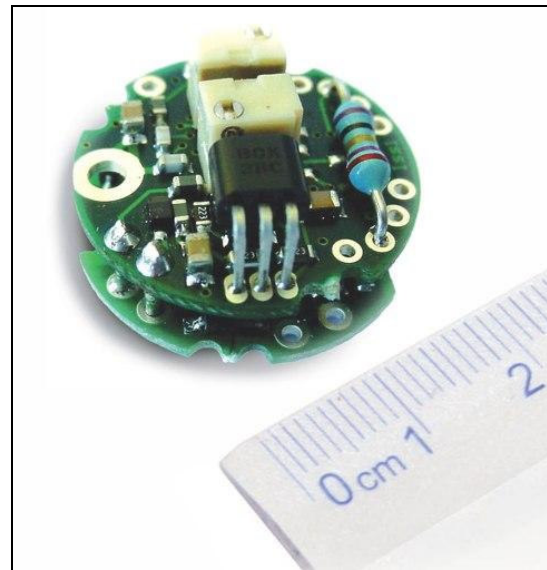


## ICA6H

### Loadcell Amplifier

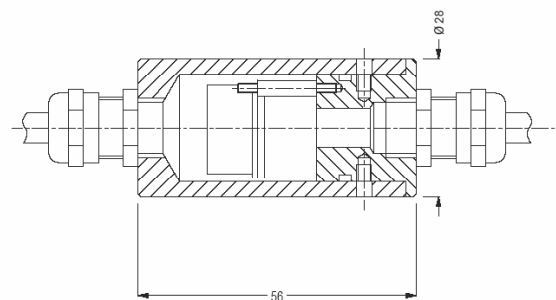
- ◆ Low drift
- ◆  $\pm 10\text{V}$  output
- ◆ 15 to 24Vdc supply range
- ◆ Protected against reverse supply connection
- ◆ 3kHz bandwidth (-3dB 2mV/V)



This miniature loadcell amplifier is designed for use with strain gauge loadcells. It has a bi-polar  $\pm 10\text{V}$  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.

Details of our loadcell families can be found in the Product List and the Loadcell Specifier Guide. If you require copies please contact our sales department or look on our web site at [www.novatechloadcells.co.uk](http://www.novatechloadcells.co.uk).



## ICA6H Specification

Parameter	Minimum	Typical	Maximum	Units
Supply voltage range	15	-	24	V
Operating current	-	30	-	mA
Operating temperature range	-40	-	85	°C
Storage temperature range	-40	-	85	°C
Reverse polarity protection	-	-	-30	V
Bridge excitation	4.9	5.0	5.1	V
Bridge Impedance	1000	-	5000	Ω
Bridge sensitivity	0.5	-	150	mV/V
Output voltage range	-10	-	+10	V
Output load	5000	-	-	Ω
Band width (-3dB 2mV/V)	0	-	3	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	0.0015	±%FR/°C
Span temperature stability	-	0.002	0.0051	±%FR/°C

### Notes

1. FR = Full Range
2. The voltage between the power supply connections and the load cell shield should not exceed 50V.
3. Any leakage resistance will be greater than 10MΩ.
4. The supply should be current limited externally.
5. The supply connections must not be reversed.
6. Bridge resistances down to 350Ω can be used if the supply voltage is reduced to 18V.
7. The output cable length can be up to 50metres using suitable screened cable.
8. Bandwidth and slew rate are affected by the bridge sensitivity.
9. 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.

### Order codes

There are three alternatives depending upon the loadcell that is to be used with the ICA6H:

1. Amplifier mounted in an inline pod – make the last character of the loadcell code C.
2. Internally mounted amplifier in a standard loadcell - make the last character of the loadcell code D. This only applies to the F256 and F257.
3. Internally mounted amplifier in a loadcell that needs to be modified to house the board – the loadcell will be allocated a Z number.

NB Loadcells for use with the ICA6H normally require a bridge resistance of at least 1000Ω.

 This product complies with the requirements of the European EMC directive.

Novatech reserves the right to vary the foregoing details without prior notice

01/2012

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