

Analogue Strain Gauge Amplifier / Signal Conditioner

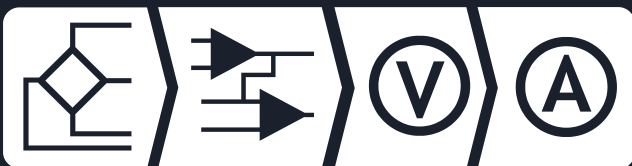


Features & Benefits

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

Applications

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



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).

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 A&D PCB
Strain gauge amplifier board

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
Offset adjustment	0.06 to 30 mV/V
Maximum Voltage Output load	±80 %FR
Maximum Current Output load	2 mA
Bandwidth (No filter and > 2 mV/V)	500 Ohms
Filter cut-off (Switchable ranges)	DC – 6000 Hz
Zero temperature coefficient (@2.5 mV/V)	1- 5000 Hz
Span temperature coefficient	0.002 %/°C
Linearity	0.007 %/°C
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)

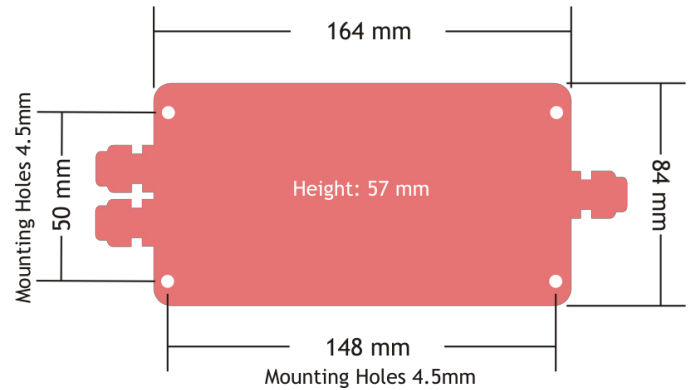
Environmental

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

Approvals

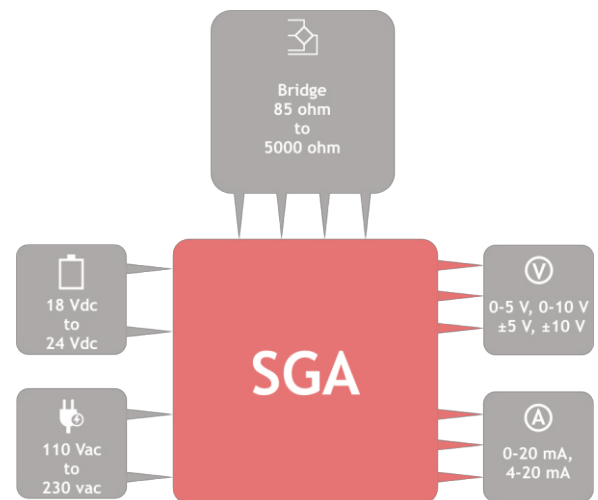
European EMC Directive	2004/108/EC
Low Voltage Directive	2006/95/EC

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