

Screw terminal assignments on the STA-300

Introduction

This document contains information necessary to successfully install your hardware.

WARNING The STA-300 is not intended for use in circuits carrying voltages in excess of those for which the inputs of Models KPCI-3101, KPCI-3102, KPCI-3103, and KPCI-3104 are rated, typically $\pm 10V$. Refer to the KPCI-3101 — 4 Series User's Manual for these products for additional limits.

Installation

As described in the International Electrotechnical Commission (IEC) Standard IEC 664, the signal terminals are Installation Category I and must not be connected to mains.

Refer to "Attaching the STA-300" in the KPCI-3101 — 4 Series User's Manual.

Analog input screw terminals

Table 1 lists the screw terminal (TB) assignments for analog input connections on the STA-300 screw terminal panel.

Table 1
Analog input screw terminal assignments on the STA-300

TB #	J1 Pin #	Description	Resistor Use	
			Bias Return Resistor	Current Shunt Resistor
1	68	Analog Input 0	—	R9
2	67	Analog Input 8/ Analog Input 0 Return	R1	
3	34	Analog Input 1	—	R10
4	33	Analog Input 9/ Analog Input 1 Return	R2	
5	66	Analog Input 2	—	R11
6	65	Analog Input 10/ Analog Input 2 Return	R3	
7	32	Analog Input 3	—	R12
8	31	Analog Input 11/ Analog Input 3 Return	R4	

Table 1 (cont.)

Analog input screw terminal assignments on the STA-300

TB #	J1 Pin #	Description	Resistor Use	
			Bias Return Resistor	Current Shunt Resistor
9	64	Analog Input 4	—	R13
10	63	Analog Input 12/ Analog Input 4 Return	R5	
11	30	Analog Input 5	—	R14
12	29	Analog Input 13/ Analog Input 5 Return	R6	
13	62	Analog Input 6	—	R15
14	61	Analog Input 14/ Analog Input 6 Return	R7	
15	28	Analog Input 7	—	R16
16	27	Analog Input 15/ Analog Input 7 Return	R8	
17	26	Amp Low	Jumper W1 Connects Amp Low to Analog Ground	
18	25	Analog Ground		

Analog output and power screw terminals

Table 2 lists the screw terminal (TB) assignments for analog output and power connections on the STA-300 screw terminal panel.

Table 2

Analog output and power screw terminal assignments on the STA-300

TB #	J1 Pin #	Description
19	58	DAC0 Output
20	57	DAC0 Return
21	60	DAC0 Reference
22	23	DAC1 Return
23	24	DAC1 Output
24	59	DAC1 Reference
41	1	+5V Output @ 1A (max, or as limited by PC)
42	35	Power Ground

Counter/Timer and digital I/O screw terminals

Table 3 lists the screw terminal (TB) assignments for digital I/O connections on the STA-300 screw terminal panel.

Table 3

Counter/Timer and digital I/O screw terminal assignments on the STA-300

TB #	J1 Pin #	Description	TB #	J1 Pin #	Description
25	42	Digital Ground	50	16	Digital I/O Port A, Line 1
26	41	User Clock Input 0	51	49	Digital I/O Port A, Line 2
27	40	User Counter Output 0	52	15	Digital I/O Port A, Line 3
28	39	External Gate 0	53	48	Digital I/O Port A, Line 4
29	8	Digital Ground	54	14	Digital I/O Port A, Line 5
30	7	User Clock Input 1	55	47	Digital I/O Port A, Line 6
31	6	User Counter Output 1	56	13	Digital I/O Port A, Line 7
32	5	External Gate 1	57	46	Digital I/O Port B, Line 0
33	8	Digital Ground	58	12	Digital I/O Port B, Line 1
34	36	User Clock Input 2	59	45	Digital I/O Port B, Line 2
35	37	User Counter Output 2	60	11	Digital I/O Port B, Line 3
36	38	External Gate 2	61	44	Digital I/O Port B, Line 4
37	42	Digital Ground	62	10	Digital I/O Port B, Line 5
38	2	User Clock Input 3	63	43	Digital I/O Port B, Line 6
39	3	User Counter Output 3	64	9	Digital I/O Port B, Line 7
40	4	External Gate 3	65	54	Digital I/O Port C, Line 0
41	1	+5V Output @ 1A	66	20	Digital I/O Port C, Line 1
42	35	Power Ground	67	53	Digital I/O Port C, Line 2
43, 44, 45	55	Digital Ground	68	19	Digital I/O Port C, Line 3
46	56	External A/D Trigger	69	52	Digital I/O Port C, Line 4
47	21	Digital Ground	70	18	Digital I/O Port C, Line 5
48	22	External A/D Sample Clock Input	71	51	Digital I/O Port C, Line 6
49	50	Digital I/O Port A, Line 0	72	17	Digital Ground

NOTE If you are connecting a high-speed clock to the STA-300, it is recommended that you connect the return to the adjacent ground screw terminal.

Power

A +5V output signal (TB41) is available on the STA-300 screw terminal panel for low current signal conditioning applications up to 1A (may be limited by PC bus).

Refer to the KPCI-3101, -3102, -3103, -3104 Series User's Manual for more information about wiring signals.

Dimensions

Figure 1
Mounting dimensions (not to scale)

