

**Small 25.4mm 3-Wire
Load Cell Amplifier / Strain Gauge Amplifier
AS0332B**

The AS0332B is a miniature circular board for **3-wire** systems providing a 4mA - 20mA current output, designed to fit inside a load cell or other transducer. The unit has individual multi-turn potentiometers for the precise setting of Zero and Span and is also available with **mid. zero output** (12mA for example) for compression / tension transducers. The inputs provide EMI-/RF-suppression. Transducer wires can be easily soldered onto the board.

Features

- Wide range power supply 10-30V
- 5V stabilised bridge excitation
- Bridge resistance 350 Ohm (or greater)
- Bridge sensitivity 0.3mV/V – 3mV/V
- Size **25.4mm** diameter, 21mm height
- Fast calibration procedure
- Reverse-polarity protection



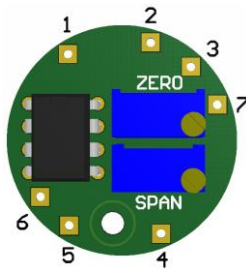
Applications

- Industrial Weighing
- Load Testing & Monitoring
- Overload Protection Systems

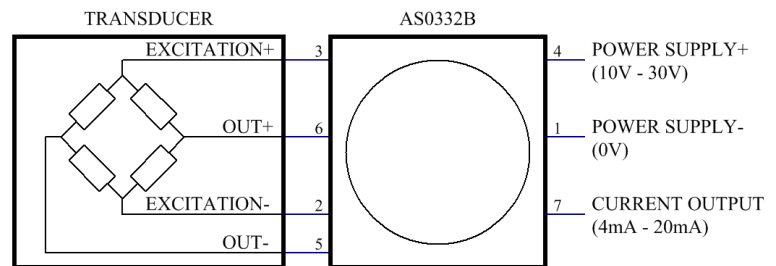
Ordering

Part number:	AS0332B-*
*Please specify required input range, between 0.3mV/V – 3mV/V Default 2.0mV/V: AS0332B-2.0MV	
Customer specific electrical / mechanical changes are possible – please contact us with your individual requirements.	

Board Connections



Schematic Diagram



Specifications

Parameter	Min	Typical	Max	Unit
Supply Voltage	10	24	30	V
Current Output – Zero (adjustable control)		4		mA
Current Output – Span (adjustable control)		20	23	mA
Bridge Sensitivity	0.3		3	mV/V
Bridge Resistance	350			Ohms
Bridge Excitation Voltage		5		V
Current Output Temp. Coefficient – Zero		0.15	1	uV/°C
Current Output Temp. Coefficient – Span		0.1		%/°C
Operating Temperature	-20		50	°C

Installation, Calibration and Sensitivity:

1. Connections:

The unit is provided with 7 pads around its periphery for the soldering of external connections. The holes in the pads are 1mm diameter (Pad size 1,9mm). The mounting hole has a diameter of 2.5mm (Pad size 5mm).

The connecting pads and wire colours, where wire tails are provided, are identified as follows -

Pad Number	Function	Typical Wire Colour
3	Bridge Excitation +ve	Red
2	Bridge Excitation -ve	Blue
6	Bridge Output +ve	Green
5	Bridge Output -ve	Yellow
4	Supply +ve (10-30V)	Red
1	Supply -ve (0V)	Black
7	4-20mA Output.	White/Black

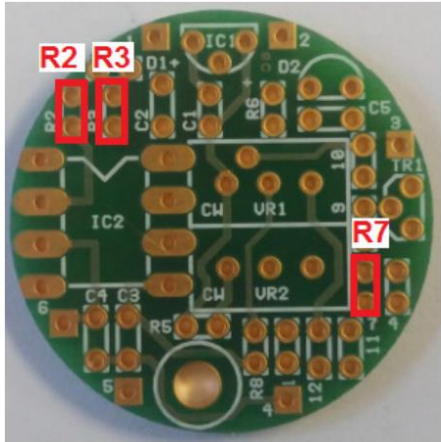
2. Calibration:

At zero load use ZERO potentiometer to set 4.00mA

At full load use SPAN potentiometer to set 20.00mA

Repeat above procedure several times until both settings are reached.

3. Sensitivity:

Input mV/V	R2 and R3 ohms	R7 ohms	Range mV/V	Resistors
0.3	33	120	0.25-0.37	
0.4	43	150	0.32-0.47	
0.5	56	180	0.41-0.60	
0.6	68	180	0.46-0.72	
0.7	75	270	0.57-0.79	
0.8	91	300	0.67-0.94	
0.9	100	330	0.73-1.02	
1.0	110	430	0.86-1.12	
1.1	120	560	0.99-1.22	
1.2	130	560	1.04-1.31	
1.4	160	560	1.20-1.56	
1.6	200	560	1.37-1.87	
2.0	270	560	1.62-2.35	
2.5	330	820	2.15-2.83	
3.0	390	1100	2.67-3.32	

Resistors R2 and R3 are always equal. They should be 1% 100ppm/C 1/8 watt grade or better.

Use either Top-side THT (1/8 watt) or Bottom-side SMD (0805) resistors.

Example: Top-side THT MF12 series from Farnell Electronics: 100R, Part MF 12 100R, Order code: 9342397.