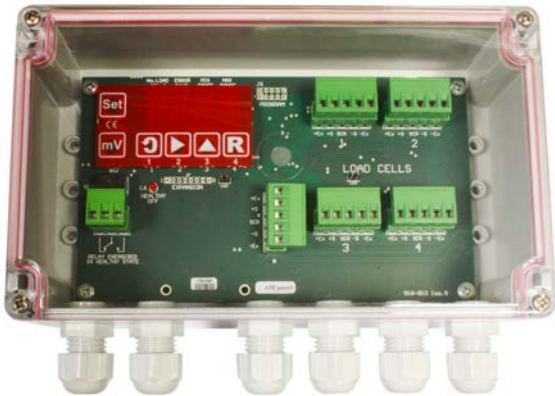




## Load Cell Integrity Junction Box & Fault Monitoring Alarm



**NEW DESIGN**



### Introduction

The LCI load cell failure alarm is designed to continuously monitor the condition of individual load cells and activate an alarm when faults in the system are detected, therefore providing increased safety and cost savings onsite for all weighing systems.

The latest version of the LCI now supports both **5V and 10V operation**. 5V operation requires less power consumption from the connected instrument and simplifies barrier selection.

It provides protection for multi-load cell installations such as silos, tanks and other systems where the failure of an individual load cell can have serious consequences such as material shortage, overflow, or incorrect production batching. The device constantly samples the individual load cell channels and activates an alarm if any failure conditions are detected, ensuring a safe working system.

The LCI should be used in conjunction with a host intelligent weighing instrument such as Mantracourt's ADW15, LCA20, LCD20, SMW etc. as well as suitable third-party products.

### Product Features

- **Increased Safety:**  
Fault monitoring capabilities provide a safe working system in critical applications by continuous sampling of load cell channels
- **Cost and Time Savings:**  
Reduction of down-time via immediate alarm and fault diagnosis
- **System Protection:**  
Avoids material shortage, overflow, or incorrect batching due to load cell damage or cable faults
- **Low Power Consumption:**  
Now available in 5V excitation which requires less power
- Avoids batch wastage and product recall
- Aids installation and commissioning

### Related Products



**LCP**  
LCI PCB board without enclosure



**JBA (JPP PCB only)**  
Active summing load cell junction box



**ADW15**  
Digital Panel Meter for Process Inputs



**SMW**  
Weighing Indicator & Controller Bulkhead



**LCD20**  
Load Cell DIN Rail Signal Amplifier



**LCA20**  
Load Cell Amplifier with Display



## Specifications

### Electrical Specifications

<b>Power Supply Voltage</b>	4-12 Vdc *Note 1
<b>Power Supply Current</b>	80 mA *Note 2
<b>Load Cell Excitation 350R Load Cell</b>	4-12 V *Note 1
<b>Load Cell Resistance (Typically 350-700R)</b>	300-1000 Ohms
<b>Load Cell Sensitivity</b>	1.0-5.0 mV/V
<b>Number of Load Cells Selectable</b>	1-4
<b>Output Load (Host Input Impedance)</b>	1M Ohms
<b>Bandwidth (*LCI Display Only)</b>	100 Hz
<b>Zero Temperature Coefficient (*LCI Display Only) @ 2mV/V @ 4V Excitation</b>	0.008 %FR/ °C
<b>Span Temperature Coefficient (*LCI Display Only)</b>	0.001 %FR/ °C
<b>Linearity</b>	0.03 %FR
<b>Scan Speed for Alarm Output (4 Cells)</b>	40 ms
<b>Display Range</b>	±50 mV
<b>Relay Contacts SPCO Current (Normally Energized)</b>	1 A 30 VDC or 1 A 120 VAC
<b>mV Measurement Accuracy Individual Cell (*LCI Display Only)</b>	±0.1 mV

\*Note 1: Derived from Host Instrument

\*Note 2: Excluding Load Cell Excitation Current

“(\*LCI Display Only)” denoted that the specification applies to the on-board display only, not the Host instrument.

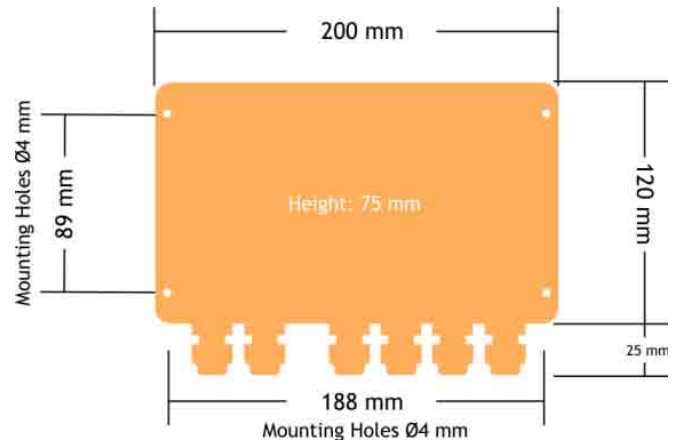
### Environmental

<b>Operating temperature range</b>	-10 to +55 °C
<b>Storage temperature range</b>	-40 to +95 °C
<b>Maximum Humidity</b>	95% Maximum
<b>IP Rating</b>	IP65/NEMA4

### Approvals

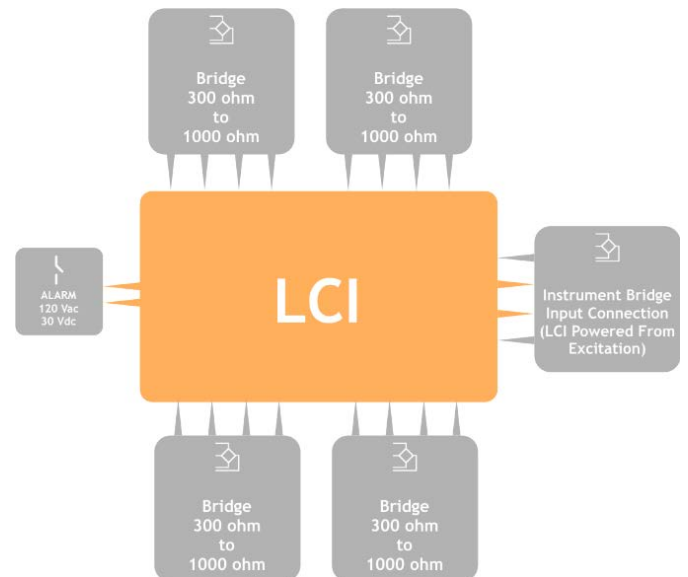
	2014/30/EU
<b>European EMC Directive</b>	BS EN 61326- 1:2013 BS EN 61326- 2-3: 2013

## Mechanical



IP65 ABS field case fitted with six M16 cable glands  
Cable diameter: 4mm (0.16") to 7mm (0.27")

## Electrical



## Order Codes

### LCI

LCI supplied in IP65 ABS Enclosure with Transparent Lid

### LCP

LCI OEM without enclosure (PCB only)



# Amber Instruments Ltd

Tel: +44 (0)1246 260250 | E-mail: [sales@amberinstruments.com](mailto:sales@amberinstruments.com)  
Web: [amberinstruments.com](http://amberinstruments.com)  
3 Mercury House, Calleva Park, Aldermaston, Berkshire, RG7 8PN.