LCA15 In Line
Intelligent Load Cell Amplifier.

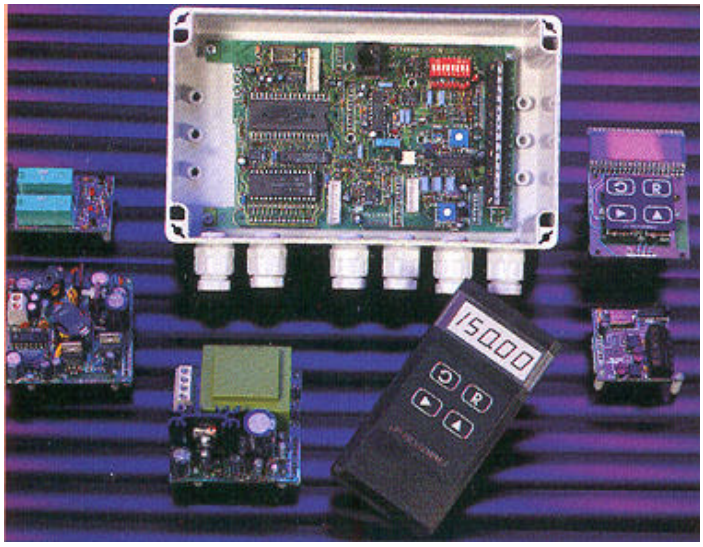
Features

Variable gain load cell sensitivity from 0.5 to 200 mV/V.
Simple one pass Auto Calibration
Auto Tare.
4-20mA and 0-10V outputs.
10V @ 160mA excitation for up to 6/350 ohm load cells.
Low drift.
Wide range of power supplies.
IP65 surface mounting case.
Isola ted analogue outputs.
10 years data retention.
Digital programming, calibration &. Display.

Introduction

The intelligent load cell amplifier offers both 4 to 20mA and 0 to 10 Volt analogue outputs, from any standard load cell input. Ease of calibration and setting of the analoue output range, make the unit extremely user friendly; being st up by a simple hand held or on board programmer/display.

Auto Tare and Peak hold (if set) on the analogue output are operated via volt free contact closures.



Output options include

Relay set points

Programmed in engineering units, with in Flight compensation and Hysterisis Setting available for control or alarm purposes.

Printer

Activated by a contact closure, display the current live value, with header massage, engineering units, auto incrementing batch number and a real time if required.

Communications

To read any value, change set points or any other parameter via:
20mA Current loop
RS485
RS232

Options

12 – 24V DC power supply
24 – 48V DC power supply
Meral case sealed to IP65
PCB onlyfor rack or customers enclosure

Specifications & order codes

Intelligent Load Cell Amplifier
The load cell amplifier is housed in a liht grey ABS case, sealed to IP65 with external dimensions of 200x120x75mm

The unit comprises an intlligent base unit with user configurable 4-20mA and 0-10V analogue outputs, withplug in module positions for the power supply, relay and communications options.

The power supply is a selectable 110/120 or 220/240V AC.
Connections for input, output and power supply are through cable glands sealed to IP65. Internal 2.5mm screw field terminals are provided.

The unit offers:

Calibration
A simple input Auto Calibration is achieved by entering the values of the lowest and highest weights used. Analogue output is precalibrated and can be ranged over any part of the displayed range.
Both input and output are calibrated by use of the programmer module.
The programmer defaults to weight display to ease calibration checks.
Auto Tare (zero) and Peak Hold are actioned by volt free contacts.

Load Cell Input
The input is of the load cell/strain gauge type.
A transducer excitation voltage of 9.6volts @ 160mA.
Compensation by +/- sense wires for cable connection, voltae drops and any variation in the 10 volt supply.
Load cell sensitivity is preset via DIL switches to 0.5, 0.8, 1.0, 1.25, 1.5, 2.0, 2.5, 3.5, 5, 10, 20, 50, 100 or 200 mV/V.
Initial offset is no greater than +-0.15 mV (15ì V/V) which is cancelled during auto calibration.

Speed is 10 readings per second with a digital filter to reduce speed.
Accuracy is 90 days +/- 0.08% of reading, +/- 0.05% FSD being typical.
Drift is 0.002% per degree C @ 2.5mV/V typical.
Resolution 15 bit.
Contact inputs are available for auto tare, print and peak hold reset and are volt free.

Analogue Outputs
The analogue outputs are isolated, 4-20mA up to 1Kohm and 0-10 volts up to 2mA.
Accuracy 4-20mA + 0.15% of range, typical.
Resolution as for display up to 13 bits. Setting time 0.25 secs to 1% of step change.
Isolation ±130V RMS or DC max to analogue input or any other port.

Data retention is 10 years for set up values, with a minimum of 10,000 write cycles.

Protection of data and functions is via watchdog timer giving repeat auto resets, impending power failure detection and shut down, low power detection and hold off.

Environmental conditions are as follows:

Storage temperature	-20 to +70 degrees C.
Storage temperature	-20 to +70 degrees C.
Operating temperature	-10 to +50 degrees C.
Relative himidity	95% max non condensing.
Product standard	To IEC 1010-1.

Options available are:

2 Set Points	Output through 5A, 240V AC SPCo relays, with a latching option.
Communications Port	For data transfer or print via:-
20mA loop	Enabling up to 254 LCA15s to be multidropped to 1 x RS232 via IF25 interface(s).
RS485	Enabling up to 25 units to be multidropped.
RS232	For 1 to 1 connection and standard printer drive.
Printer Operation	By closure of volt free contact.
Baud Rates	300, 600, 1200, 2400, 4800, 9600 (19200 Fast Format only).
Die Cast Case	Sealed to IP65 with external dimensions of 260x160x95mm max.
Stainless Steel Case	Sealed to IP65 with external dimensions of 220x160x85mm.
DC powering	24-48V DC and 9-32V DC.
PCB Only(Eurocard)	100x160mm for rack or customers enclosure.