DOC-17081-C

Using the STP68 or STP68-DIN Screw Terminal Panel

The STP68 and STP68-DIN are generic screw terminal panels provided for use with many data acquisition boards from Data Translation that have mating 68-pin connectors. These boards include the DT300 Series, DT330 Series, DT340, and DT2820.

The STP68 measures 3 15/16 inches by 3 15/16 inches (100 mm x 100 mm). Figure 1 shows the layout of the STP68.

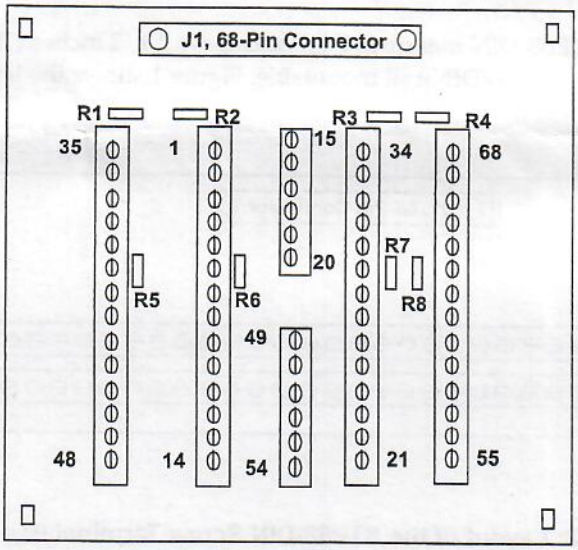

Figure 1: Layout of the STP68 Screw Terminal Panel

The STP68 contains eight 0 Ω resistors, which are installed by default. Table 1 lists the resistors and the pins of the signals to which they correspond.

Table 1: Resistor Use

Resistor	Signal	Resistor	Signal
R1	Pin 36	R5	Pin 41
R2	Pin 2	R6	Pin 7
R3	Pin 33	R7	Pin 28
R4	Pin 67	R8	Pin 62

For most configurations, leave these resistors unchanged. Some boards, such as the DT340, allow you to substitute these resistors with resistors of different values to terminate high frequency clock input signals. See the *DT340 Getting Started Manual* for more information.

The STP68-DIN measures 7 1/4 inches by 2 1/2 inches (185 mm x 62 mm) and is DIN-rail mountable. Figure 1 shows the layout of the STP68-DIN.

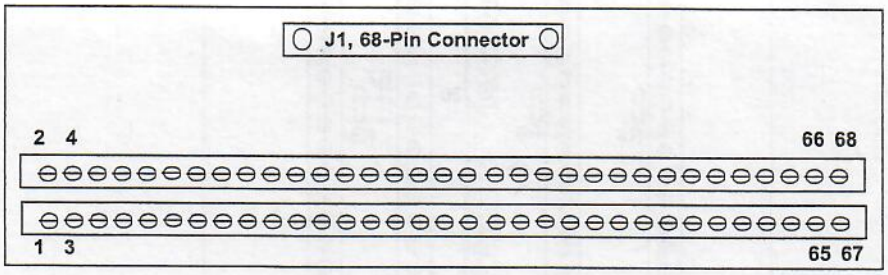

Figure 2: Layout of the STP68-DIN Screw Terminal Panel

Cable EP305 connects connector J1 on the screw terminal panel to the 68-pin connector on the data acquisition board, as shown in Figure 2.

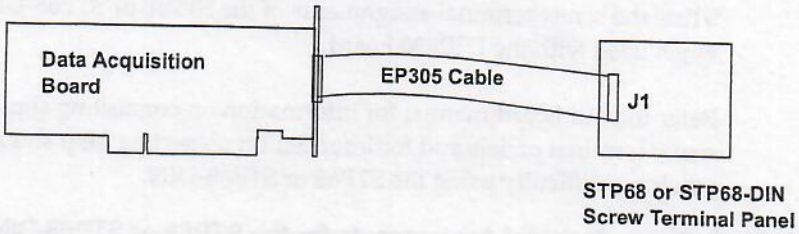

Figure 3: Connecting the STP68 or STP68-DIN to a Data Acquisition Board

Connector J1 on the screw terminal panel brings out all of the signals from the 68-pin connector on the data acquisition board. The screw terminal assignments on the STP68 or STP68-DIN connector match the pin assignments on the J1 connector of the board one for one.

Table 2 lists the screw terminal assignments of the STP68 or STP68-DIN when used with the DT300 Series boards; Table 3 lists the screw terminal assignments of the STP68 or STP68-DIN when used with the DT330 Series boards; Table 4 lists the screw terminal assignments of the STP68 or STP68-DIN when used with the DT340 board; and Table 5 lists the screw terminal assignments of the STP68 or STP68-DIN when used with the DT2820 board.

Refer to your board manual for information on connecting signals to screw terminal panels and for information on getting help should you have difficulty using the STP68 or STP68-DIN.

Table 2: Screw Terminal Assignments for the STP68 or STP68-DIN when used with DT300 Series Boards

TB Number	Signal Description	TB Number	Signal Description
1	+ 5 V Output @1 A	2	User Clock Input 3
3	User Counter Output 3	4	External Gate 3
5	External Gate 1	6	User Counter Output 1
7	User Clock Input 1	8	Digital Ground
9	Digital I/O Port B, Line 7	10	Digital I/O Port B, Line 5
11	Digital I/O Port B, Line 3	12	Digital I/O Port B, Line 1
13	Digital I/O Port A, Line 7	14	Digital I/O Port A, Line 5
15	Digital I/O Port A, Line 3	16	Digital I/O Port A, Line 1
17	Digital Ground	18	Digital I/O Port C, Line 5
19	Digital I/O Port C, Line 3	20	Digital I/O Port C, Line 1
21	Digital Ground	22	External A/D Sample Clock In
23	Analog Output 1 Return	24	Analog Output 1
25	Analog Ground	26	Amp Low
27	Analog Input 15/7 Return	28	Analog Input 7
29	Analog Input 13/5 Return	30	Analog Input 5

Table 2: Screw Terminal Assignments for the STP68 or STP68-DIN when used with DT300 Series Boards (cont.)

TB Number	Signal Description	TB Number	Signal Description
31	Analog Input 11/3 Return	32	Analog Input 3
33	Analog Input 9/1 Return	34	Analog Input 1
35	Power Ground	36	User Clock Input 2
37	User Counter Output 2	38	External Gate 2
39	External Gate 0	40	User Counter Output 0
41	User Clock Input 0	42	Digital Ground
43	Digital I/O Port B, Line 6	44	Digital I/O Port B, Line 4
45	Digital I/O Port B, Line 2	46	Digital I/O Port B, Line 0
47	Digital I/O Port A, Line 6	48	Digital I/O Port A, Line 4
49	Digital I/O Port A, Line 2	50	Digital I/O Port A, Line 0
51	Digital I/O Port C, Line 6	52	Digital I/O Port C, Line 4
53	Digital I/O Port C, Line 2	54	Digital I/O Port C, Line 0
55	Digital Ground	56	External A/D Trigger
57	Analog Output 0 Return	58	Analog Output 0
59	DAC1 Reference	60	DAC0 Reference
61	Analog Input 14/6 Return	62	Analog Input 6
63	Analog Input 12/4 Return	64	Analog Input 4
65	Analog Input 10/2 Return	66	Analog Input 2
67	Analog Input 8/0 Return	68	Analog Input 0

Table 3: Screw Terminal Assignments for the STP68 or STP68-DIN when used with DT330 Series Boards

TB Number	Signal Description	TB Number	Signal Description
1	+5 V Output	2	No Connect
3	Digital Ground	4	Digital I/O Port D, Line 7
5	Digital I/O Port D, Line 5	6	Digital I/O Port D, Line 3
7	Digital I/O Port D, Line 1	8	Digital Ground
9	Digital I/O Port C, Line 7	10	Digital I/O Port C, Line 5
11	Digital I/O Port C, Line 3	12	Digital I/O Port C, Line 1
13	Digital Ground	14	Digital I/O Port B, Line 7
15	Digital I/O Port B, Line 5	16	Digital I/O Port B, Line 3
17	Digital I/O Port B, Line 1	18	Digital Ground
19	Digital I/O Port A, Line 7	20	Digital I/O Port A, Line 5
21	Digital I/O Port A, Line 3	22	Digital I/O Port A, Line 1
23	Digital Ground	24	No Connect
25	No Connect	26	No Connect
27	DAC0 Return	28	DAC0 Output
29	DAC2 Return	30	DAC2 Output
31	DAC4 Return	32	DAC4 Output
33	DAC6 Return	34	DAC6 Output
35	Power Ground	36	No Connect
37	Digital Ground	38	Digital I/O Port D, Line 6
39	Digital I/O Port D, Line 4	40	Digital I/O Port D, Line 2
41	Digital I/O Port D, Line 0	42	Digital Ground
43	Digital I/O Port C, Line 6	44	Digital I/O Port C, Line 4
45	Digital I/O Port C, Line 2	46	Digital I/O Port C, Line 0

Table 3: Screw Terminal Assignments for the STP68 or STP68-DIN when used with DT330 Series Boards (cont.)

TB Number	Signal Description	TB Number	Signal Description
47	Digital Ground	48	Digital I/O Port B, Line 6
49	Digital I/O Port B, Line 4	50	Digital I/O Port B, Line 2
51	Digital I/O Port B, Line 0	52	Digital Ground
53	Digital I/O Port A, Line 6	54	Digital I/O Port A, Line 4
55	Digital I/O Port A, Line 2	56	Digital I/O Port A, Line 0
57	Digital Ground	58	No Connect
59	No Connect	60	No Connect
61	DAC1 Return	62	DAC1 Output
63	DAC3 Return	64	DAC3 Output
65	DAC5 Return	66	DAC5 Output
67	DAC7 Return	68	DAC7 Output

Table 4: Screw Terminal Assignments for the STP68 or STP68-DIN when used with the DT340 Board

TB Number	Signal Description	TB Number	Signal Description
1	+5 V Output	2	C/T Clock Input 7
3	C/T Clock Output 7	4	C/T Gate Input 7
5	C/T Gate Input 5	6	C/T Clock Output 5
7	C/T Clock Input 5	8	Digital Ground
9	Digital I/O Port D, Line 7	10	Digital I/O Port D, Line 5
11	Digital I/O Port D, Line 3	12	Digital I/O Port D, Line 1
13	Digital Ground	14	Digital I/O Port C, Line 7
15	Digital I/O Port C, Line 5	16	Digital I/O Port C, Line 3
17	Digital I/O Port C, Line 1	18	Digital I/O Port B, Line 7
19	Digital I/O Port B, Line 5	20	Digital I/O Port B, Line 3
21	Digital I/O Port B, Line 1	22	Digital Ground
23	Digital I/O Port A, Line 7	24	Digital I/O Port A, Line 5
25	Digital I/O Port A, Line 3	26	Digital I/O Port A, Line 1
27	Digital Ground	28	C/T Clock Input 3
29	C/T Clock Output 3	30	C/T Gate Input 3
31	C/T Gate Input 1	32	C/T Clock Output 1
33	C/T Clock Input 1	34	Digital Ground
35	Power Ground	36	C/T Clock Input 6
37	C/T Clock Output 6	38	C/T Gate Input 6
39	C/T Gate Input 4	40	C/T Clock Output 4
41	C/T Clock Input 4	42	Digital Ground
43	Digital I/O Port D, Line 6	44	Digital I/O Port D, Line 4
45	Digital I/O Port D, Line 2	46	Digital I/O Port D, Line 0

Table 4: Screw Terminal Assignments for the STP68 or STP68-DIN when used with the DT340 Board (cont.)

TB Number	Signal Description	TB Number	Signal Description
47	Digital Ground	48	Digital I/O Port C, Line 6
49	Digital I/O Port C, Line 4	50	Digital I/O Port C, Line 2
51	Digital I/O Port C, Line 0	52	Digital I/O Port B, Line 6
53	Digital I/O Port B, Line 4	54	Digital I/O Port B, Line 2
55	Digital I/O Port B, Line 0	56	Digital Ground
57	Digital I/O Port A, Line 6	58	Digital I/O Port A, Line 4
59	Digital I/O Port A, Line 2	60	Digital I/O Port A, Line 0
61	Digital Ground	62	C/T Clock Input 2
63	C/T Clock Output 2	64	C/T Gate Input 2
65	C/T Gate Input 0	66	C/T Clock Output 0
67	C/T Clock Input 0	68	Digital Ground

Table 5: Screw Terminal Assignments for the STP68 or STP68-DIN when used with the DT2820 Board

TB Number	Signal Description	TB Number	Signal Description
1	DO15 +	2	DO15 –
3	DO13 +	4	DO13 –
5	DO11 +	6	DO11 –
7	DO09 +	8	DO09 –
9	DO07 +	10	DO07 –
11	DO05 +	12	DO05 –
13	DO03 +	14	DO03 –
15	DO01 +	16	DO01 –
17	DI14 –	18	DI14 +
19	DI12 –	20	DI12 +
21	DI10 –	22	DI10 +
23	DI08 –	24	DI08 +
25	DI06 –	26	DI06 +
27	DI04 –	28	DI04 +
29	DI02 –	30	DI02 +
31	DI00 –	32	DI00 +
33	No Connect	34	No Connect
35	DO14 +	36	DO14 –
37	DO12 +	38	DO12 –
39	DO10 +	40	DO10 –
41	DO08 +	42	DO08 –
43	DO06 +	44	DO06 –
45	DO04 +	46	DO04 –

Table 5: Screw Terminal Assignments for the STP68 or STP68-DIN when used with the DT2820 Board (cont.)

TB Number	Signal Description	TB Number	Signal Description
47	DO02 +	48	DO02 –
49	DO00 +	50	DO00 –
51	DI15 –	52	DI15 +
53	DI13 –	54	DI13 +
55	DI11 –	56	DI11 +
57	DI09 –	58	DI09 +
59	DI07 –	60	DI07 +
61	DI05 –	62	DI05 +
63	DI03 –	64	DI03 +
65	DI01 –	66	DI01 +
67	DGND	68	+5 V