RETIRED

microBlox™ Isolated I/O Modules w/ *Bluetooth*® Wireless Technology

DC Voltage INPUT uB31 (Narrowband) & uB41 (Wideband)

NARROW	WIDE	FIELD (INPUT)	HOST (OUTPUT)
uB31-01, 4Hz	uB41-01, 1KHz	-1V to +1V	-5V to +5V
uB31-02, 4Hz	uB41-02, 1KHz	-5V to +5V	-5V to +5V
uB31-03, 4Hz	uB41-03, 1KHz	-10V to +10V	-5V to +5V
uB31-04, 4Hz	uB41-04, 1KHz	-1V to +1V	0 to +5V
uB31-05, 4Hz	uB41-05, 1KHz	-5V to +5V	0 to +5V
uB31-06, 4Hz	uB41-06, 1KHz	-10V to +10V	0 to +5V
uB31-07, 4Hz	uB41-07, 1KHz	-20V to +20V	-5V to +5V
uB31-08, 4Hz	uB41-08, 1KHz	-20V to +20V	0 to +5V
uB31-09, 4Hz	uB41-09, 1KHz	-40V to +40V	-5V to +5V
uB31-10, 4Hz	uB41-10, 1KHz	-40V to +40V	0 to +5V
uB31-12, 4Hz	uB41-12, 1KHz	-60V to +60V	-5V to +5V
uB31-13, 4Hz	uB41-13, 1KHz	-60V to +60V	0 to +5V
uB31-B, 4Hz	uB41-B, 1KHz	Pgm ±1V to ±60V DC	Pgm Any -5V to +5V

Add model suffix "-CG" to specify Commercial Grade model with 0˚C to 55˚C operating temperature, ±0.125% accuracy, and no hazardous location approvals.

The microBlox™ modules offer a flexible space-saving solution for isolating, monitoring, and driving industrial process signals to interface with modern data acquisition systems. Individual microBlox™ modules plug into 4, 8, or 16 channel carriers in any mix to build flexible high-density analog I/O systems. Bluetooth wireless technology enabled versions allow input polling & trending, and input/output ranges to be wirelessly configured to your specific application using a smart phone or tablet. All microBlox™ components have a high immunity to harsh industrial environments, are CE & ATEX compliant, and UL approved for installation in Class I, Division II hazardous locations (pending).

The uB31 & uB41 models isolate a high-level DC voltage field input to an industry-standard host analog signal bus for the I/O ranges indicated in the Table above. The uB31 has higher filtering for signals below 4Hz, while the uB41 relaxes filtering somewhat for a wider signal bandwidth useful for high-speed applications up to 1KHz. See similar uB30/40 models for low-level (millivolt) ranges below 1V.

INPUT (FIELD)

Field Range:	Fixed DC Voltage ranges from ±1V to ±60V (see Table) and programmable voltage ranges from ±1V to ±60V ("-B"). Channel CJC switch can be ON or OFF for this model.
Resolution:	16-bit bipolar ADC, ±1V: 1/27395; ±5V/±10V/±20V/±40V: 1/34244; ±60V: 1/51366.
Resistance:	203.32KΩ (via resistive input divider x0.0163).
Input Sample Rate:	uB31: 40sps; uB41: 2000sps.
Normal Mode/Bandwidth:	uB31: -3dB at 4Hz typical; uB41: -3dB at 1KHz typical.
Protection:	TVS & Diode Clamps built-in, plus additional protection on back-panel.
Common Mode Rejection:	130dB typical, 50-60Hz.

OUTPUT (HOST)

Host Range:	0-5V or ±5V DC per model, or programmable from -5V to +5V ("-B" models).
Resolution:	16-bit DAC, 0-5V: 1/26305; ±5VDC: 1/52610.
Current Drive:	5V into 1KΩ minimum or 5mA max load.
Response Time:	Output Step 0-98% in 200ms (uB31) or 2ms (uB41).

GENERAL I/O

Power Consumption:	Up to 0.25W, or 50mA Max from 5V.
I/O Resolution:	Effective resolution is the least of input (A/D) and output (D/A) resolution: uBx1-01/-04: 1/27395; uBx1-02/-03: 1/34244; uBx1-04/-05/-06: 1/26305. uBx1-07: 1/34244; uBx1-08/-10/-13: 1/26305; uBx1-09/-12: 1/51366.
Accuracy:	Better than ±0.1%. "-CG" model: Better than ±0.125%.
Non-Linearity:	Better than ±0.05%.
Noise:	Less than 0.03% of 10V span p-p rms (uB31 or uB41).
Ambient Effect:	Less than ±80ppm/°C.
MTBF:	Consult Factory.

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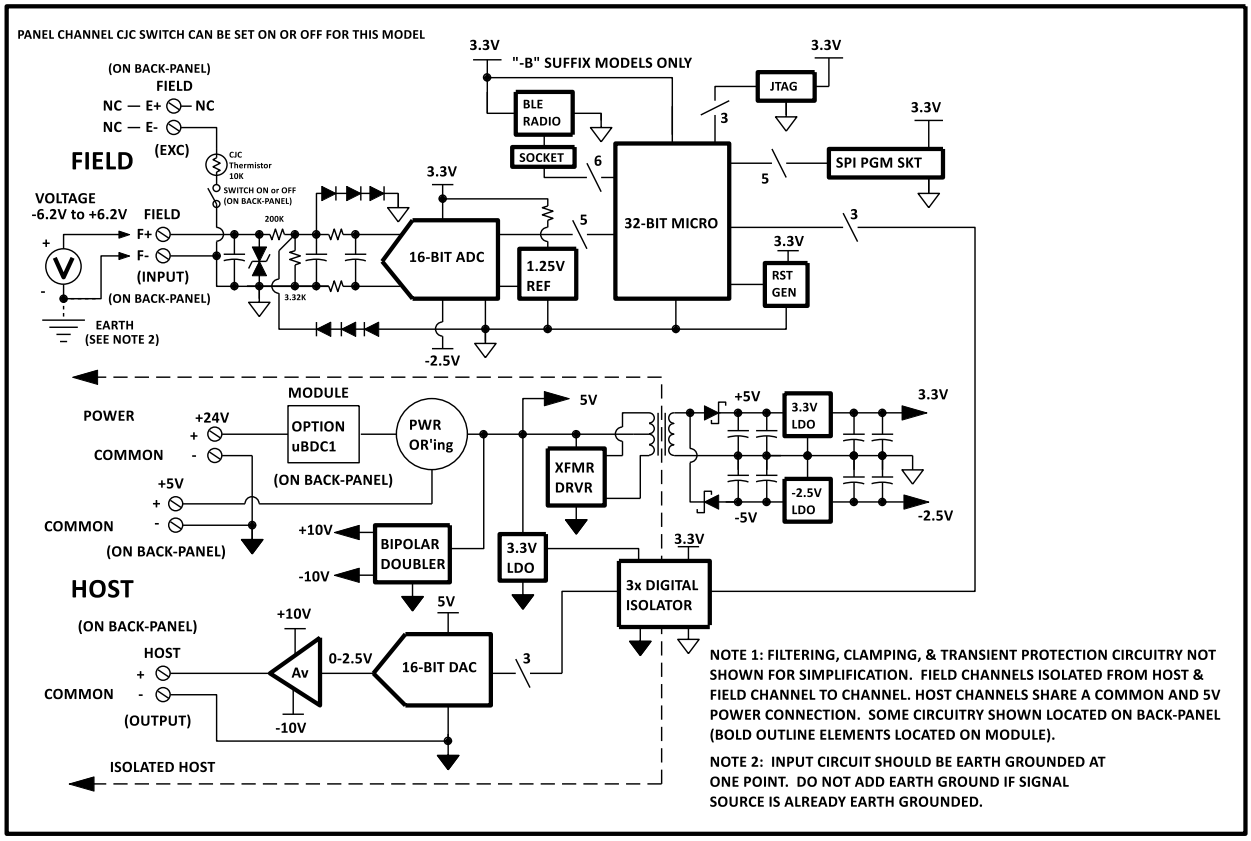
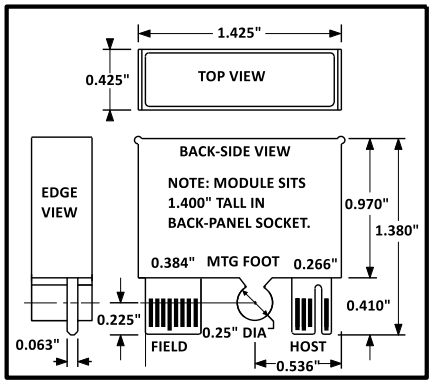
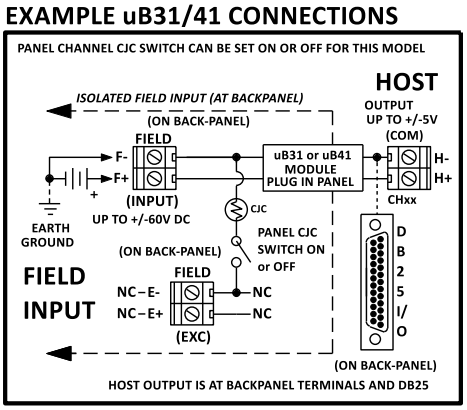
SIMPLIFIED uB31/41 ISOLATED DC VOLTAGE FIELD INPUT TO HOST VOLTAGE OUTPUT



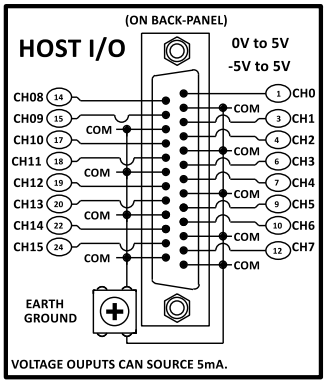
microBlox MODULE DIMENSIONS



EXAMPLE uB31/41 CONNECTIONS



DB25 HOST ANALOG I/O



Refer to 8501-038 microBlox™ family specifications for additional details and other available microBlox™ modules and accessories.

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Revision History

REV DATE	Version	EGR/DOC	Description of Revision
17 OCT 2017	B	BC/MJO	Added earth ground note 2, CJC switch note, formatting.
02 APR 2018	C	BC/MJO	Corrected ±40V Input Resolution.