



**APPLIED MEASUREMENTS LTD.**  
Transducer Specialists...

+44 (0) 118 981 7339

[info@appmeas.co.uk](mailto:info@appmeas.co.uk)

<https://appmeas.co.uk>

## SGA Load Cell Amplifier

### Key Features:

- Input: 0.06mV/V to 30.3mV/V
- Output: 0-5Vdc, 0-10Vdc, 4-20mA, 0-20mA, ±5Vdc or ±10Vdc
- Environmental Protection: IP65
- High Speed: Bandwidth 6kHz max.
- Mains & 18-24Vdc Versions
- Very Stable Bridge Excitation
- Selectable Sensitivity
- High Frequency Filtering
- User Selectable Analogue Outputs
- IP65 ABS Field Case with Cable Glands
- Surface Mount PCB
- Switch Selectable Offset ±70% FS
- 3 Year Guarantee
- Full CE Approval



The [SGA load cell amplifiers](#) provide a high stability, high speed, conditioned analogue output from up to four 350Ω strain gauge bridges connected in parallel, from very low-level input signals amplifying them to a stable, high-level industry standard process signal such as 0-10Vdc or 4-20mA.

Other great features of the SGA include; adjustable transducer sensitivity 0.06 to 30 mV/V, user-selectable analogue outputs ±10V, ±5V, 0-10V, 0-5V, 0-20mA, 4-20mA, easy configuration using non-interactive zero & span controls

And variable low-pass filters. All these features allow you to fine tune the SGA to your application.

We can supply two different versions of the amplifier:

SGA-A model - requires a 110 or 240Vac supply or 18-24Vdc supply

SGA-D model – requires a 18-24Vdc supply

The SGA amplifier is housed in a rugged ABS enclosure sealed to IP65 making it suitable for a wide variety of industrial applications.

We can supply the amplifier fully wired and calibrated with any of our wide range of strain gauge load cells, please contact our [technical sales team](#).

[See our full range of load cell amplifiers.](#)

### Options:

- AC or DC Supply Versions, AC & DC Versions or DC Only Versions
- Internal Bridge Completion Module Catering for ¼-Bridge and ½-Bridge Strain Gauge Configurations
- IP65 Enclosure for General Industrial Locations



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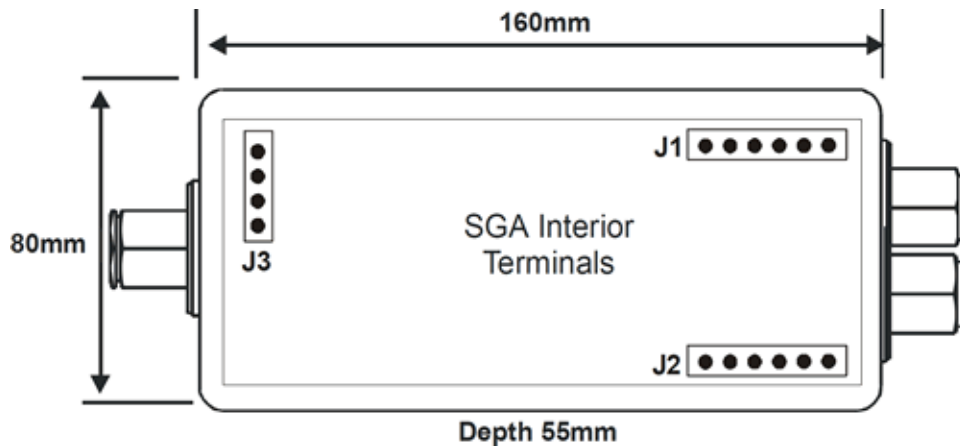
## Industries:

- Automotive
- Agriculture
- Silo and Weighing Industry
- Construction
- Alternative Energy
- Civil Engineering
- Lifting and Handling
- Waste Management

## Applications:

- Weighing Platforms
- Vessel Weighing Systems
- Weighbridges
- Conveyor Weighing Systems
- Bridge Structure Monitoring
- Waste Management Systems
- Lifting and Handling
- Monitoring of Anchor Loads
- Truck Load Weight Monitoring
- Skip Weighing System
- Multi-Cell or Multi-Transducer Installations
- Monitoring of Building Foundations
- Force Measurement in Formula Racing
- Silo Weighing
- Measuring the Power Output of a Motor
- Weighbridges

## Dimensions (mm):



## Ordering Codes:

Core Product	Supply Voltage	Example Result
SGA	99-120/198-253Vac (in ABS case)	SGA/A
SGA	18-28Vdc (in ABS case)	SGA/D
SGA	18-28Vdc (PCB only)	SGAPCB/D
D4	DIN Rail Mounts for SGA Case	D4
IS1224	Isolated 9-32Vdc PSU for SGA/D	IS1224
SGABCM	¼ & ½ Bridge Completion Module	SGABCM

## Associated Products:



[Load Cells & Force Sensors](#)



[Pi600 Pressure Sensor](#)



[AML/SGD Displacement Sensor](#)



[Torque Transducers & Torque Sensors](#)



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## Specification:

Parameter	Min	Typical	Max	Units
Power supply (SGA/A) 50 - 60Hz	99/198	110/230	126/253	V AC
Power supply DC (SGA/A and SGA/D)	18		24	V DC (Note: 1)
Power supply IS12/24 - Isolated (optional)	9		36	V DC
Power supply current DC :- (depends on loading)	50	90	200	mA
Bridge excitation 350R Strain Gauge	9.5	10	10.5	V
Bridge resistance	85			Ohms
Bridge sensitivity (Switchable)	0.06		30	mV/V
Gain adjustment (Pot - fine adj.)	0.06		1.0	mV/V (Note: 2)
Offset adjustment (Pot - fine adj.)	-1.25		+1.25	%FR (FR=Full Range)
Offset adjustment (Switchable - coarse adj)	±1.25		±79	%FR
Output load (Voltage output)			2	mA
Output load (Current output)	0		500	Ohms
Bandwidth (No filter and > 2mV/V) - 3dB point	DC		6	kHz
Filter cut-off (Switchable ranges) - 3dB point	1		5000	Hz
Zero temperature coefficient (@ 2.5mV/V)		0.002	0.009	%FR/ °C at 2.5mV/V FR
Span temperature coefficient		0.007	0.01	%FR/ °C
Linearity		0.03		%FR
Gain stability -1st 1000 Hours		0.2		%FR
Gain stability - 2nd 1000 Hours		0.1		%FR
90 day Offset stability		3.3		uV
Output load stability gain (0 - 100%)			0.01	%FR
Output load stability offset (0 - 100%)			0.01	%FR
Power supply rejection gain (0 - 100%)			0.01	%FR
Power supply rejection offset (0 - 100%)			0.01	%FR
Operating temperature range	-10		50	°C
Storage temperature range	-20		70	°C
Humidity			95	%
Note 1: 18V max at full load.	Note 2: Depends on sensitivity settings			
Output Options Set by On-Board Switch				
±10V, ±5V, 0-10V, 0-5V, 0-20mA, 4-20mA				
Connections				
Field screw terminals - 2.5mm <sup>2</sup> rising clamp				
Enclosure				
ABS case 164 x 84 x 55 sealed to IP65 fitted with 3 off cable glands				
Controls				
Gain pot, Offset pot, Coarse gain switches, Coarse offset switches, Filter cut-off switches, Output mode switch				
Environmental				
CE Environmental Approvals	European EMC Directive 2004/108/EC, Low Voltage directive 2006/95/EC			