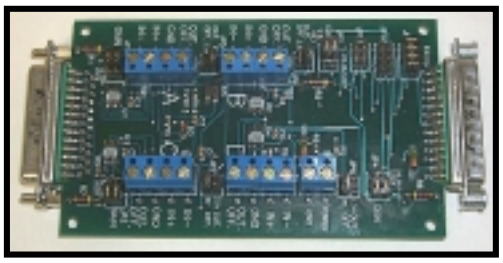
4-Channel Amplifier Board
Model SDAIBB



The SDAIBB is a Data Acquisition module that has four input buffers with selectable gains and selectable output offsets. The gain can be set from 1 to 1000 with a single resistor change. Gains of 1 and 22.28 provided. The output can be offset by 0V, 2.5V, or by a user selected amount.

The SDAIBB is designed to amplify single ended or differential signals in the range of –0.15 to +5.0V into +0.01 to +5.0V signals that are compatible with B&B's line of Data Acquisition products.

Sensor and power supply connections are made through terminal blocks or solder pads. A/D connections are made through a DB25 male connector and are designed to connect to many of the B&B Data Acquisition products. All lines on the DB25 connectors are carried through, allowing boards to be "stacked" for expanding the number of channels or bringing in or out other lines.

The SDAIBB board requires 8 mA at 10 to 30 VDC, and can be brought directly into the board through terminal blocks or passed from another board.

B&B Models Compatible with SDAIBB

Model	Channels Supported	Power on pins 2 and 7	2.5V Output Offset Avaliable
485SDA10	0-10	Yes	Yes
485SDA12	0-10	Yes	Yes
232SDA10	0-10	Yes	Yes
232SDA12	0-10	Yes	Yes
232SPDA	0-3	Yes	Yes
232SPDACL	0-3	Yes	Yes
485SPDA	0-3	Yes	Yes
485SPDACL	0-3	Yes	Yes
232OPSDA*	4 and 5	No	No
ADIO12	4-7	No	No
ADIO10	4-7	No	No

* Set the jumper for any position and use the solder pads on the DB25 connector to bring out connections for channels 4 and 5. The other channels already have selectable gains.

Values for Use with the Provided Gain of 22.28

V_{CM}	V_{DIFF}	Out Ref	1% Resistor	Calculated Gain	Output Range
27.5 mV max	+55 mV	0 V	4.7 kΩ	22.28	0.01 - 1.23 V
0 V	±52 mV	2.5 V	4.7 kΩ	22.28	1.32 - 3.68 V
2.5 V	±110 mV	2.5 V	4.7 kΩ	22.28	0.03 - 4.97 V

This product designed and manufactured in USA of domestic and imported parts by

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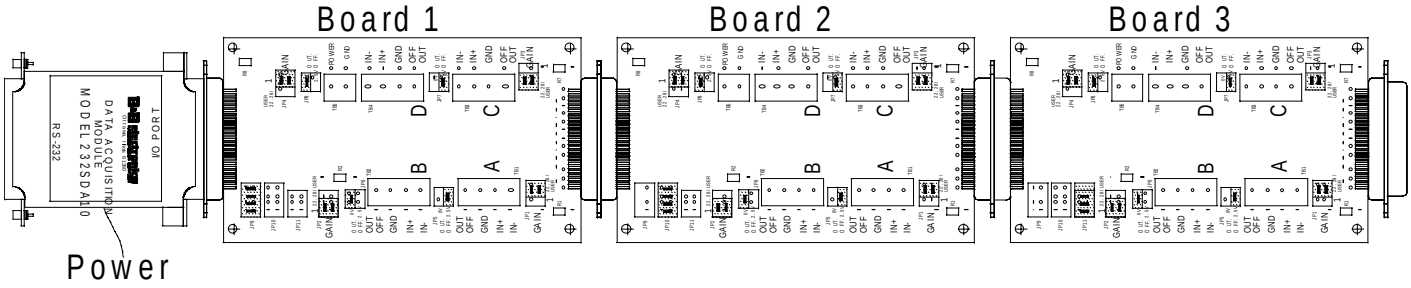
Single Power Supply System With 11 Channels Supported



Specifications

Input Channels

Number of Channels	4
Resolution	11 bits
Total Unadjusted Error	±3 bits
Gain	1 to 1000 with 1 and 22.28 provided
Max. Gain Error	0.35%
Max. Gain Drift	25 ppm
Max. Input Offset Voltage	200 µV
Max. Input Offset Voltage Drift	2 µV/°C
Input Impedance	2 GΩ, 2pF
Input Voltage Range	
Gain = 1	-0.15 to +5.00 V
Gain > 1	-0.15 to +4.60 V
Output Voltage Range	
Gain = 1	0.01 to 5.00 V
Gain > 1	0.01 to 4.95 V

Power Supply

Input Voltage	
Single Module	10 to 30 VDC
Three Modules	12 to 30 VDC
Input Current	8 mA max. per Module
Current Draw From Precision 5 V	0.5 mA per board
Max. Current Throughput	1 A

Connections

Analog Input	Terminal Blocks/Solder Pads
Analog Output	DB25 Male Connector and DB25 Female Connector
Power	Terminal Blocks/Solder Pads or Pins 2 and 7 of the Male DB25

Environment

Operating Temperature	-40 to +85 °C
Storage Temperature	-65 to +125 °C

Size 5.6 X 2.75 in. (14 X 7 cm)

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