



BRIDGE AMPLIFIER

Type B12-1B

- *User configurable input range*
- *High impedance output drive option*
- *Isolated sensor/transducer supply*
- *AC or low voltage (11-32 VDC, 12-24VAC) powered versions*
- *Wall or DIN rail mounting*
- *Module unplugs without disturbing wiring or breaking input current loops*
- *Analogue circuitry used throughout*

The B12-1B Bridge Amplifier is a versatile unit for converting signals from milli-volt and bridge type transducers (e.g. strain gauge, load and pressure transducers) into standard process signals.



As standard, the Bridge Amplifier provides user configurable ranges from 0-10mV to 0-100mV. The unit can be manufactured for other ranges to order e.g. 0-10V. The output signal is factory configured to order, the ranges available cover most of the common process signal types including current sink. A high impedance mA output drive option is also available. An isolated and stabilised power supply for excitation of bridge type circuits and other transducers requiring a constant voltage is provided.

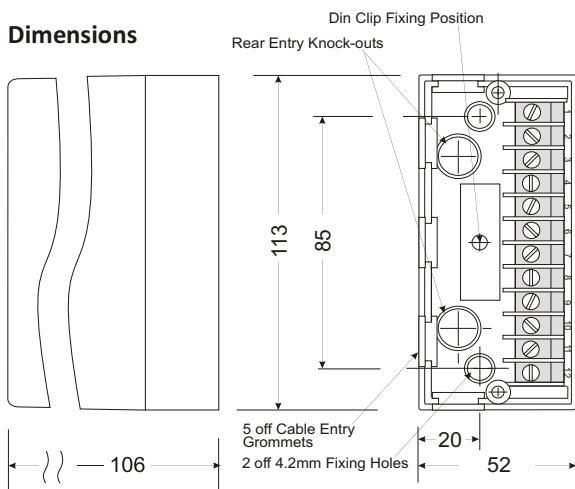
Information required when ordering

- Specify type 'B12-1/B'
- Input signal
- Output signal
- Transducer supply requirements
- Supply voltage and frequency

Options

- High output drive required (mA outputs) ?
- DIN rail mounting clip required ?

Dimensions



Specifications

Notes:.

1. Output ranges are factory calibrated for one type of signal and not user configurable
2. Outputs, other than those shown are possible - our sales team will be pleased to advise

Inputs

User adjustable within the range 0-10mV up to 0-100mV as standard. *Other ranges can be provided e.g. 0-10V - our sales team will be pleased to advise.*

Outputs

0-10mA (2000R), 0-20 mA (1000R), 4-20 mA (1000R)
High impedance output drive options: 0-10mA (5000R), 0-20 mA (2500R), 4-20 mA (2500R) *Maximum output impedances in ohms shown in brackets.*
0-5v, 1-5V, 0-10V, 2-10V (500R minimum)
Current sink 4-20mA @ 50 volts max.

Transducer Excitation Supply

Constant Current:

Typically 5mA

Set during manufacture to suit transducer.

Constant Voltage

Output	Typically 10V at 6mA max.
Accuracy	0.01%
Load Regulation	0.005% / mA
Temp. Coefficient	0.002% / °C

Response Time

1 sec as standard.

Isolation

The input and output are not isolated from each other, but are isolated from the power supply.

Calibrated Accuracy

± 0.1% FSD at 100% when factory calibrated.
NB Error introduced by User output range changes, typically 1% but may be corrected by span control.

Linearity Error

± 0.1% FSD

Output Ripple

0.2% RMS of FSD

Load Resistance Effect

0.001% of span / 100 ohm change

Stability

Over 24 hours ± 0.1% FSD, Over 1 year ± 0.25% FSD

Temperature Coefficients

Zero: ± 0.02% span / °C, Span: ± 0.02% span / °C

Environmental

Temperature: operating -10 to +60°C, storage -20 to +70°C
Humidity: 0 – 95% RH non-condensing

Power Supply

AC Supply: 110, 220 or 230V ±10% 50/60Hz 5VA

Fuse: 100mA quick-blow (internal)

Low voltage: 11-32VDC 4 W / 12-24VAC

Fuse: 250mA anti-surge (internal)

Supply Voltage Rejection

Span change: <0.02% span / % supply change.

Safety & EMC

Safety: EN61010-1, Immunity: EN50082-1,

Emissions: EN50081-1, CE certified

Mechanical

Weight: approx. 0.5kg

Enclosure: Fire retardant materials - PPO base, ABS cover

Screw terminal wire capacity: 2 x 1.5mm²

Electrical Connections



WARNING: these details are provided for pre-sales information only. Installation must be carried out in accordance with the User Guide

Inputs	1	Constant I or V (+)	
	2	Input Signal (+)	
	3	Input (-)	
	4	Constant I or V (-)	
	5	-no internal connection	
	6	-no internal connection	
Outputs	7	mA Output (+)	Current Sink
	8	mA Output (-)	8 (+)
		Voltage Output (+)	9 (-)
	9	Voltage Output (-)	
Supply	10	Earth AC	Earth DC
	11	Neutral Mains	Negative (-) Supply
	12	Line Supply	Positive (+) Option

Please Note: constant current or voltage transducer supply outputs and DC auxiliary supply versions are options which must be specified at time of order.



THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE THE FRONT COVER IS REMOVED. LIVE TERMINALS WILL BE EXPOSED.

Continuous development may necessitate changes in these details without notice

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