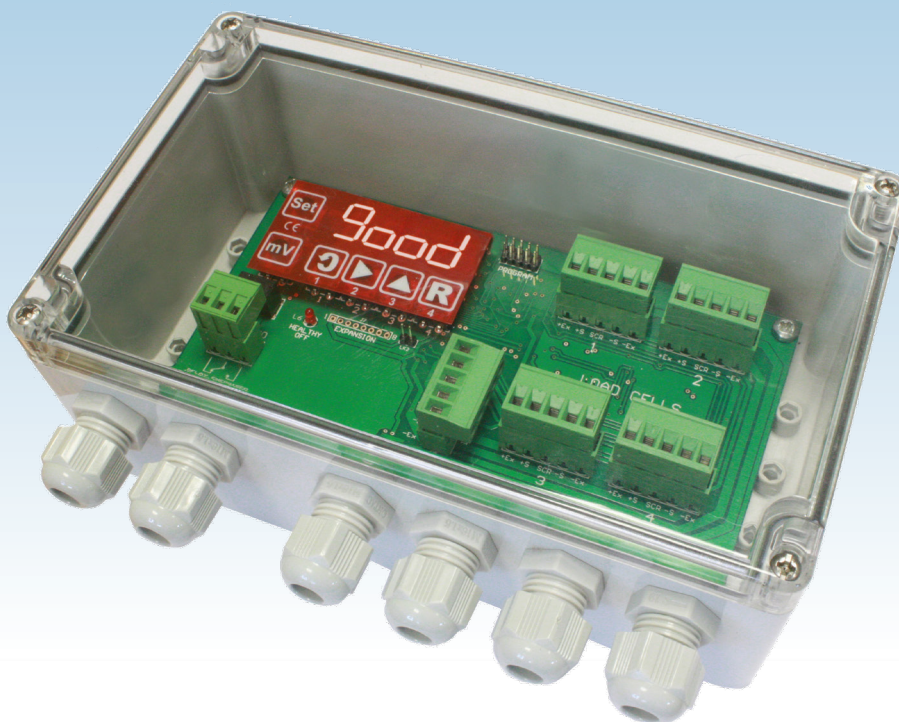


JUNCTION BOX WITH CONTINUOUS LOAD CELL HEALTH MONITORING



Continuous, cost effective load cell monitoring with an instant alarm signal.

This Intelligent Junction Box is designed to continuously monitor the output signal and electrical circuit of up to 4 load cells connected together in a weighing system; if a fault condition occurs with one or more load cells then the LED display shows the relevant load cell number(s) together with the error details. An alarm signal is also indicated by a relay changing its state.

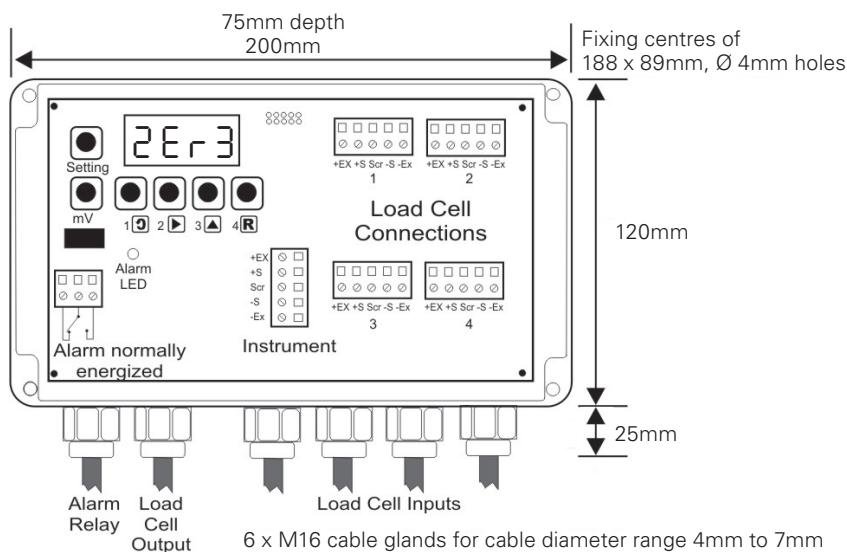
Avoidance of product recall or batch wastage, reduction in plant downtime, increased safety and faster installation and commissioning are just a few of many reasons why the this intelligent junction box is an important component in any weighing system. The compact, IP65 / NEMA4 rated unit contains an on-board microprocessor that continuously checks each load cell for errors such as an out-of-balance mV signal, a signal outside of a pre-set mV range, a reduction in the excitation voltage, a short-circuit or an open-circuit.

The junction box can be used with **any brand** of indicator/transmitter meeting the requirements shown on the next page

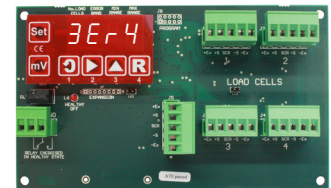
- Continuous monitoring of up to 4 load cells
- IP65 / NEMA4 ingress protection
- ABS casing
(option of Stainless Steel casing or PCB only)
- Red LED illuminates and relay changes state if a fault condition occurs
- RoHS, CE and European EMC approvals
- Checks for Wheatstone bridge faults in the load cell
- Removable terminals for simpler, faster wiring
- Display shows individual mV/V outputs of the load cells (or the mean mV/V value)
- Transparent cover for easy viewing of faults on 4-digit red LED display (ABS version only)
- 3 year warranty

JB4T-INTELLIGENT

technical specification...



Optional stainless steel IP65 version (cover is not transparent)



Optional PCB only

Intelligent Junction Box

Specifications	
Faults monitored by junction box	Load Cell out of pre-set balance range
	Load Cell out of pre-set operating range
	Low/high excitation voltage
	Open circuit to any load cell
	Short circuit on any load cell connection
Power	Internal load cell fault (Wheatstone bridge imbalance)
	By Load Cell Excitation from indicator/transmitter
Indication	4-digit LED display for set up, load cell number and error type (see above examples) & individual or total mV signal
Interface	6 buttons for reading & set up
Connections	2 part terminals, for up to 2.5mm ² cross-section cable
	4 x 5 way, for load cell connections
	1 x 5 way, for load cell output to indicator/transmitter
Dimensions	1 x 3 way, alarm relay contacts
	200 x 120 x 75 mm
Environmental	Sealed to IP65 / NEMA4 with cable glands & blanking plugs fitted; CE Compliant
Enclosure	Grey ABS IP65 / NEMA4 (Stainless Steel Case IP65 / NEMA4, or PCB only, as options)
Relay Alarm	Relay is normally energized in healthy state (when power is provided to the junction box). SPCO current: 1 A; 30 V DC or 120 V AC
Use with barriers (ATEX)	NOT ATEX approved. NOT suitable for use with barriers, even when installed in an ATEX certified enclosure or in a 'safe' zone
Compatible indicators/transmitters	Thames Side XT1000, XT2000, XTSGA, XT960, Matrix 2, SMART, SMART-ATEX (without barriers), X320, R400, DP100 or another brand (minimum excitation voltage 5V DC)

Performance Parameters	
Allowable voltage at Junction Box (from indicator/transmitter)	4 to 12 V DC
Allowable current from indicator/transmitter	Max. 80 mA *
Load cell bridge resistance	300 to 1000 Ohms
Load cell sensitivity	1.0 to 5.0 mV/V
Number of load cells	1 to 4
Output load (indicator input resistance)	1M Ohms
Bandwidth (display only)	100 Hz
Zero Temperature Coefficient of display value @ 2 mV/V @ 4V excitation	0.008 % FR / °C
Span Temperature Coefficient of display value	0.001 % FR / °C
Linearity	0.03 % FR
Error display speed on LED display (using 4 cells)	Typ. 40 ms, Max. 100 ms
Display Range	± 50 mV
mV measurement accuracy for individual load cells (display only)	± 0.1 mV
Operating temperature	-10 to +55 °C
Storage temperature	-40 to +95 °C
Max. humidity	95% non-condensing
EMC Approvals	2014/30/EU, BS EN 61326-1:2013, BS EN 61326-2-3:2013
Maximum cable length between junction box and indicator/transmitter	10 metres when using our 6-core screened cable CA-PU-5.7MM-6C with XT1000/XT2000. With other cable or indicators, make a voltage drop calculation or consult us

* excluding load cell excitation current
FR: full range



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Our policy is one of continuous product enhancement. We therefore reserve the right to incorporate technical modifications without prior notification.



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