

Strain Gauge/Load Cell Amplifier/Signal Conditioner



The SGA Strain Gauge Amplifier is a high performance signal conditioner for single or multiple strain gauge bridge sensors such as load, force, pressure and torque

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 available with AC or DC power supply options. Robust and fully CE compliant.

For a digital version with set point relays, communications and display options please see our Load Cell Amplifier Model (LCA15).

Specification at a Glance

- 10 V excitation for up to 4 x 350 ohm strain bridges
- IP65 ABS field case with cable glands
- Analogue output options: 0-20 mA, 4-20 mA, 0-10, 0-5 ± 5 and ± 10 V
- Wide range filtering 1 Hz to 5 kHz
- Switch selectable offset $\pm 70\%$ FS
- Adjustable transducer sensitivity 0.1 to 30 mV/V
- 3 year manufacturer's warranty
- Full CE approval
- IP65 / NEMA 4 enclosure dimensions 160 x 80 x 55 mm



User 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

- Alternative Energy
- Silo & Weighing
- Marine
- Food Industry



Bridge • Analogue • Voltage & Current

Related Product



SGA A&D pcb
Strain gauge amplifier board



LVDT
Conditioner/amplifier, 4-20mA and voltage



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



IS12/24
Isolated 12/24 V power supply for the SGA

Case Study

The Application:

A leading marine publication wanted to carry out tests on various makes of anchors to determine their effectiveness and grade them on their merits. An anchor's most important feature is its holding power.

The requirement was to capture the varying holding power of each anchor over a period of several minutes and present the results as a series of graphs in a feature article.

The Solution:

A load link was fitted to the anchor chain and connected to an SGA Strain Gauge Amplifier. The IP65 rated SGA was

set up to feed a 0-5V signal proportional to the holding power into a data-logger, thereby providing the publication with the data required to write an informative article for their readers.



CE & Environmental

Storage temperature	- 10 °C to +50°C
Operating temperature	- 20 °C to +70°C
Relative humidity	95% maximum non condensing
IP Rating	IP65 / NEMA 4

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

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