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Amplificator analogic SGA



Amplificator analogic SGA Producator: LCM Systems SGA Analogue Strain Gauge Amplifier

Descriere

SGA Analogue Strain Gauge Amplifier

Features :

- Very Stable Bridge Excitation
- Selectable Sensitivity
- High Frequency Filtering
- User Selectable Analogue Outputs
- High Specification
- IP65 ABS field case with cable glands
- Surface mount PCB
- Wide range filtering 1Hz to 5kHz
- Switch selectable offset ±70% FS
- Shunt Calibration facility (120Kohms) Excitation: regulated 10V @110mA

The SGA range of strain gauge amplifiers offers great flexibility. Both the 110/230Vac powered SGA/A and 18-24Vdc powered SGA/D offer 10volt on-board excitation, capable of powering up to four 350ohm strain gauge bridges. Please note that the 110/230Vac version can also be DC powered.

With an input sensitivity range of ±0.06 to ±29 mV/V. Any sensor in this input range can be amplified to give ±10V, ±5V, 0-10V, 0-5V, 0-20mA or 4-20mA outputs.

There is also a wide offset control, using a combination of switches and a potentiometer. This gives an adjustment range of ±70%.

The SGA is an ideal product for many OEM customers, as its flexibility means that it can be configured to suit most applications.

The SGA can be supplied calibrated with any of LCM Systems sensor range or could be integrated within a larger instrumentation system.

Specification :

Parameter				
	Min	Typ	Max	Units
Power supply (SGA/A):- (110/230Vac) 50 - 60Hz	-	110/230	-	V AC
Power supply DC :-	18	-	24*	V DC
Power supply current DC :- (depends on loading)	50	90	200	mA
Bridge excitation 350R Bridge	9.5	10	10.5	VDC
Bridge resistance	85	-	-	Ohms
Bridge sensitivity (Switchable)	0.06	2.5	29	mV/V
Gain adjustment (Pot - fine adjustment.)	0.06	-	1.0	mV/V
Offset adjustment (Pot - fine adustment.)	-1.25	-	+1.25	%FR
Offset adjustment (Switchable - coarse adjustment)	±1.25	-	±79	%F
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	%/ºC@2.5 mV/V
Span temperature coefficient	-	0.007	0.01	%°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	- 20	-	50	°C
Storage temperature range	-40	-	70	°C
Humidity	-	-	95	%
*N.B. 18V max at full load FR= Full Range				
Output options set by on board switch	±10V, ±5V, 0-10V, 0-5V, 0-20mA, 4-20mA			
Connections	Field screw terminals - 2.5mm² rising clamp			
Enclosure	ABS case 160 x 80 x 55sealed to IP65 fitted with 3off cable glands			
Controls	Gain pot Offset pot Coarse gain switches Coarse offset switches Filter cut-off switches Output mode switch			

CE & Environmental				
Storage temperature	-20 to +70ºC			
Operating temperature	-10 to 50°C			
Relative humidity	95% maximum non condensing			
Safety/Low Voltage Directive	2006/95/EC			
EMC Directive	2004/108/EC			

Parameter

CE & Environmental