Maximum wiring resistance	500 Ohm Pt 1000 IEC/US/JIS 4 wires 500 Ohm Ni 1000 IEC/US/JIS 4 wires 50 Ohm Pt 100 IEC/US/JIS 4 wires 50 Ohm Ni 100 IEC/US/JIS 4 wires 50 Ohm Cu 10 IEC/US/JIS 4 wires 200 Ohm Pt 1000 IEC/US/JIS 2 or 3 wires 200 Ohm Ni 1000 IEC/US/JIS 2 or 3 wires 20 Ohm Pt 100 IEC/US/JIS 2 or 3 wires 20 Ohm Ni 100 IEC/US/JIS 2 or 3 wires 20 Ohm Cu 10 IEC/US/JIS 2 or 3 wires
Measurement accuracy	+/- 7 °C thermocouple J with internal cold-junction compensation 60 °C +/- 6.8 °C thermocouple E with internal cold-junction compensation 60 °C +/- 6.8 °C thermocouple B with internal cold-junction compensation 60 °C +/- 6.4 °C thermocouple T with internal cold-junction compensation 60 °C +/- 5.5 °C thermocouple K with internal cold-junction compensation 60 °C +/- 5.1 °C thermocouple J with internal cold-junction compensation 25 °C +/- 5 °C thermocouple S with internal cold-junction compensation 60 °C +/- 4.6 °C thermocouple E with internal cold-junction compensation 25 °C +/- 4.6 °C thermocouple B with internal cold-junction compensation 25 °C +/- 4.4 °C thermocouple T with internal cold-junction compensation 25 °C +/- 4.2 °C thermocouple R with internal cold-junction compensation 60 °C +/- 4.1 °C thermocouple S with internal cold-junction compensation 25 °C +/- 4 °C thermocouple K with internal cold-junction compensation 25 °C +/- 4 °C Cu 10 25 °C internal +/- 4 °C Cu 10 25 °C external +/- 3.6 °C thermocouple R with internal cold-junction compensation 25 °C +/- 2.85 °C thermocouple T with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple S with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple R with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple K with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple J with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple E with external cold-junction compensation 60 °C +/- 2.85 °C thermocouple B with external cold-junction compensation 60 °C +/- 2 °C Pt 1000 25 °C external +/- 2 °C Pt 100 25 °C external +/- 1.75 °C thermocouple T with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple S with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple R with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple K with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple J with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple E with external cold-junction compensation 25 °C +/- 1.75 °C thermocouple B with external cold-junction compensation 25 °C +/- 1 °C Pt 1000 25 °C internal +/- 1 °C Pt 100 25 °C internal +/- 1 °C Ni 1000 25 °C internal +/- 1 °C Ni 1000 25 °C external +/- 1 °C Ni 100 25 °C internal +/- 1 °C Ni 100 25 °C external
Marking	CE
Overvoltage category	II
Status LED	1 LED red module error (ERR) 1 LED green module status (RDY)

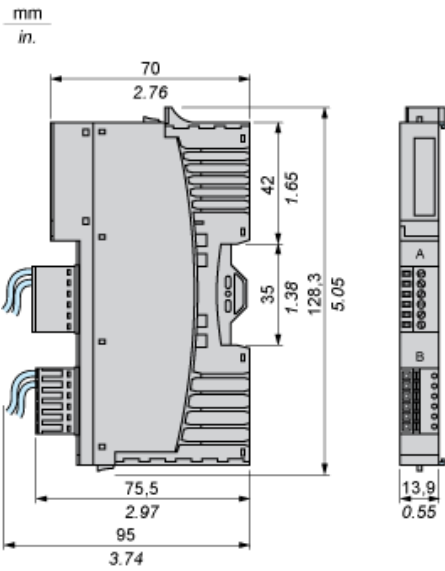
Environment

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	5 gn 58...150 Hz 35 x 15 mm symmetrical DIN rail 3 gn 58...150 Hz 35 x 7.5 mm symmetrical DIN rail +/-0.35 mm 10...58 Hz
Shock resistance	30 gn 11 ms IEC 88 reference 2-27

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS (date code: YYWW)	Compliant - since 0825 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available

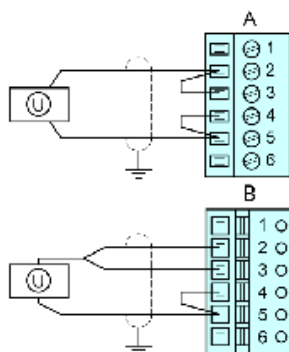
Dimensions



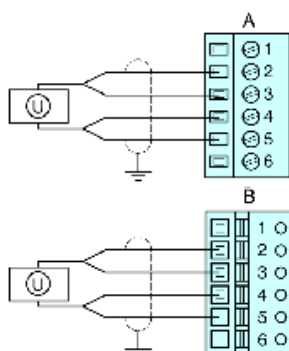
Wiring Diagrams

Examples

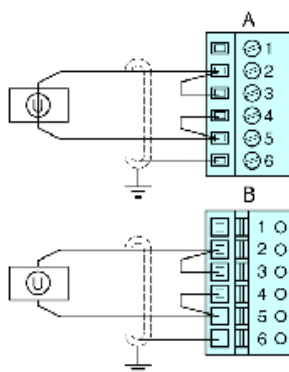
2 and 3-wire temperature probes



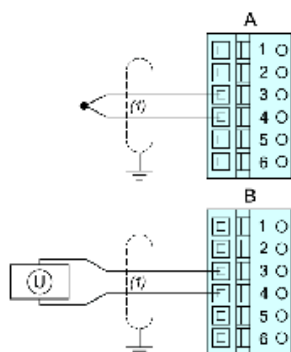
4-wire temperature probes



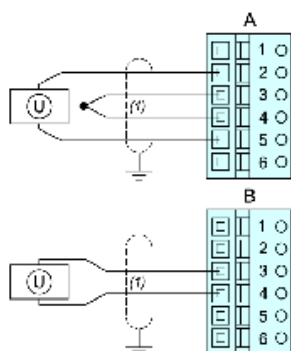
2-wire temperature probes in highly disturbed environments



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	no connection for TC or mV	
3	TC + or mV + connection	TC + or mV + connection
Either used or jumped for a two-, three-, or four-wire RTD	Either used or jumped for a two-, three-, or four-wire RTD	
4	TC - or mV - connection	TC - or mV - connection
Either used or jumped for a two-, three-, or four-wire RTD	Either used or jumped 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		

Pin	Top Connections	Bottom Connections
no connection for TC or mV	no connection for TC or mV	
6	inner double-shield cable	cable shield