SGA Series Strain Gauge Transducer Amplifier

PRODUCT SHEET

Features

- Variable gain sensitivity from 0.06 to 30.3mV/V
- Variable offset upto ±80%full range
- Switched range low pass filter 1Hz to 5KHz
- 10V @ 120mA excitation for up to 4off 350 ohm load cells
- High stability
- Non interaction gain and offset
- Wide range of power supplies
- Selectable outputs options- 0-5V, 0-10V, ±5V, ±10V, 0-20mA or 4-20mA
- High speed, up to 5KHz

introduction

The amplifier module is primarily intended for use with strain gauge based transducers.

It provides both the excitation supply for the transducer and conditions the signal to provide standard voltage or current outputs.

Physically, it is constructed on a single PCB and can be mounted in an enclosure or supplied simply as a PCB.

Power Supply			
Supply Voltage	24VDC	(18-28VDC)	(Model SGA-D)
	110/240VAC	(99-120/ 198-253VAC)	(Model SGA-A)
Transducer Supply			
Transducer Excitation	10 volts DC +/- 3% at 120mA minimum		
Transducer Excitation Stability	0.1% in 12 months +/- 0.005%/ºC, 0 to + 40ºC		
Input Characteristics			
Type	Strain gauge full bridge		
Nominal Transducer Impedance	15000 ohms max, 85 ohms min.		
Effect of transducer impendance temperature coefficient and input impedance temperature coefficient. Negligible @ worst case input impedance of 15000ohms.			
Common Mode Voltage	May be unbalanced by up to 30% max of excitation voltage (10V)		
Full Scale Transducer Output Range	0.06 to 30.3mV/Volt (full scale)		
Zero Adjustment	0 to +/-80% of full scale input		
Zero Temperature Coefficient	0.5 micro-volts/ºC max		
Long Term Zero Drift	0.10%/year max @ 2mV/Volt		
Input Filter	Set by dip switches giving -3dB points at nominally 1,5,10, 50, 100,500,1000,5000 Hz cut-off frequencies		

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See Strain Gauge Amplifier Standard Price List

Output Characteristics	
Voltage Output	Selectable to +/- 5VDC +/- 10VDC 0 to 5 VDC 0 to 10VDC
Maximum Load Current	Bipolar input (-F.S. to + F.S.) 3mA
Current Output	Selectable to 0-20mA 4-20mA
Maximum Loop Drive	500 ohms
Span Temperature Coefficient	0.007% of reading/ºC
Overall Input/Output Gain Stability	+/- 0.01%/ºC maximum

Controls	
Potentiometers	1 x fine gain, 1 x fine offset.
Switch Settings	DIL switches will be used for: Coarse Gain Coarse Offset Filter: In/Out and cut off frequency Output Range Selection Input Filter (1KHz)
Interaction	Gain and Offset non-interactive

Physical	
Operating Temperature Range	0 to +50ºC
Storage Temperature Range	-20 to 70ºC
Mechanical	Supplied with screw clamp terminals capable of accepting wires to 2.5mm²
Case	ABS case of maximum external dimensions of 160 x 80 x 55mm.

In the interests of continued development, we reserve the right to alter product specifications without prior notice.

CE 95