

Model V792-ZB11

Rack Mount Isothermal Termination Panel

INSTRUCTION MANUAL

April, 1997

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WARRANTY
DWP

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FRONT PANEL

The V792-ZB11 is designed specifically for the V243. The panel has 78 terminal blocks to connect to field wiring. The first 72 terminals are used to connect 24 channels through a common mode filter to the V243. The front panel is labeled for all 24 differential channels with an individual shield for each channel. The other 6 terminals connect to ground, the buffered output, and the calibration voltage output. See the V243 manual for a more complete description of these signals.

CONNECTIONS

When using the panel, shielded, twisted-pair wire should be used. The common mode filter removes high frequency signals that are present on all three inputs of a channel (“+”, “-”, and “S”). For this reason, the shield should never be connected to the ground at the termination panel. The shield does have a 100 k Ω resistor to ground to provide a return path for bias currents.

Although not recommended, if a shield is not available for a given channel, connect the shield “S” to the non-inverting input “-”.

TABLE 1 - CONNECTOR LAYOUT

Terminal Number	V243 Connector P3	V243 Connector P4	V243 Connector P5	V243 Connector P6
1	Channel 1+	Channel 25+	Channel 49+	Channel 73+
2	Channel 1-	Channel 25-	Channel 49-	Channel 73-
3	Channel 1 Shield	Channel 25 Shield	Channel 49 Shield	Channel 73 Shield
4	Channel 2+	Channel 26+	Channel 50+	Channel 74+
5	Channel 2-	Channel 26-	Channel 50-	Channel 74-
6	Channel 2 Shield	Channel 26 Shield	Channel 50 Shield	Channel 74 Shield
7	Channel 3+	Channel 27+	Channel 51+	Channel 75+
8	Channel 3-	Channel 27-	Channel 51-	Channel 75-
9	Channel 3 Shield	Channel 27 Shield	Channel 51 Shield	Channel 75 Shield
10	Channel 4+	Channel 28+	Channel 52+	Channel 76+
11	Channel 4-	Channel 28-	Channel 52-	Channel 76-
12	Channel 4 Shield	Channel 28 Shield	Channel 52 Shield	Channel 76 Shield
13	Channel 5+	Channel 29+	Channel 53+	Channel 77+
14	Channel 5-	Channel 29-	Channel 53-	Channel 77-
15	Channel 5 Shield	Channel 29 Shield	Channel 53 Shield	Channel 77 Shield
16	Channel 6+	Channel 30+	Channel 54+	Channel 78+
17	Channel 6-	Channel 30-	Channel 54-	Channel 78-
18	Channel 6 Shield	Channel 30 Shield	Channel 54 Shield	Channel 78 Shield
19	Channel 7+	Channel 31+	Channel 55+	Channel 79+
20	Channel 7-	Channel 31-	Channel 55-	Channel 79-
21	Channel 7 Shield	Channel 31 Shield	Channel 55 Shield	Channel 79 Shield
22	Channel 8+	Channel 32+	Channel 56+	Channel 80+
23	Channel 8-	Channel 32-	Channel 56-	Channel 80-
24	Channel 8 Shield	Channel 32 Shield	Channel 56 Shield	Channel 80 Shield
25	Channel 9+	Channel 33+	Channel 57+	Channel 81+
26	Channel 9-	Channel 33-	Channel 57-	Channel 81-
27	Channel 9 Shield	Channel 33 Shield	Channel 57 Shield	Channel 81 Shield
28	Channel 10+	Channel 34+	Channel 58+	Channel 82+
29	Channel 10-	Channel 34-	Channel 58-	Channel 82-
30	Channel 10 Shield	Channel 34 Shield	Channel 58 Shield	Channel 82 Shield
31	Channel 11+	Channel 35+	Channel 59+	Channel 83+
32	Channel 11-	Channel 35-	Channel 59-	Channel 83-
33	Channel 11 Shield	Channel 35 Shield	Channel 59 Shield	Channel 83 Shield
34	Channel 12+	Channel 36+	Channel 60+	Channel 84+
35	Channel 12-	Channel 36-	Channel 60-	Channel 84-
36	Channel 12 Shield	Channel 36 Shield	Channel 60 Shield	Channel 84 Shield
37	Channel 13+	Channel 37+	Channel 61+	Channel 85+
38	Channel 13-	Channel 37-	Channel 61-	Channel 85-
39	Channel 13 Shield	Channel 37 Shield	Channel 61 Shield	Channel 85 Shield
40	Channel 14+	Channel 38+	Channel 62+	Channel 86+
41	Channel 14-	Channel 38-	Channel 62-	Channel 86-
42	Channel 14 Shield	Channel 38 Shield	Channel 62 Shield	Channel 86 Shield
43	Channel 15+	Channel 39+	Channel 63+	Channel 87+
44	Channel 15-	Channel 39-	Channel 63-	Channel 87-
45	Channel 15 Shield	Channel 39 Shield	Channel 63 Shield	Channel 87 Shield
46	Channel 16+	Channel 40+	Channel 64+	Channel 88+
47	Channel 16-	Channel 40-	Channel 64-	Channel 88-
48	Channel 16 Shield	Channel 40 Shield	Channel 64 Shield	Channel 88 Shield
49	Channel 17+	Channel 41+	Channel 65+	Channel 89+
50	Channel 17-	Channel 41-	Channel 65-	Channel 89-
51	Channel 17 Shield	Channel 41 Shield	Channel 65 Shield	Channel 89 Shield
52	Channel 18+	Channel 42+	Channel 66+	Channel 90+

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53	Channel 18-	Channel 42-	Channel 66-	Channel 90-
54	Channel 18 Shield	Channel 42 Shield	Channel 66 Shield	Channel 90 Shield
55	Channel 19+	Channel 43+	Channel 67+	Channel 91+
56	Channel 19-	Channel 43-	Channel 67-	Channel 91-
57	Channel 19 Shield	Channel 43 Shield	Channel 67 Shield	Channel 91 Shield
58	Channel 20+	Channel 44+	Channel 68+	Channel 92+
59	Channel 20-	Channel 44-	Channel 68-	Channel 92-
60	Channel 20 Shield	Channel 44 Shield	Channel 68 Shield	Channel 92 Shield
61	Channel 21+	Channel 45+	Channel 69+	Channel 93+
62	Channel 21-	Channel 45-	Channel 69-	Channel 93-
63	Channel 21 Shield	Channel 45 Shield	Channel 69 Shield	Channel 93 Shield
64	Channel 22+	Channel 46+	Channel 70+	Channel 94+
65	Channel 22-	Channel 46-	Channel 70-	Channel 94-
66	Channel 22 Shield	Channel 46 Shield	Channel 70 Shield	Channel 94 Shield
67	Channel 23+	Channel 47+	Channel 71+	Channel 95+
68	Channel 23-	Channel 47-	Channel 71-	Channel 95-
69	Channel 23 Shield	Channel 47 Shield	Channel 71 Shield	Channel 95 Shield
70	Channel 24+	Channel 48+	Channel 72+	Channel 96+
71	Channel 24-	Channel 48-	Channel 72-	Channel 96-
72	Channel 24 Shield	Channel 48 Shield	Channel 72 Shield	Channel 96 Shield
73	Ground	Ground	Ground	Ground
74	Ground	Ground	Ground	Ground
75	Calibrator Out +	Calibrator Out +	Calibrator Out +	Calibrator Out +
76	Calibrator Out -	Calibrator Out -	Calibrator Out -	Calibrator Out -
77	Buffered Output 1+	Buffered Output 25+	Buffered Output 49+	Buffered Output 73+
78	Buffered Output 1-	Buffered Output 25-	Buffered Output 49-	Buffered Output 73-

T_M = Temperature being monitored
 T_R = Temperature reference

FIGURE 1 - ISOTHERMAL REFERENCE JUNCTION

ISOTHERMAL REFERENCE

The actual voltage created at the output of the V792 is a function of the difference between the temperature being measured and the reference temperature.

$$V_{OUT} = f(T_M - T_R)$$

The reference temperature can be fixed at a known temperature or measured. The V792 is capable of measuring the reference temperature. Refer to the V243 manual for a more complete description of the isothermal reference.

TEST POINTS

Test points are available on each terminal block and are located above the captive screw. The testing hole is .078" (2 mm) in diameter and is designed to accept standard multimeter test leads.

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FEATURES

- Up to 72 I/O terminations with 19-inch rack mounting
- Internal reference junction
- Dependable cage clamp connections to field wiring
- Test points available on each terminal

APPLICATIONS

- Field wiring terminations
- Module I/O termination
- General-purpose patch panel
- General-purpose temperature measurement
- Distributed environmental temperature control and monitoring
- Temperature control in material processing

GENERAL DESCRIPTION

The Model V792 Isothermal Panel provides a reference junction for up to 31 thermocouples. When configured for non-isothermal operation, the panel permits termination of up to 72 I/O terminations. Arranged for 19-inch rack mounting, the panel occupies only one 4.45 centimeters (1 3/4 inches) of rack height.

The V792 uses 72 LMI steel cage clamp terminals to receive field wiring. Each terminal accepts a single solid or stranded conductor in wire sizes AG 22 to AG 14. The rear panel has two 50P Amphenol Ribbon connectors, one 50S High Density connector, and one 68S High Density connector for a wide variety of solutions.

ORDERING INFORMATION

V792-ZB11 - Rack Isothermal Panel

Accessories -5819-Exyz Cable, 50P High Density to 50P High Density

5819-Fxyz Cable, 50P High Density to 50S High Density

5819-Hxyz Cable, 50P High Density to 50P Amphenol Ribbon

5855-Bxyz Cable 50S Amphenol Ribbon to 36 AMP Rectangular (up to 2)

5868-Cxyz Cable, 68P High Density to 68P High Density

5868-Dxyz Cable, 68P High Density to 68S High Density

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FEATURES

- mounting.

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- wiring.

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Up to 72 I/O terminations with 19" rack

Internal reference junction.

Dependable cage clamp connections to field

Test points available on each terminal.

APPLICATIONS

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- control and monitoring.

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Field wiring terminations.

Module I/O termination.

General purpose patch panel.

General purpose temperature measurement.

Distributed environmental temperature

Temperature control in material processing.