



Output Modules



A5B39 Units DC Current Output

A5B39 modules plug into a backpanel to provide a single channel of analog output. Input signals are buffered, isolated, filtered, and converted to a proportional DC current output signal.

The A5B39 has a track-and-hold circuit in the input stage which can be operated in a hold mode where one D/A converter can supply many output modules, or a track mode where one D/A converter is dedicated to each module.

Setting of the track or hold mode is controlled by the logic state of WR/EN. The APB02 backpanel allows host computer control of the WR EN control line, which allows multiplexing of one host D/A converter to up to sixty-four A5B39 output modules. During power up, the output remains at 0mA for 100mS, enabling the track-and-hold circuit to be initialized.

Ordering Information

Model	Input	Output
A5B39-01	Current Output 0 to 5V DC	4 to 20mA
A5B39-02	Current Output -5 to 5V DC	4 to 20mA
A5B39-03	Current Output 0 to 5V DC	0 to 20mA
A5B39-04	Current Output -5 to 5V DC	0 to 20mA

Performance

Input Voltage Range
±5V or 0 to 5V

Input Voltage Maximum
±36V (no damage)

Input Resistance
50M ohms

Output Current Range
0 to 20mA or 4 to 20mA

Over Range Capability
10%

Load Resistance Range
0 to 650 ohms (0 to 750 ohms for supply voltage greater than 4.95V DC)

Output Current Under Fault, Max.
26mA

Output Protection
Continuous: 240VRMS max
Transient: ANSI/IEEE C37.90.1-1989

CMV, Output to Input
Continuous: 1500VRMS max
Transient: ANSI/IEEE C37.90.1-1989

CMR (50 or 60Hz)
110dB

Accuracy
±0.05% Span (±0.08% max)

Nonlinearity
±0.02% Span (±0.035% max)

Stability
Zero: ±0.5μA/°C (±1μA/°C max)
Span: ±20ppm/°C (±40ppm/°C max)

Noise
Output ripple, 100Hz bandwidth: 10μA-P-P
(20μA-P-P max)

Bandwidth, -3dB
400Hz

Sample and Hold
Output droop rate: 40μA/S
Acquisition time: 50μS

Track-and-Hold Enable Control
Max Logic "0": +1V
Min Logic "1": +2.5V
Max Logic "1": +36V
Input Current, "0": 1.5mA

Power Supply Voltage
+5VDC ±5%

Power Supply Current
170mA max

Power Supply Sensitivity
±0.25μA/%

Environmental
Operating Temperature Range: -40 to 85°C
Storage Temperature Range: -40 to 85°C
Relative Humidity: 0 to 95% noncondensing
RFI Susceptibility: ±0.5% span error @ 400MHz, 5W, 3 ft.

Approvals (CSA, FM)
Class I; Division 2; Groups A, B, C, D.



Ordering Information

Backpanels and Accessories

User's Manual

8500-299

A5B User's Manual. Acromag provides (1) manual with first purchase order at NO CHARGE. Additional manuals must be purchased. The first manual must be specified on the purchase order to ensure delivery.

Backpanels

APB01

16-channel, non-multiplexed backpanel. Non-addressable analog I/O signal channels provide each module with its own analog bus. The module output switch is continuously "on" when using this backpanel. A temperature sensor is mounted on each channel to provide cold junction compensation for thermocouple modules. Field connections are terminated with four screw terminals at each module site.

APB02

16-channel, multiplexed backpanel. Has two analog buses; one for input, one for output. Two-bus configuration takes advantage of the switch-controlled outputs on the input modules and the track-and-hold inputs on the output modules. Up to four APB02 backpanels can be daisy-chained. Includes temperature sensor and four screw terminals at each module site.

APB03

Single channel, non-multiplexed backpanel. See tables below for additional parts required.

APB04

Dual channel, non-multiplexed backpanel. See tables below for additional parts required.

The following parts are required for DIN rail mounting of one APB03 or APB04 backpanel:

Quantity	Part No.	Description
1	UM-BEFE35	Base element with snap foot
2	UM-SE	Side element

The following parts are required to DIN rail mount two or more APB03 or APB04 backpanels:

Quantity	Part No.	Description
2	UM-BEFE35	Base element with snap foot
2	UM-SE	Side element
Note 1	UM-BE35	Base element w/o snap foot
Note 2	UM-VS	Connection pin

Note 1: Quantity = # of panels - 2

Note 2: Quantity = 4 x (# of panels - 2)

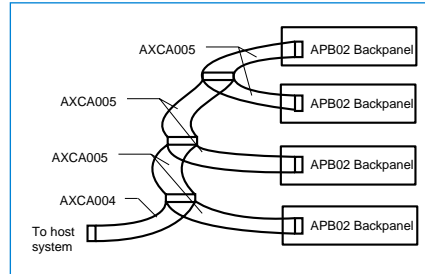
Cables

AXCA004-xx

Interface cable for host system connection. General-purpose 26 conductor ribbon cable for use with APB01/02 backpanels. Specify length, -xx, in feet when ordering.

AXCA005

Daisy-chain cable, interconnects up to four APB02 backpanels.



Power Supplies

AXPRT-003

Power supply, 120V AC input (104 to 132V range).

AXPRE-003

Power supply, 220V AC input (207 to 265V range).

Interface Accessories

AXEV

Evaluation board (single channel) with a test socket. See table below for additional parts required.

The following parts are required for DIN rail mounting of one AXEV evaluation board:

Quantity	Part No.	Description
2	UM-BEFE35	Base element with snap foot
2	UM-SE	Side element
4	UM-VS	Connection pin

AXIF

Universal interface board. Converts a 26-pin ribbon cable to 26 screw terminals for discrete wire. Mounts on AXRK-002 rack (standoffs, mounting hardware included). Use AXCA004 cable.

AVMEIF

VMEbus interface board, 32 inputs. Interfaces APB01 backpanel with a 26-pin ribbon cable to Acromag VME A/D boards.

Mounting Accessories

AXRK-002

19-inch metal rack for mounting the backpanels, power supplies, and universal interface board.

UM-BEFE 35

Base element with snap foot (for DIN rail mounting).

UM-BE 35

Base element without snap foot (for DIN rail mounting).

UM-SE

Side element (for DIN rail mounting).

UM-VS

Connection pin (for DIN rail mounting).

Miscellaneous Accessories

AXFS-003

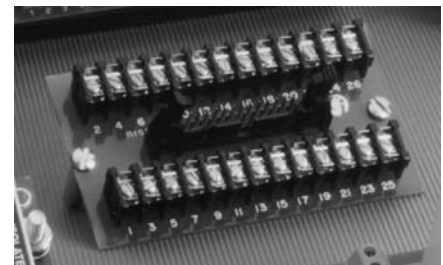
Fuses for backpanel, 4 amp, package of 10.

AXJP-003

Jumper strap, package of 10 jumpers. Connects I/O modules to direct the output of any input module to the adjacent output module on the APB01 backpanel. The jumpers can also be used to configure I/O addresses on APB02 backpanel.

AXR1

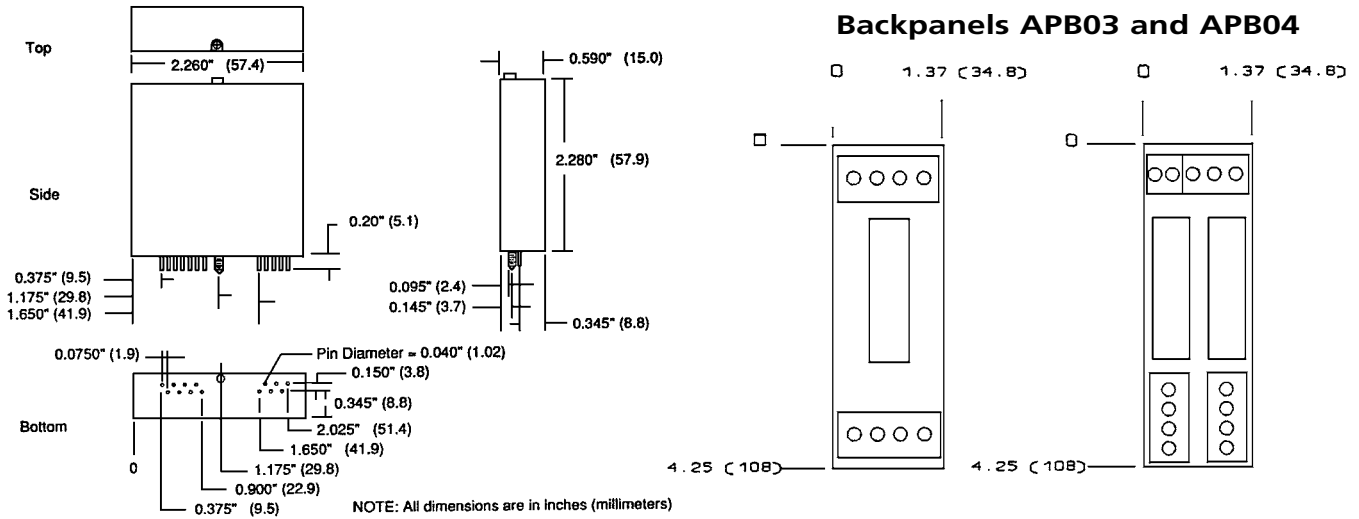
Current conversion resistor (precision 20 ohm 0.1%) for A5B32 current input module. Sockets are provided on APB01/02.



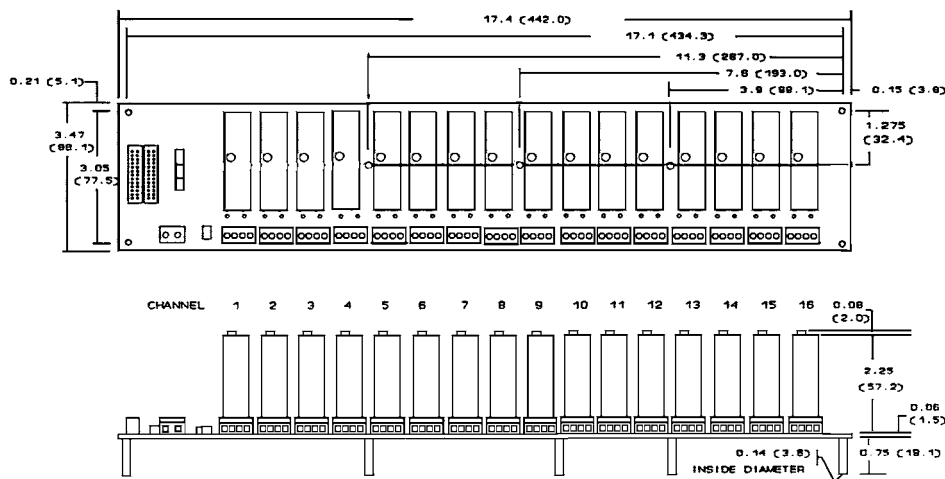
AXIF interface board



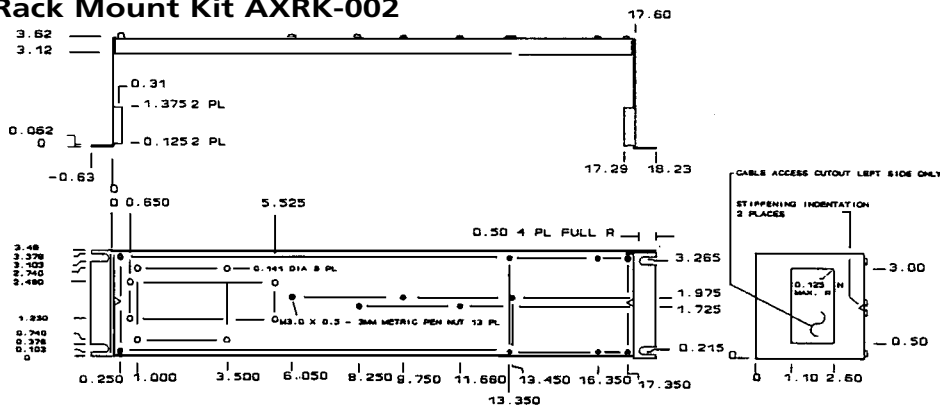
Dimensions



Backpanel APB01, APB02



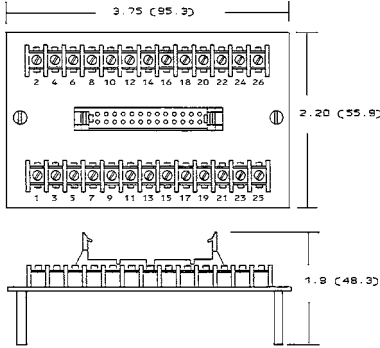
Rack Mount Kit AXRK-002



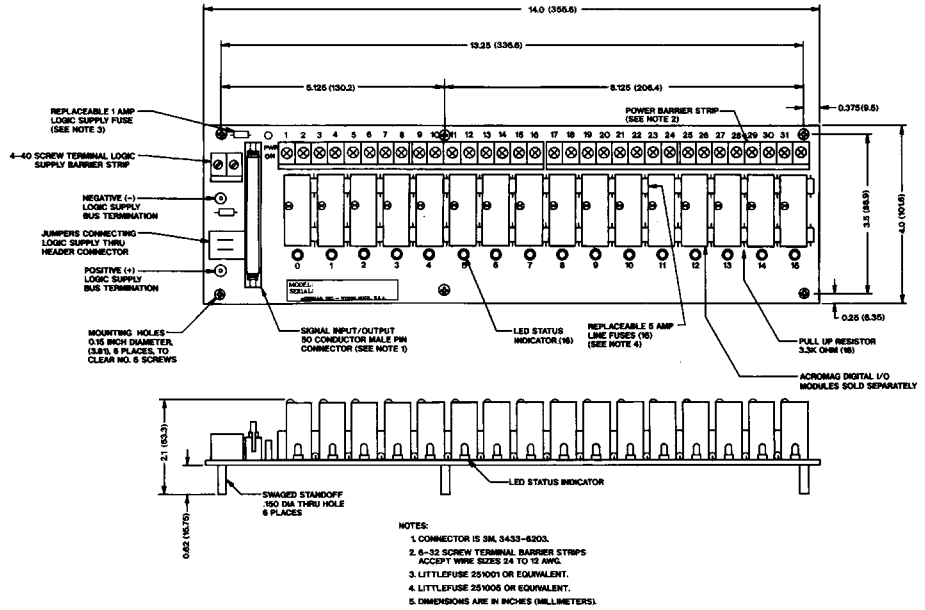


Dimensions

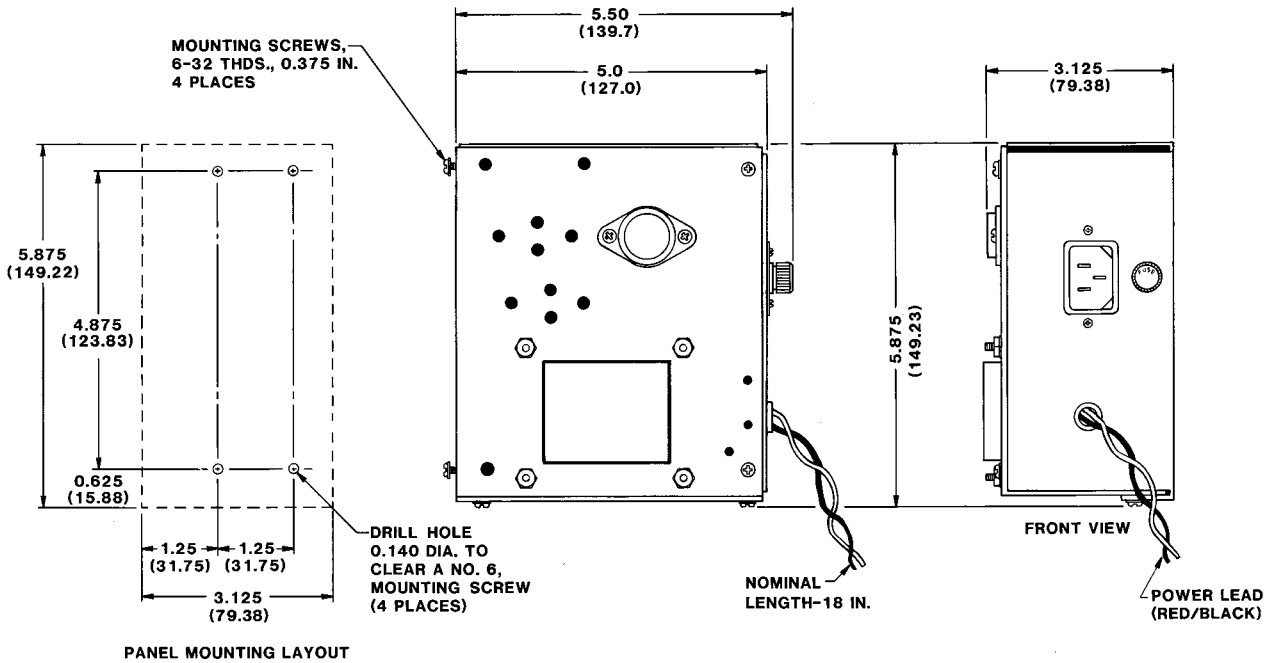
AXIF Outline Drawing



Digital I/O Panel APB16H-SSR



Power Supplies AXPRT-003 (115V) and AXPRES-003 (230V)



Dimensions are in inches (millimeters).