Novatech
Loadcell Design & Manufacture

LCD20 Loadcell Amplifier

- 4 to 20mA and 0 to 10V output
- Data logging at 13ms to 1hr intervals
- 10 point linearisation
- 2 set points with relay outputs
- Factory calibration in mV/V
- RoHS compliant

Specification

Parameter	Value	Unit
Loadcell Input		
Bridge Excitation	4.75 (Min) / 5 (Typical) / 5.25 (Max)	Vdc
Loadcell Excitation System	6 wire (4 wire loadcells can be used with links)	
Bridge Impedance	85	Ohms
Bridge Sensitivity Range 1	±3.7	mV/V
Bridge Sensitivity Range 2	±7.8	mV/V
Factory Calibration of sensitivity	±0.05	%FS
Offset Temperature Stability (2.5mV/V FS)	±2	ppm/°C
Gain Temperature Stability	±4	ppm/°C
Non-linearity	±10	ppm FR
Internal Resolution	1 Million	Counts/Divisions
Resolution at 10Hz sampling	180,000	Counts/Divisions
Resolution at 80Hz sampling	130,000	Counts/Divisions
Analogue Output		
Current Output	4 (Min) / 20 (Max)	mA
Loop resistance	1	kÎ©

Voltage Output	0 (Min) / 10 (Max)	V
Load resistance	5	kÎ©
Bandwidth -3dB	8.5	Hz
Phase Delay â€“ Step Change	26	ms
Phase Delay â€“ Sine Wave	55	ms
Rise and fall time (10 to 90%)	40	ms
Rise and fall time (1 to 99%)	85	ms
Zero stability	0.005 (Typical) / 0.01 (Max)	%FS/°C
Gain stability	0.005 (Typical) / 0.01 (Max)	%FS/°C
Resolution	8,000	Counts/Divisions
Power, Options and Environmental		
Power Supply	9 (Min) / 32 (Max)	Vdc
Power	3	W
Set points	2 Setpoints with SPNO contacts rated 240Vac/30Vdc at 3A.	
Option LP2	Remote handheld programmer with 4½ digit display.	
Option PGM1	Programming cable.	
Case dimensions	H 120 W 25 D 112	mm
Operating temperature range	-20 (Min) / 50 (Max)	°C
Storage temperature	-20 (Min) / 70 (Max)	°C
Humidity	0 (Min) / 95 (Max)	%RH Non condensing
Protection	IP20	

The LCD20 intelligent loadcell amplifier is a compact, DIN rail mounted microprocessor based unit for use with strain gauge bridge loadcells in force measuring applications.

All set up functions are via either the hand held programming module or a computer depending on the option chosen. Free toolkit software is available that can be run on a computer to carry out all the set-up functions and is able to log data from the LCD20. The computer is connected via a PGM1 programming cable. Data logging intervals can be set at 13ms to 1hr. The logging duration can be set to 9999 readings or 999 hours. The exact limits on the logging function are affected by the sampling rate of the LCD20

and the computer used for logging. Two analogue outputs are available, 4 to 20mA and 0 to 10V. The current output operates in source mode with the amplifier supplying the loop power. The analogue output is uni-polar so if a bi-directional loadcell is used it is scaled so that the mid point of the analogue output is equal to zero load. This will be 12mA or 5V. If the LCD20 is supplied with a loadcell it will normally be calibrated to read the loadcell output in the same engineering units as the loadcell calibration. A traceable system certificate will be supplied for the amplifier and loadcell combination. Alternative calibrations are possible; please consult our engineering department to discuss your requirements. The full manual is available for download from our website if you require more detail on any of the items in this data-sheet. Alternative calibrations are possible; please consult our engineering department to discuss your requirements. CE - This instrumentation product complies with the requirements of the European EMC directive.

Order Codes

Code	Description
	The option codes from the table above are added to the base product code LCD20. Please consult our engineering department for help with your requirements.

Notes

- FS = full scale.
- FR = full range.
- RH = relative humidity.
- Analogue output specifications are based upon 80 samples per second with no averaging or filtering.

Files

Type	Title	Download
PDF Manual	Printable manual.	Download

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