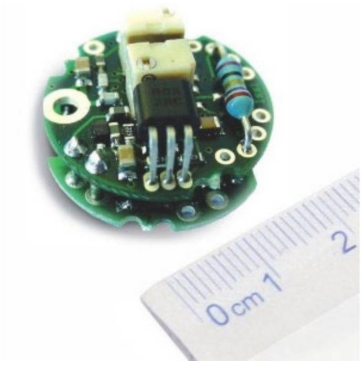
Novatech
Loadcell Design & Manufacture

ICA6H Loadcell Amplifier



- Low drift
- Â±10V output
- 15 to 24Vdc supply range
- Protected against reverse supply connection
- 3kHz bandwidth (-3dB 2mV/V)

Specification

Parameter	Value	Unit
Supply voltage range	15 (Min) / 24 (Max)	V
Operating current	30	mA
Operating temperature range	-40 (Min) / 85 (Max)	°C
Storage temperature range	-40 (Min) / 85 (Max)	°C
Reverse polarity protection	-30	V
Bridge excitation	4.9 (Min) / 5.0 (Typical) / 5.1 (Max)	V
Bridge Impedance	1000 (Min) / 5000 (Max)	Î©
Bridge sensitivity	0.5 (Min) / 150 (Max)	mV/V
Output voltage range	-10 (Min) / +10 (Max)	V
Output load	5000	Î©
Band width (-3dB 2mV/V)	0 (Min) / 3 (Max)	kHz
Slew rate (2mV/V)	0.09	V/µs
Zero adjustment	±2	%FR
Span adjustment	±8	%FR
Nonlinearity	0.02	%FR
Zero temperature stability	0.0004 (Typical) / 0.0015 (Max)	±%FR/°C
Span temperature stability	0.002 (Typical) / 0.0051 (Max)	±%FR/°C

This miniature loadcell amplifier is designed for use with strain gauge loadcells. It has a bi-polar Â±10V output for use with bi-directional loadcells even though it is powered from a uni-polar supply.

The amplifier can be mounted in an in-line stainless steel pod sealed to IP67 or it can be mounted inside some loadcells. The pod is shown below, it has the advantage of easy access to the calibration trimmers. If you require the amplifier to be mounted in a loadcell please consult our engineering department. CE - This instrumentation product complies with the requirements of the European EMC directive.If the ICA6H does not have all the functions you require the SGA Loadcell Amplifier may be more suitable. An SGA data-sheet is available.

Notes

- FR = Full Range
- The voltage between the power supply connections and the load cell shield should not exceed 50V.
- Any leakage resistance will be greater than 10MΩ.
- The supply should be current limited externally.
- The supply connections must not be reversed.
- Bridge resistances down to 350Ω can be used if the supply voltage is reduced to 18V.
- The output cable length can be up to 50metres using suitable screened cable.
- Bandwidth and slew rate are affected by the bridge sensitivity.
- The amplifier specifications must be read in conjunction with the appropriate loadcell data-sheet to determine the overall specification of the loadcell and amplifier combined.

Connections

The amplifier uses four core screened cable with two cores used for the power supply and two cores for the amplifier output. Detailed connection information is supplied with each loadcell. Wire colours are dependant upon the type of cable used with the loadcell.

Files

Type	Title	Download
PDF Instructions	Printable user instructions.	Download

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