SGA/A & SGA/D

Analogue Strain Gauge Amplifier / Signal Conditioner

Introduction

The SGA offers a wide bandwidth and a wide input signal range. The device can be powered from AC or DC supplies providing excitation for up to 4 x 350 ohm strain gauge bridges.

The conditioned output signal can be selected from 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, ±5 V or ±10 V. Options include. Isolated DC supply, DIN rail mount and OEM module.

The Strain Gauge Amplifier (SGA) is supplied in a waterproof IP65 NEMA 4 bulkhead mountable case and is robust and fully CE compliant.

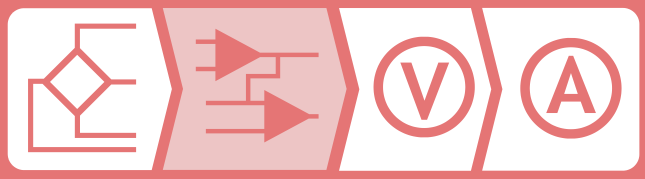
For a digital version with set point relays, communications and display options please see our Load Cell Amplifier Model (LCA20).

Features & Benefits

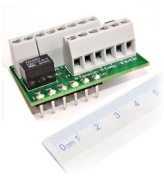
- Suitable for almost any analogue application
- Very stable bridge excitation
- Selectable sensitivity
- High frequency filtering
- User selectable analogue outputs
- Bridge completion module now available

Ideal Applications

- Silo weighing
- Data acquisition systems
- Process control
- PLC interfaces



Related Products



SGABCM
Bridge completion module for both quarter and half bridges, compatible with all versions of SGA

IS1224
Isolated 12/24 V power supply for the SGA

LVDT
Conditioner/amplifier, 4-20mA and voltage

SGA/D PCB
Strain gauge amplifier board

For pricing or any further information, please contact Omni Instruments Ltd.

Measurement and data acquisition solutions

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Specifications

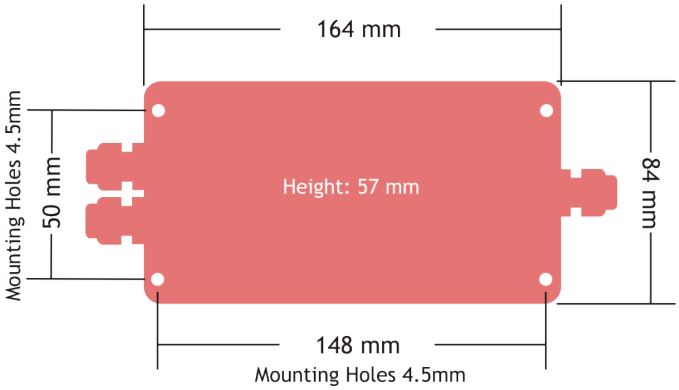
Electrical Specifications	
Power supply (SGA/A only)	110/230 V AC
Power supply DC (SGA/A and SGA/D)	18 to 24 V DC (See note 1)
Isolated Power Supply (IS1224 option)	9 to 36 V DC
Power supply current DC - (depends on loading)	90 mA typical
Bridge excitation	5 and 10 V
Bridge resistance (minimum for 10V Excitation)	85 Ohms
Bridge sensitivity	0.06 to 30 mV/V
Offset adjustment	±80 %FR
Maximum Voltage Output load	2 mA
Maximum Current Output load	500 Ohms
Bandwidth (No filter and > 2 mV/V)	DC – 6000 Hz
Filter cut-off (Switchable ranges)	1- 5000 Hz
Zero temperature coefficient (@2.5 mV/V)	0.002 %/°C
Span temperature coefficient	0.007 %/°C
Linearity	0.03 %FR
Output options	±10 V, ±5 V, 0-10 V, 0-5 V, 0-20 mA, 4-20 mA

Note 1: 18 V max at full load (four 350 Ohm load cells connected in parallel @ 10 V excitation)

Environmental	
Operating temperature range	-10 to 50 °C
Storage temperature range	-20 to 70 °C
Maximum Humidity	95% Non-Condensing
IP Rating	IP67/Nema4

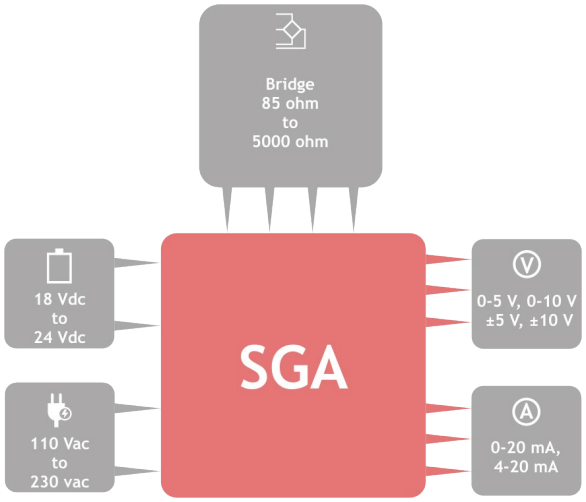
Approvals	
European EMC Directive	2004/108/EC
Low Voltage Directive	2006/95/EC

Mechanical



IP67 ABS field case fitted with 3 M16 cable glands
Cable diameter: 4mm (0.16") to 7mm (0.27")

Functional Connections



Order Codes

SGA-A
110/230V AC 50-60Hz for connecting up to 4 transducers (min 350R each) in an ABS Case

SGA-D
18/24V DC for connecting up to 4 transducers (min 350R each) in an ABS Case

SGABCM
Retro fit PCB Bridge Completion Module for the SGA

IS1224
Isolated DC PSU Module for SGA/D

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