

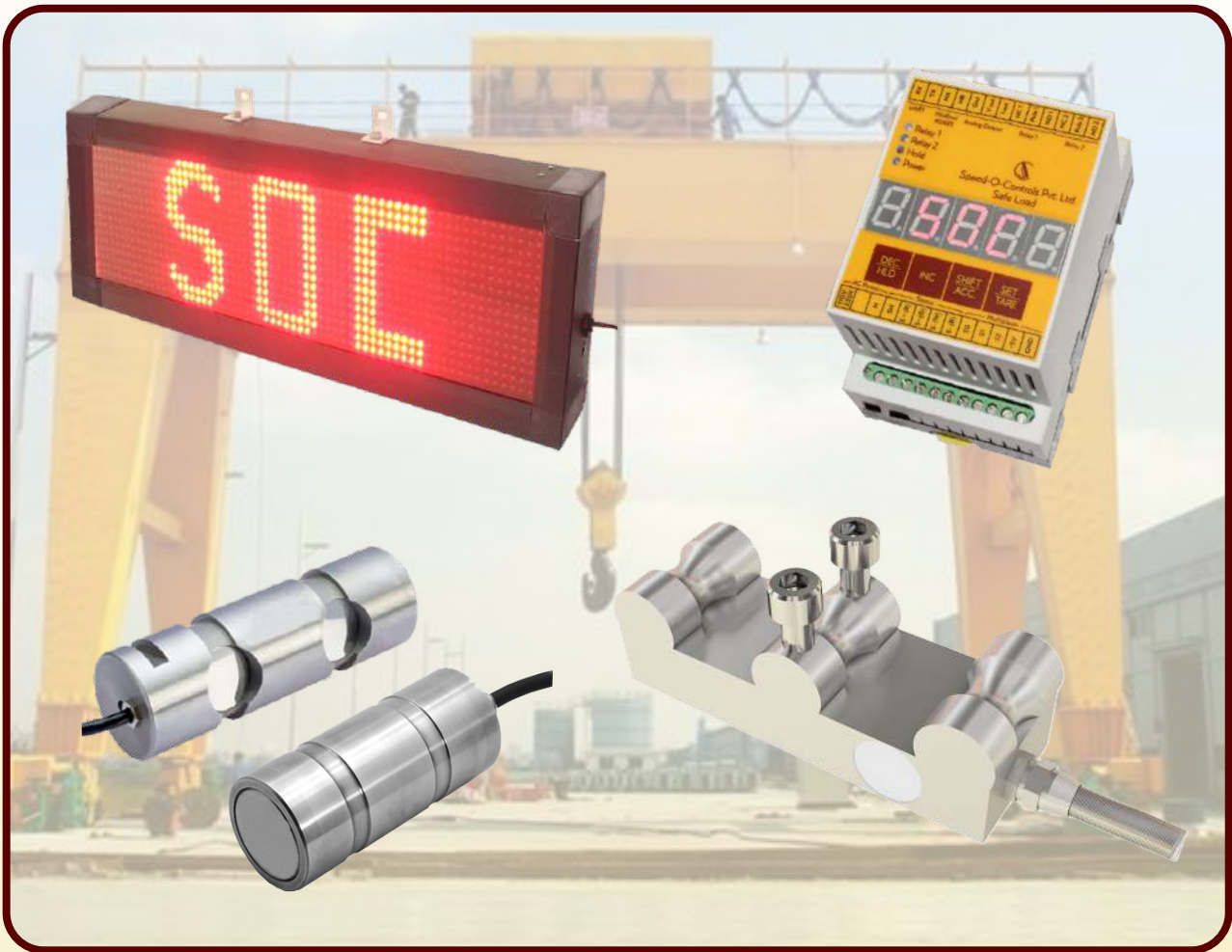


**SPEED-O-CONTROLS
PVT. LTD.**



LOADCELL SOLUTIONS

LOAD CELL

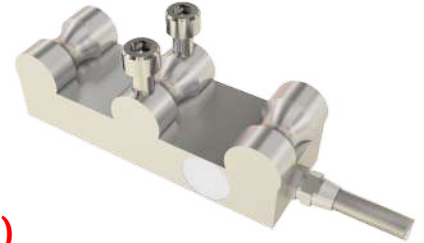


DISCOVER OUR RANGE OF LOAD CELL SYSTEMS

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WIRE ROPE LOAD CELL



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Description

The Rope Tension Load Cell is mainly for used in Hoist and Crane weighing systems or in general where the tension in a steel wire needs to be measured. The load cells are clamped directly on the fixed end of a lifting wire rope and fitted with strain gauges allowing them to produce a signal proportional to the measured load.

The Rope Tension Load Cell has a unique advantage that it is suitable for most commonly used rope sizes and can be clamped directly on to the wire rope, hence eliminating the requirement for any mechanical changes in the machine.

Operation

When force is applied to the Load Pin along it's sensitive axis, the effect on the strain gauge results in an output signal proportional to the force applied.

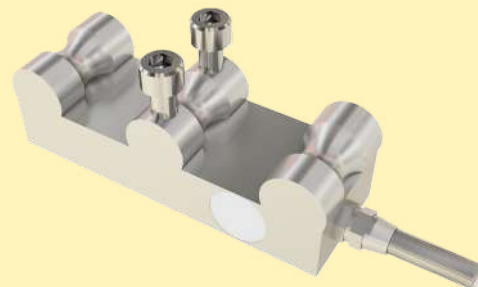
The diagram at the right shows the typical diagram how force is to be applied on the Rope Tension Load Cell.

The load cell is then to be connected to an ADC based display system for calibration of the appropriate load for weighing / overload functionality.

Specifications

Rated Load	2T/5T/10T/20T
Wire Rope Diameter	8mm-32mm
Rated output	2 mV/V \pm 0.02%
Input Resistance	350 \pm 10 Ω
Output Resistance	350 \pm 2 Ω
Insulation Resistance	\geq 5000M Ω
Hysteresis	\leq 0.03%FS
Repeatability	\leq 0.02%FS
Creep	< 0.03%FS/30min
Zero Balance	\leq 1%FS
Safe Overload	150%FS
Recommended Supply voltage	5 ~ 12V
Use temp Range	-10~+60° C
Zero Temp Coefficient	< 0.04%FS/10° C
Rated output Temp Coefficient	< 0.04%FS/10° C
Cable Flexible	4 core 5 meter

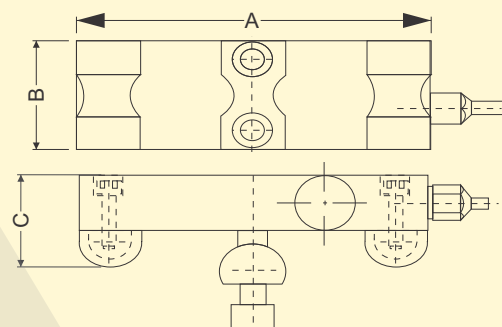
Rope Tension Load Cell



Load Cell Installation

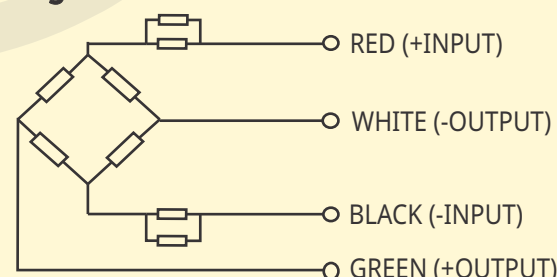


Dimensions :



Rated Load	A	B	C
2T	140	48	43
5T	140	48	43
10T	160	60	50
20T	180	70	50

Wiring :



NOTE : For load cell cable extension, use 4 core shielded cable 0.25sq. mm only.

PIN TYPE LOAD CELL



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Description

The pin type load Cell is mainly for used in Crane weighing systems or in general where the load applied on a pin needs to be measured. The pins are mounted on machines in place of normal shafts and fitted with strain gauges allowing them to produce a signal proportional to the measured load.

The Load Pin has a highly secure and stable steel structure and is made of High Alloy Steel for resistance against shock and overload.

Operation

When force is applied to the Load Pin along it's sensitive axis, the effect on the strain gauge results in an output signal proportional to the force applied.

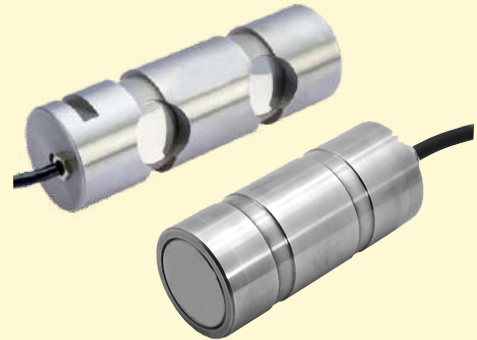
The diagram at the right shows the typical diagram how force is to be applied on the Pin Type Load Cell.

The load cell is then to be connected to an ADC based display system for calibration of the appropriate load for weighing / overload functionality.

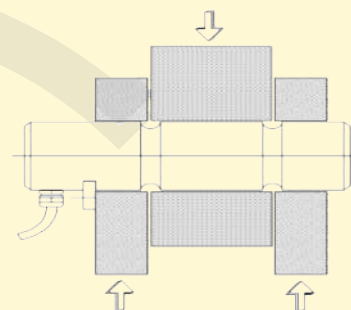
Specifications

Rated Output	2 mV/V
Nonlinearity	$\leq 0.03\%FS$
Hysteresis	$\leq 0.03\%FS$
Repeatability	$\leq 0.02\%FS$
Creep	$< 0.03\%FS/30min$
Zero Balance	$\leq 1\%FS$
Input Resistance	$350 \pm 10\Omega$
Output Resistance	$350 \pm 3\Omega$
Insulation Resistance	$\geq 5000M\Omega$
Safe Overload	150%FS
Ultimate Overload	200%FS
Recommended Supply voltage	5 ~ 12V
Use Temp Range	-10~+60° C
Zero Temp Coefficient	$< 0.04\%FS/10^{\circ}C$
Rated output Temp Coefficient	$< 0.04\%FS/10^{\circ}C$
Cable Flexible	4 core 5 meter

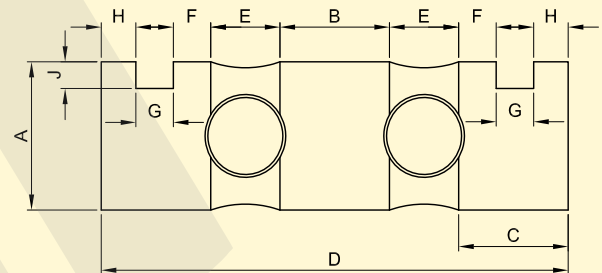
Shear Pin Load Cell



Load Pin Installation



Dimensions:



Capacity	A	B	C	D	E	F	G	H	J
500kg. to 1T	25	19	19	81	12	6.5	6.5	6	4.5
3T,5T	35	31	23.5	110	16	10	6.5	7	6
10T	50	41	38	157	20	19.5	8.5	10	7
20T	65	66	39	192	24	20.5	8.5	10	9.5
30T	75	76	50.5	225	24	28	10.5	12	10.5
50T	85	91	58.5	260	26	36	10.5	12	12
100T	100	100	76	328	38	53.5	10.5	12	14

NOTE : For load cell cable extension, use 4 core shielded cable 0.25sq. mm only.

Description

Wireless load display is a safety device to display the load carried by the crane/lifting device with the help of an input from a load transducer/load cell. Its large size allows for viewing from longer distances and the device can be safely mounted at a remote position.

The device is connected to the Safeload Indicator which features in-built relays for protection from overloading.

Use of this device helps cable breakages, costly downtime of crane, maintenance and repairs, thus improving safety in the workplace and maintaining high levels of efficiency.

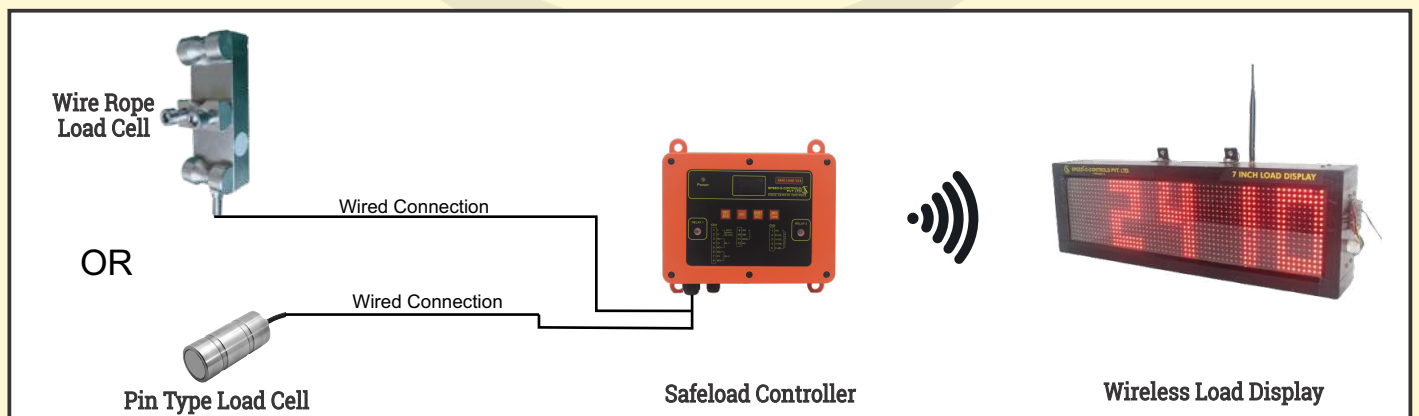
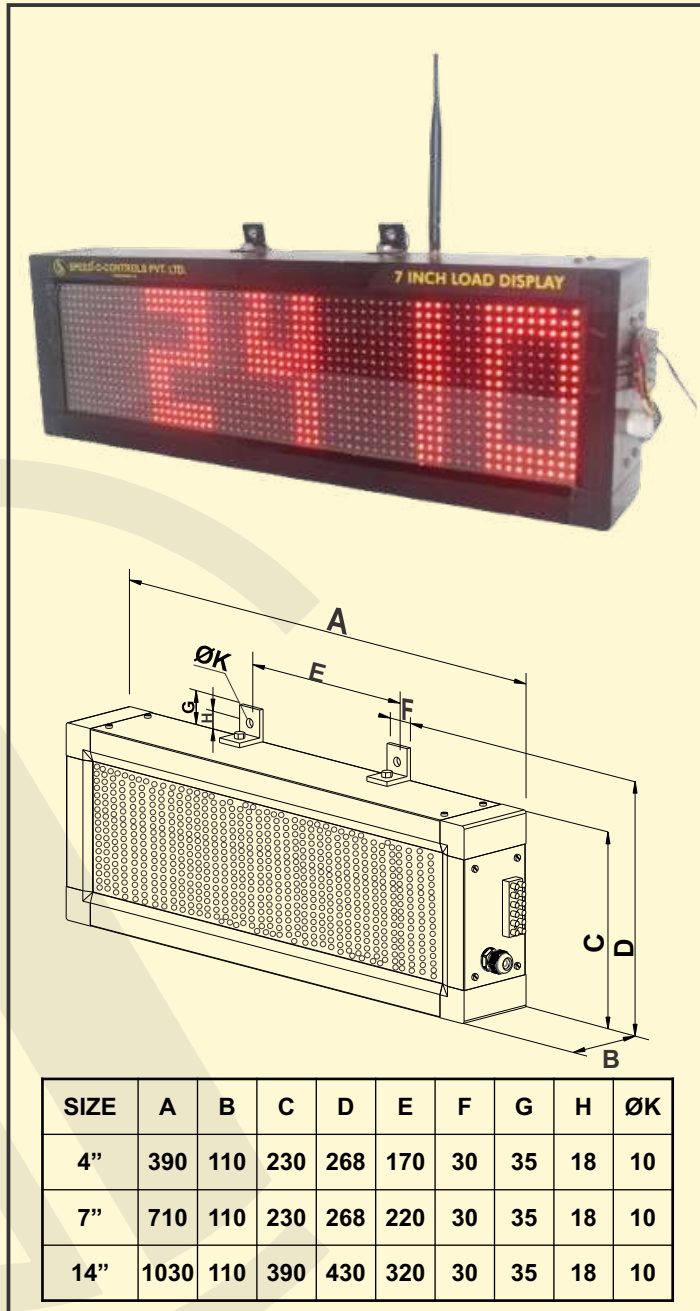
Specifications

- LED Display, Red, with 5 Digits.
- Digit Height 4 inch, 7 inch, 14 inch available.
- Aluminium Housing
- Working temperature: from -20 to 70°C
- Power supply via 90 - 240Vac.
- Maximum visibility and high performance vision
- Indicator specially designed and manufactured to be used in new static and dynamic systems of weighing in industrial environments.
- **Frequency : 2.4 GHz**

Applications

- Load indication on overhead cranes or other lifting devices
- Weighing indication at long distance

Wireless Load Display



Description

Digital load display is a safety device to display the load carried by the crane/lifting device with the help of an input from a load transducer/load cell. Its large size allows for viewing from longer distances and the device can be safely mounted at a remote position. The device is connected to the Safeload Indicator which features in-built relays for protection from overloading. It may also be useful for rope slack detection. The relays can be wired to the lifting contactor or alarm or as required. Use of this device helps reduce rope breakages, costly downtime of crane, maintenance and repairs, thus improving safety in the workplace and maintaining high levels of efficiency.

Specifications

- LED Display, Red, with 5 Digits.
- Digit Height 4 inch, 7 inch, 14 inch available.
- Sheet Metal Housing
- Working temperature: from -20 to 70°C
- Power supply via 90 - 240Vac.
- Maximum visibility and high performance vision
- Indicator specially designed and manufactured to be used in new static and dynamic systems of weighing in industrial environments.
- Tare option on front panel or by remote control.
- Rs485 Communication (2 Wire) with Safeload Indicator

Applications

- Load indication on overhead cranes or other lifting devices
- Weighing indication at long distance
- Overload Protection
- Rope Slack prevention
- Audio Indication interfacing for overload.
- High Accuracy, weighing with 32bit ADC

NOTE 1: For display modbus connection, use 2 core shielded cable only

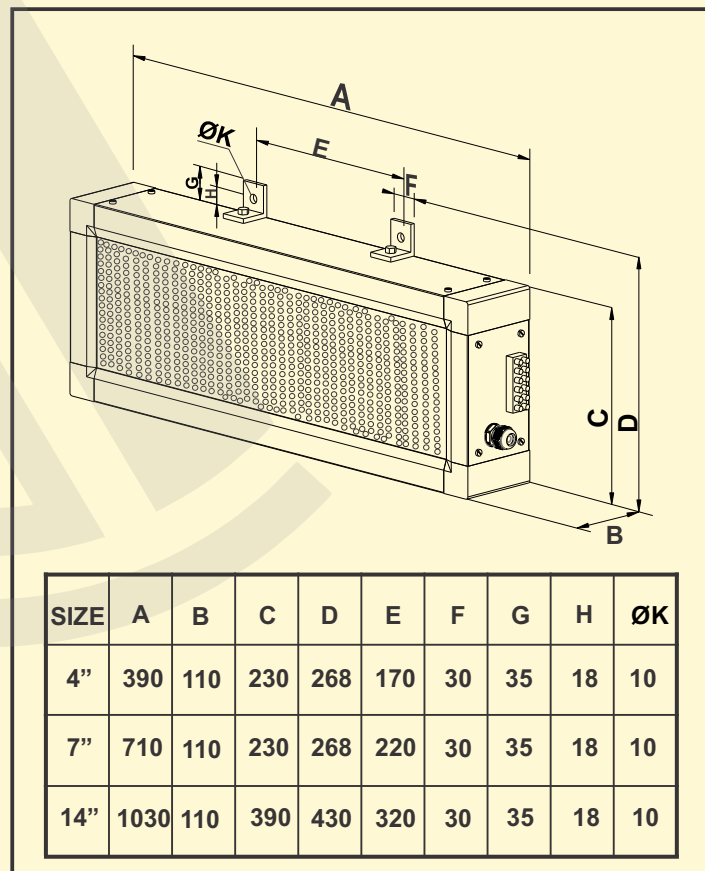
NOTE 2: Use separate cable for display power supply of 0.5 sq. mm & modbus connection

Digital Load Display

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Dimensions



Description

The **SAFE-LOAD** electronic controller is designed to convert analog electrical stress from Load Cell into a digital weight value. The indicator, with 2 relay outputs is useful to avoid accidents and breakdowns due to overloads in EOT Cranes, winches & hoists among many other applications. The controller can be connected to a larger display for remote viewing and optional storage of load value.

Technical Characteristics

- Input Supply : 90 - 230VAC, 50Hz.
- Programmable overload protection with 2 relays
- Optional Input supplies available on demand.
- 4 buttons for programming: DEC, INC, SET, SHIFT
- 5 Digit, LED 7 Segment display. 15mm digit height.
- 4 Status Indicator LEDs (Power, Hold, & 2 Relays)
- Sensor Input in mV.
- Communication with a Larger display with 2 Core Cable via RS-485
- In-built Data Saving Feature
- Weight value Hold Functionality
- Easy Calibration
- Installation on DIN rail
- Measurements: L x W x H: 110mm x 85mm x 72.25mm
- Working temperature -10°C to + 60°C
- High Accuracy, with 32bit ADC
- Accuracy with Wire rope load cell: 5% F.S
- Accuracy with Pin type load cell: 1% F.S

Optional Additions

- Large Digital Display connection : 7 Inch, 14 Inch.
- Wireless Remote control & remote display interfacing.
- Summation Device for Multiple Load Cell Connections.
- Analog Output : 0-10V / 4-20mA
- Data Logger for weight storage.

NOTE 1: For load cell cable extension, use 4 core shielded cable 0.25sq. mm only.

NOTE 2: For display modbus connection, use 2 core shielded cable only

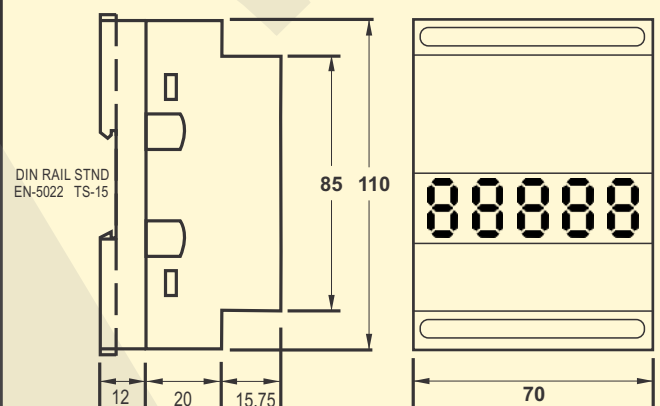
NOTE 3: Use separate cable for display power supply of 0.5 sq. mm & modbus connection

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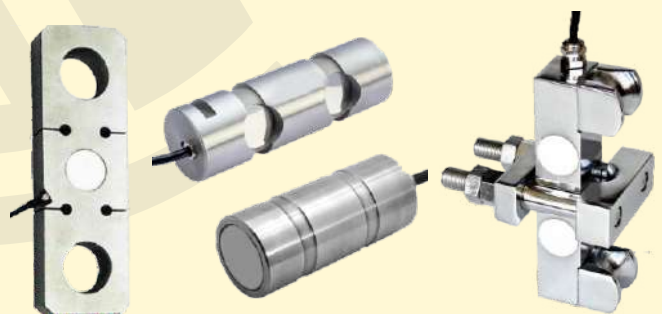
Safeload Controller



Dimension:



Compatible with all Load Cells



Description

The **SAFE-LOAD** electronic controller is designed to convert analog electrical stress from Load Cell into a digital weight value. The indicator, with 2 relay outputs is useful to avoid accidents and breakdowns due to overloads in EOT Cranes, winches & hoists among many other applications. The controller can be connected to a larger display for remote viewing and optional storage of load value.

Technical Characteristics

- Input Supply : 48 - 230VAC, 50Hz.
- Programmable overload protection with 2 relays
- Optional Input supplies available on demand.
- 4 buttons for programming: DEC, INC, SET, SHIFT
- 1.3 inch 128 x 64 pixel Oled Display.
- 3 Status Indicator LEDs (Power & 2 Relays)
- Sensor Input in mV.
- Communication with a Larger display with 2 Core Cable via RS-485
- In-built Data Saving Feature
- Weight value Hold Functionality
- Interactive Calibration & User Interface.
- Measurements: L x W x H: 187mm x 186mm x 82mm
- Working temperature -10°C to + 60°C
- High Accuracy, with 24bit ADC
- Accuracy with Wire rope load cell: 5% F.S
- Accuracy with Pin type load cell: 1% F.S

Optional Customization

- Large Digital Display connection : 7 Inch, 14 Inch.
- Wireless Display
- Handheld remote display
- Dual-Channel operation for two load-cell Connections & 4 relay outputs.
- Analog Output : 0-10V / 4-20mA
- IOT based Data Logger for weight storage.

NOTE 1: For load cell cable extension, use 4 core shielded cable 0.25sq. mm only.

NOTE 2: For display modbus connection, use 2 core 0.5sq mm shielded cable only

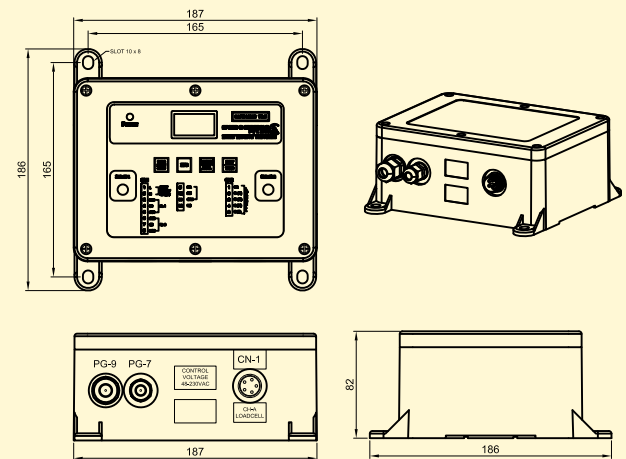
NOTE 3: Use separate cable for display power supply modbus connection

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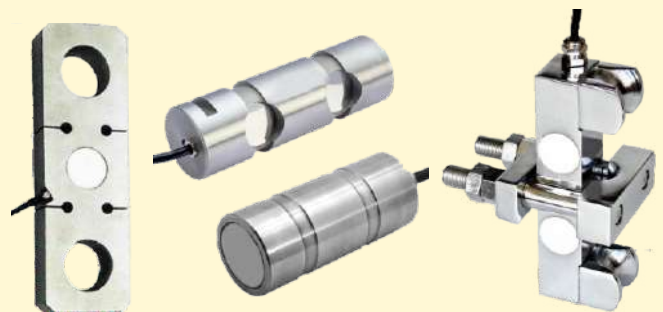
Safeload Controller



Dimension:



Compatible with all Load Cells



Description

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Technical Characteristics

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- 4 buttons for programming: DEC, INC, SET, SHIFT
- 1.3 inch 128 x 64 pixel Oled Display.
- 3 Status Indicator LEDs (Power & 2 Relays)
- Sensor Input in mV.
- Communication with a Larger display with 2 Core Cable via RS-485
- In-built Data Saving Feature
- Weight value Hold Functionality
- Interactive Calibration & User Interface.
- Measurements: L x W x H: 100mm x 100mm x 80mm
- Working temperature -10°C to + 60°C
- High Accuracy, with 24bit ADC
- Accuracy with Wire rope load cell: 5% F.S
- Accuracy with Pin type load cell: 1% F.S

Optional Customization

- Large Digital Display connection : 7 Inch, 14 Inch.
- Wireless Display
- Handheld remote display

NOTE 1: For load cell cable extension, use 4 core shielded cable 0.25sq. mm only.

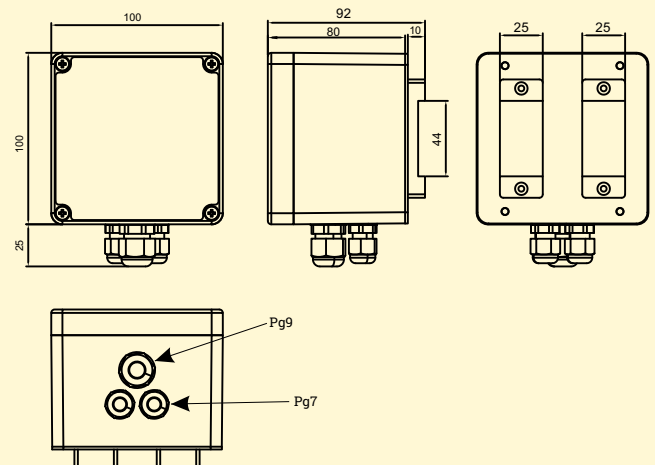
NOTE 2: For display modbus connection, use 2 core 0.5sq mm shielded cable only

NOTE 3: Use separate cable for display power supply modbus connection

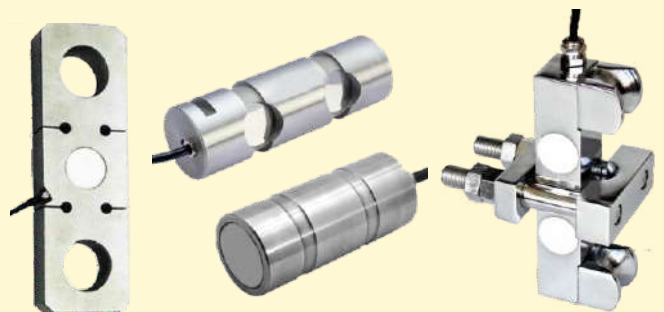
Safeload Controller



Dimension:



Compatible with all Load Cells



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Industrial Estate, Andheri-Kurla, Road,
Mumbai - 400072 ,
Tel : (022) 42469700-730,
E-mail : sales@socgroup.in

Visit us at :
www.speedocontrols.com
www.socremote.com
www.socjoystick.com

Unit - II: Plot No. 4912, G. I. D. C.,
Phase IV, Vatva,
Ahmedabad - 382445
Tel.: (079) 68169700/702/712,
E-mail : enquiry2@socgroup.in