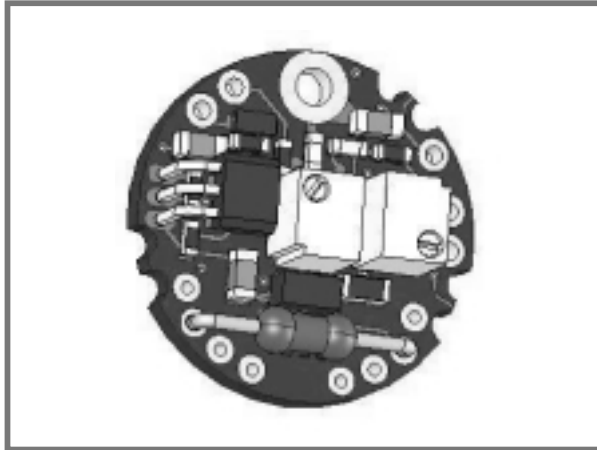


# In-Cell/Miniature Analogue Strain Gauge Voltage & Current SIGNAL AMPLIFIERS

## ICA Series



- **Miniature Design**  
(Ø19.5mm x 7.6mm high)
- **0.1-10volt, 0.1-5volt, 0-±10volt and 4-20mA Output Versions**
- **User Adjustable Sensitivity**
- **Zero and Span Controls using 20 turn potentiometers**
- **CE Approved**
- **3 YEAR WARRANTY**

### DESCRIPTION

The new generation of ICA series In-Cell/Miniature Strain Gauge Amplifiers are designed for applications where it is not possible to fit a larger amplifier due to space constraints, or where a direct amplified output is required from a sensor.

The size of the ICA means that it can be fitted integral to most strain gauge based products, giving a pre-scaled output ready for use. There are 2 variant of new models available; standard stability (S) for general industrial applications and high stability (H) for applications where accuracy and performance are of utmost importance. Although this form of amplifier does not offer the performance available from our SGA series, they offer other advantages as detailed above.

The ICA series can be bought separately or supplied as an integral part of one of our standard or special sensor products.

As with all Applied Measurements products, the ICA is supplied with a 3 Year Warranty.

CHARACTERISTICS		ICA1S	ICA2S	ICA3S/ICA6S	ICA4S/ICA5S	UNITS
<b>Output Range:</b>		0.1 to 10V	0.1 to 5V	0 to ±10V	4 to 20mA	see opposite
<b>Minimum Output:</b>		0.07V	0.07V	0V	3.8mA	see opposite
<b>Number of Connections:</b>		3	3	4/3	3/2	see opposite
<b>Mode of Operation:</b>		uni-directional	uni-directional	bi-directional	uni-directional	see opposite
<b>Power Supply</b>	<b>Minimum:</b>	13	8.5	±13/+14	10/7.5	Vdc
	<b>Typical:</b>	24	-	-	24	Vdc
	<b>Maximum:</b>	30	28	±15/+18	30	Vdc
<b>Bridge Excitation Voltage:</b>		5±0.1	5±0.1	5±0.1	5±0.1/1.1nom	Vdc
<b>Nominal Bridge Resistance:</b>		350-5K	350-5K	350-5K	350-5K	ohms
<b>Input Sensitivity Range:</b>	<b>Minimum:</b>	0.5	0.5	0.5	0.5	mV/V
	<b>Typical:</b>	2.5	2.5	2.5	2.5	mV/V
	<b>Maximum:</b>	150	150	150	150/55	mV/V
<b>Minimum Resistance across Output:</b>		5000	5000	5000	N/A	ohms
<b>Maximum Loop Resistance:</b>		N/A	N/A	N/A	250/800	ohms
<b>Output Bandwidth:</b>		1000	1000	1000	1000	Hz (max)
<b>Zero Temp Coefficient:</b>		0.0025 (0.0015)	0.0025 (0.0015)	0.0025 (0.0015)	0.0025 (0.0015)/0.005	±%FSO/°C typ.
<b>Span Temp Coefficient:</b>		0.0064 (0.0051)	0.0064 (0.0051)	0.0064 (0.0051)	0.0064 (0.0051)/0.014	±%FSO/°C typ.
<b>Output Linearity:</b>		<0.02	<0.02	<0.02	<0.02	±%FSO
<b>Operating Temperature Range:</b>		-40 to +85	-40 to +85	-40 to +85	-40 to +85	°C
<b>Maximum Relative Humidity:</b>		95	95	95	95	% non-condensing
<b>Connection Method:</b>		Plated through holes	Plated through holes	Plated through holes	Plated through holes	see opposite

Transducer Specialists...

## APPLIED MEASUREMENTS LIMITED

3 MERCURY HOUSE - CALLEVA PARK - ALDERMASTON - BERKSHIRE - RG7 8PN - UK

Tel: (+44) 0118 981 7339 Fax: (+44) 0118 981 9121 email: info@appmeas.co.uk Internet: www.appmeas.co.uk

Issue 10/07

