

Product Datasheet - Technical Specifications



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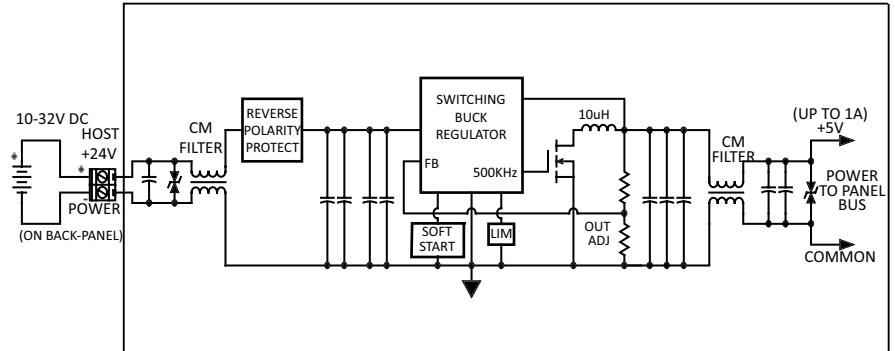
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Signal Conditioners: microBlox™ Series

uBDC1 DC Power Module



Wide-Range DC Voltage Input ♦ 5V/1A DC Output to Backpanel ♦ Supports Redundant Power

Description

Acromag's microBlox™ uB Series I/O modules offer a compact, high-performance solution for interfacing sensors and field devices with data acquisition systems. uB signal conditioning modules are ideal to isolate, filter, convert and amplify a wide variety of signal types for test, measurement and control systems. Just plug uB modules into 4, 8, or 16-channel backpanels in any mix for a high-density analog I/O interface. Channel-to-channel isolation provides optimal noise and surge protection from ground loops, spikes, and high common mode voltages.

The uBDC1 power module allows a backpanel populated with I/O modules to operate off DC power voltage levels other than 5V. This optional module plugs into a special socket on the backpanel to convert a power supply voltage from 10-32V DC to 5V/1A which will drive up to 16 I/O modules. uBDC1 modules include over-voltage, reverse-voltage and short-circuit protection (current limiting).

With the uBDC1 power module, users can also implement redundant power methods for the backpanel. In redundant applications, the uBDC1 becomes the primary power source.

Key Features & Benefits

- Allows use of wide range 10-32V DC power supplies to operate backpanels
- Enables implementation of redundant power to uB backpanels.
- Polarized to only fit in panel power slot
- Over-molded circuit has superior shock, vibration, moisture, and dust protection.
- -40 to 80°C (-40 to 176°F) operation
- UL, cUL Class I, Div 2, ABCD and ATEX Zone 2 hazardous location approvals



ISO9001
AS9100  MADE IN USA

Acromag 
THE LEADER IN INDUSTRIAL I/O

Signal Conditioners: microBlox™ Series

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Performance Specifications

See Backpanels for additional system specifications.

■ General

Dimensions

Height: 1.380" with connectors. 0.970" without.
Width: 0.425". Length: 1.425".

Input

10-32V DC.

Output Voltage

5V DC $\pm 5\%$ (4.7V to 5.3V range).

Output Current

1A (1.25A absolute maximum).

Efficiency

90% typical.

Output Ripple

Less than 150mVp-p, typical.

Response Time

Less than 15ms typical.

Over-Voltage Protection

TVS in module plus additional TVS protection provided on backpanel.

Current-Limiting

Built-In, plus additional limiting provided on backpanel.

Reverse-Voltage Protection

Built-In, plus additional protection provided on backpanel.

Filtering

Transient voltage suppression, capacitors, & common-mode I/O filtering.

Line Regulation

Less than 0.005% 10-32V, 1A, typical.

Load Regulation

Less than 4%, 0.05A to 1A, typical.

■ Environmental

Operating Temperature

-40 to 80°C (-40° to 176°F).

Ambient Operating Temperature

-40°C to +80°C, no deration.

Storage Temperature

-40 to 85°C (-40° to 185°F).

Relative Humidity

0 to 95% non-condensing.

Isolation

Non-isolated.

Power is common to host-side of I/O.

Shock and Vibration Immunity

Conforms to:

IEC 60068-2-6: 10-500 Hz, 4G, 2 hours/axis, for sinusoidal vibration.

IEC 60068-2-64: 10-500 Hz, 4G-rms, 2 hours/axis, for random vibration.

EC 60068-2-27: 25G, 11ms half-sine, 18 shocks at 6 orientations, for mechanical shock.

Electromagnetic Compatibility (EMC) Compliance

Minimum immunity per BS EN 61000-6-1 (2007):

CE marked, per EMC Directive 2004/108/EC.

Electrostatic Discharge Immunity (ESD),

per IEC 61000-4-2.

Radiated Field Immunity (RFI), per IEC 61000-4-4.

Electrical Fast Transient Immunity (EFT),

per IEC 61000-4-4.

Surge Immunity, per IEC 61000-4-5. Conducted RF

Immunity (CRFI), per IEC 61000-4-6.

Emissions

Class B product with emissions per BS EN 61000-6-3

(2007+A1:2011): enclosure port, per CISPR 16.

Low voltage AC mains port, per CISPR 16.

Approvals

CE compliant. RoHS Compliant.

UL/cUL Class 1, Division 2, Groups ABCD.

ATEX Zone 2.

Ordering Information

Model	Non-Isolated Input	Output
uBDC1	10-32V DC	5V, 1A DC

Accessories

Model	Description
uB04	4 channel panel, surface mount
uB04D	4 channel panel, DIN rail mount
uB08	8 channel panel, surface mount
uB08D	8 channel panel, DIN rail mount
uB16	16 channel panel, surface mount
uB16D	16 channel panel, DIN rail mount