

DNA-STP-AO-250

0- 35 VDC, 250 mA Current Buffer Board

- 4 channels
- 250 mA per channel, continuous
- 0-35 VDC Volt output, minimum
- Direct connect cable to DNx-AO-308
- High Accuracy
- Drives capacitive and inductive loads
- Wide 9 - 36 VDC power supply voltage



General Description:

The DNA-STP-AO-250 is a 0 - 35 VDC, high current output buffer board for use with DNx-AO-308 series interfaces. The unit provides continuous output currents of up to 250 mA on each of 4 channels. A fixed gain of 3.5 allows the DNx-AO-308 board to drive outputs up to 35 VDC. The outputs are current limited at 300 mA and are protected from thermal overload.

The board provides excellent gain and offset performance and is an ideal solution in applications requiring both high current and high accuracy. The 1 V/uS slew rate provide ensures the DNA-STP-AO-250 is fast enough to keep up with almost all high current system requirements. The outputs are designed to drive capacitive and inductive loads and should be compatible with almost all systems, including those driving long distances of wire

The 37-pin D input to the DNA-STP-AO-250 can be connected to the DNA-AO-308 board using a standard, straight connection 37-pin cable. Outputs are available at screw terminals or at a 37-pin D connector. The buffered outputs are controlled by DNx-AO-308 channels 0 through 3. A "pass through" connector provides connections of a second DNA-STP-AO-250 board to the host DNx-AO-308 board channels 4 through 7.

A fan mounted on the unit assures the buffer stays within temperature limits. The fan is thermostatically controlled and turns on if the internal temperature of the unit exceeds 45°C. An on board LED per channel illuminates to indicate the output buffer is in thermal overload.

The unit is powered directly using any DC power supply between 9 and 36 VDC.

The DNA-STP-AO-250 is fully enclosed. Though there is no cover on the top of the unit, the top of the printed circuit board has no active signals exposed other than those on the various connectors and screw terminals.

Technical Specifications:

Number of Channels	4
Gain	3.5 x
Output Range	0 to 35 VDC
Gain error	±0.2%, max
Offset error	±3 mV, max
Output slew rate	1 V/μS
Output current	250 mA, at 0 - 35 V, min
Output current limit	Current limited at 300 mA
Output protection	500 mA, resettable fuse per channel
Thermal overload	LED display of output buffer over temp
Input power required	9 to 36 VDC
Cooling	Fan based forced air cooling. Fan turns on when internal temperature exceeds 45°C.
Physical Dimensions	10.0" x 4.2" x 2.125"
Operating Temp. (tested)	0°C to +85°C
Storage Temp	-40°C to +85°C
Operating Humidity	0 - 95%, non-condensing

Output Connections:

Gnd	1	20	-15V	Gnd	1	20	-15V
+15V	2	21	Gnd	+15V	2	21	Gnd
Rsvd	3	22	Rsvd	Rsvd	3	22	Rsvd
Rsvd	4	23	Gnd	Rsvd	4	23	Gnd
Gnd	5	24	Gnd	Gnd	5	24	Gnd
+VA Out	6	25	-VA Out	Rsvd	6	25	Rsvd
Gnd	7	26	Rsvd	Gnd	7	26	Rsvd
Rsvd	8	27	Gnd	Rsvd	8	27	Gnd
Rsvd	9	28	Rsvd	Rsvd	9	28	Rsvd
Gnd	10	29	Rsvd	Gnd	10	29	Rsvd
Rsvd	11	30	Gnd	Rsvd	11	30	Gnd
Rsvd	12	31	Rsvd	Rsvd	12	31	Rsvd
Gnd	13	32	Aout3	Gnd	13	32	Aout7
Sense/Gnd3	14	33	Gnd	Gnd	14	33	Gnd
Aout2	15	34	Sense/Gnd2	Aout6	15	34	Gnd
Gnd	16	35	Aout1	Gnd	16	35	Aout5
Sense/Gnd1	17	36	Gnd	Gnd	17	36	Gnd
Aout0	18	37	Sense/Gnd0	Aout4	18	37	Gnd
Gnd	19			Gnd	19		

JOUT1 High Current
Output Connector

J308-OUT connector to
2nd STP-AO-250 board

Ordering Guide:

Part Number	Description
DNA-STP-AO-250	35 VDC, 250 mA output board for use with DNx-AO-308 series analog output boards