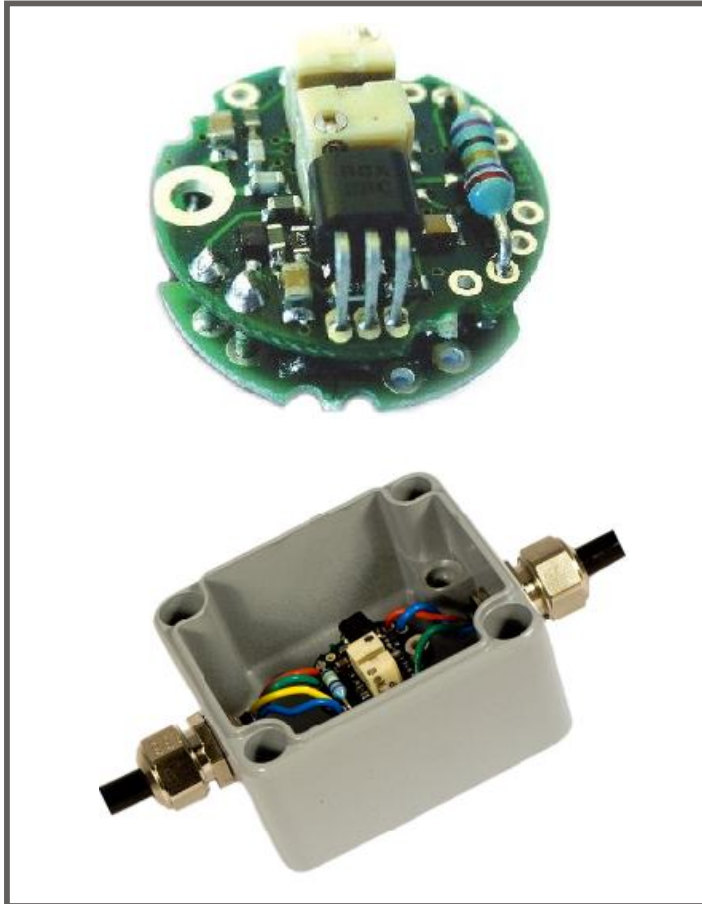


# In-Cell/Miniature Analogue Strain Gauge Voltage & Current **SIGNAL AMPLIFIERS**

## ICA Series



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

### Options Available

High Stability version with improved thermal performance

Calibrated with any of our strain gauge based transducers as a Complete System with UKAS Traceable Certificate

Fitted inside compact die-cast enclosure for in-line mounting on transducer cable. Dimensions (DxWxL): 30mm x 45mm x 50mm

### **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.

We are able to supply the ICA fitted inside a miniature IP65-rated die-cast enclosure to provide signal conditioning 'in-line' with the transducer cable, providing a neat and simple amplified system.

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.

*Transducer Specialists...*

## **APPLIED MEASUREMENTS LIMITED**

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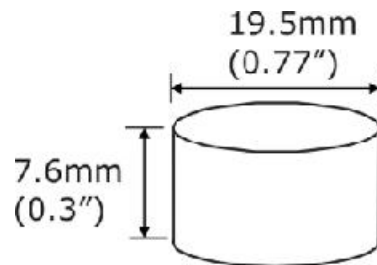


# SPECIFICATION

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

All dimensions in mm

## ICA Amplifier Dimensions



## Optional ICA Enclosure Dimensions

