JBOX-LCI

SMART JUNCTION BOX WITH MONITORING OF THE INTEGRITY OF THE LOAD CELLS

Smart junction box designed for parallel connecting of 2 to 4 load cells to a measurement electronics and ensuring the monitoring of their proper functioning.

- Control the output signal of each sensor separately
- Control the unbalance between the sensor's signal
- Detection of open circuit and short circuit
- Control of the excitation voltage of the load cells
- Ensure the positive safety for load-limitation systems based on multiple load cells parallel connected (hoisting devices)

JBOX-LCI

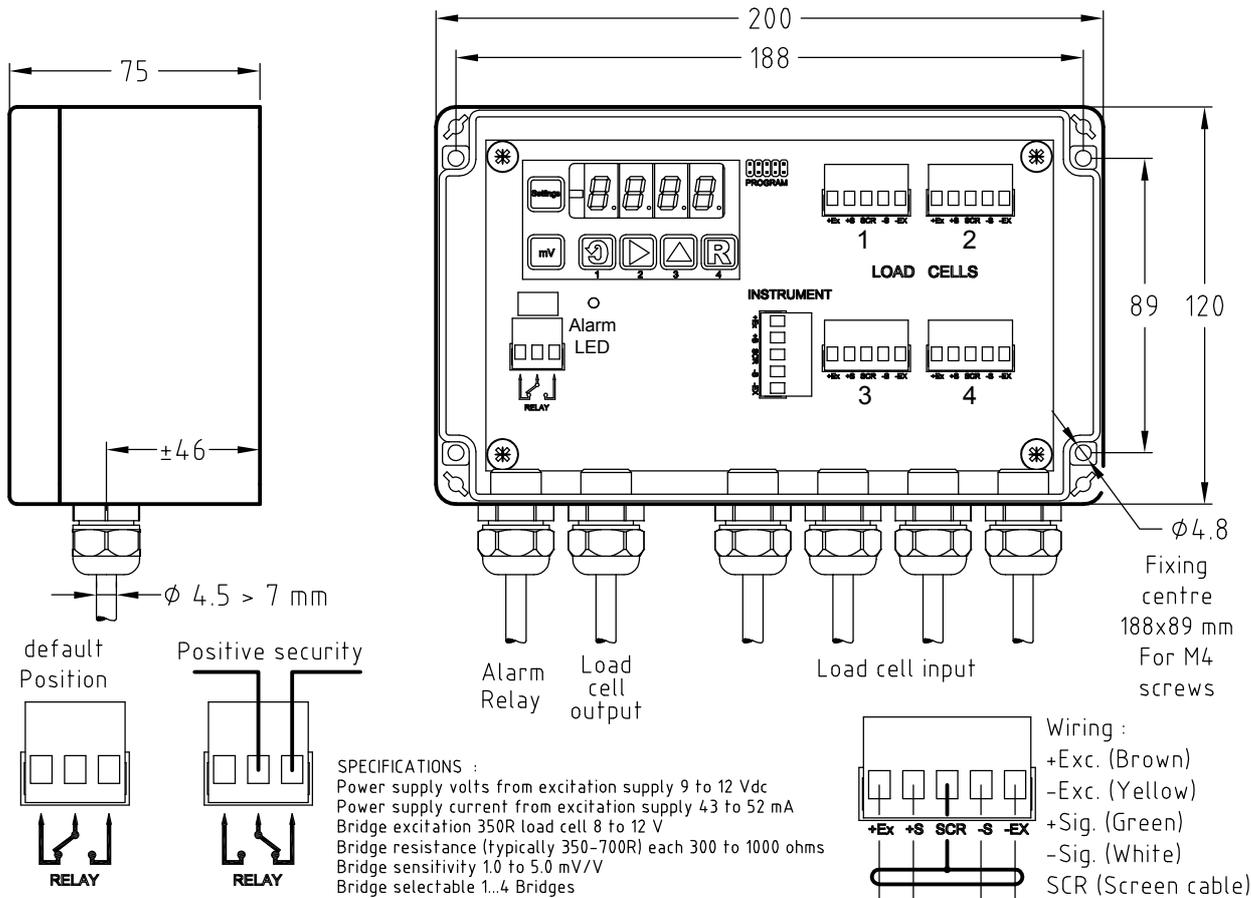|	
Display	4 digits to:
	- Indicate the signal of each sensor (mV)
	- Indicate the average signal resulting from the parallel connection
	- Show error messages (nr of sensor and type of error)
Safety	SPCO relay (0.5 A / 50 VDC max.) energized in safe conditions
	Secret code for access to programming
Key pad	6 pushbuttons to:
	- Encode the number of sensors
	- Enter the allowable ranges of sensor's signals
	- Enter the code giving access to programming
Supply	10 VDC ± 15 % provided by the force measurement electronics
	52 mA (except the consumption of the sensors)
Load cells	Impedance: from 300 up to 1.000 Ω
	Excitation: 10 VDC ± 20 %
	Signal: from 1 up to 5 mV/V
Environment	Operating temperature range: from - 40 to + 85°C
	Storage temperature range: from - 40 to + 95°C
	Humidity: 95 %
Accuracy	Non linearity: ± 0.0015% of full scale
	Temperature coefficient of zero (2 mV/V): ± 0.0005 %V / °C
	Temperature coefficient of span: ±0.0005 % / °C
Connections	4 blocks of 5 terminals (2.5 mm²) to connect the sensors
	1 block of 5 terminals (2.5 mm²) to connect the measurement electronics
	1 block of 3 terminals (2.5 mm²) connected to the alarm relay
Dimensions	200 x 120 x 75 mm (PCB: 170 x 100 mm)
Housing	ABS grey, IP65 with cable glands and blanking plugs

JUNCTION BOX

model JBOX–LCI   for 1 to 4 Load cells

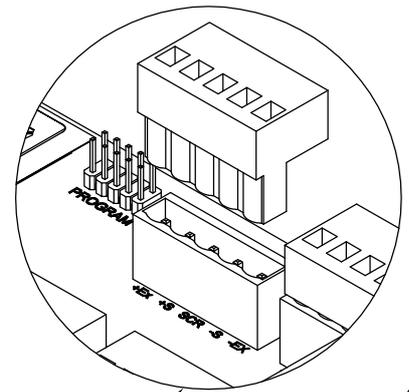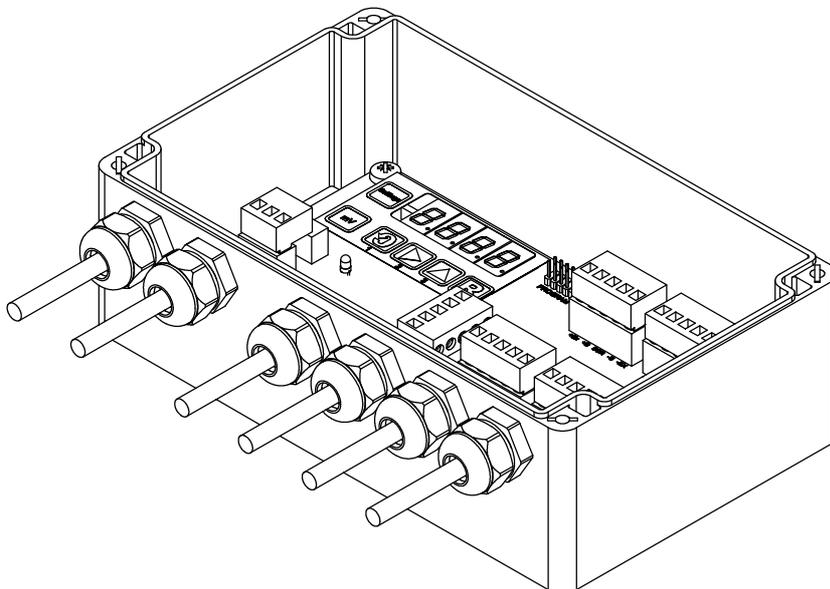Load cell integrity alarm & junction box , IP 65 enclosure ABS
Faults monitored :
–Load Cell out of preset balance range
–Load Cell out of pre–set operating range
–Open circuit to any load cell on each connection
–Short circuit on any load cell connection
–Internal load cell fault (Bridge Imbalance)

CE

75

±46

∅ 4.5 > 7 mm

200

188

89   120

∅4.8
Fixing centre
188x89 mm
For M4 screws

PROGRAM

Settings

mV

R
1   2   3   4

Alarm LED

RELAY

INSTRUMENT

1   2
LOAD CELLS

3   4

+Ex +S SCR -S -EX

default
Position

RELAY

Positive security

RELAY

Alarm Relay

Load cell output

Load cell input

SPECIFICATIONS :
Power supply volts from excitation supply 9 to 12 Vdc
Power supply current from excitation supply 43 to 52 mA
Bridge excitation 350R load cell 8 to 12 V
Bridge resistance (typically 350–700R) each 300 to 1000 ohms
Bridge sensitivity 1.0 to 5.0 mV/V
Bridge selectable 1...4 Bridges

+Ex +S SCR -S -EX

Wiring :
+Exc. (Brown)
-Exc. (Yellow)
+Sig. (Green)
-Sig. (White)
SCR (Screen cable)

PROGRAM

2 part plug-in connectors
wire max 2.5 mm²

Rev.14/8/2002