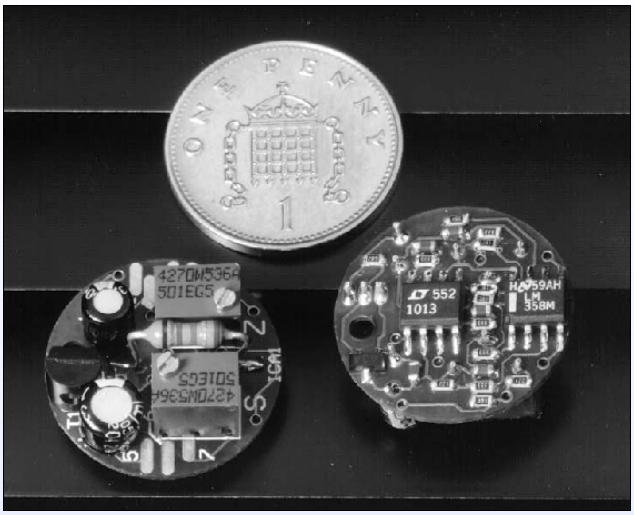
In-Cell/Miniature Analogue Strain Gauge Voltage & Current SIGNAL AMPLIFIERS ICA Series

Issue - Sept 2003



- **Miniature Design (Ø19mm x 10mm high)**
- **0-10volt, 0-5volt. 0-±10volt and 4-20mA Versions**
- **User Adjustable Sensitivity**
- **Zero and Span Controls using 20 turn potentiometers**
- **CE Approved**
- **3 YEAR WARRANTY**

DESCRIPTION

The ICA series of In-Cell/Miniature 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. Although this form of amplifier does not offer the performance available from our SGA series, but has other advantages, as detailed above.

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

This product is supplied with a 3 Year Warranty.

CHARACTERISTICS	ICA1	ICA2	ICA3	ICA4	UNITS
Output Range:	0 to 10V	0 to 5V	0 to ±10V	4 to 20mA	see opposite
Minimum Output:	0.07V	0.07V	0V	3.8mA	see opposite
Number of Connections:	3	3	4	3	see opposite
Mode of Operation:	uni-directional	uni-directional	bi-directional	uni-directional	see opposite
Power Supply Minimum:	15	8.5	24	18	Vdc
Typical:	24	12	24	24	Vdc
Maximum:	30	14	30	28	Vdc
Bridge Excitation Voltage:	2.5	2.5	2.5	2.5	Vdc
Nominal Bridge Resistance:	350	350	350	350	ohms
Input Sensitivity Range: Minimum:	0.5	0.25	0.5	0.25	mV/V
Typical:	2.5	2.5	2.5	2.5	mV/V
Maximum:	20	20	20	20	mV/V
Minimum Resistance across Output:	5000	2500	5000	N/A	ohms
Maximum Loop Resistance:	N/A	N/A	N/A	1000	ohms
Output Bandwidth:	1000	1000	1000	1000	Hz
Zero Temperature Coefficient:	<1	<1	<1	<1	microVolt/°C
Span Temperature Coefficient:	<0.015	<0.015	<0.015	<0.015	±%FSO/°C
Output Linearity:	<0.05	<0.05	<0.05	<0.05	±%FSO
Tempearture Range Operating:	0 to +50	0 to +50	0 to +50	0 to +50	°C
Storage:	-10 to +60	-10 to +60	-10 to +60	-10 to +60	°C
Relative Humidity:	95	95	95	95	% non-condensing
Connection Method:	7 solder pads	7 solder pads	7 solder pads	7 solder pads	see opposite

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