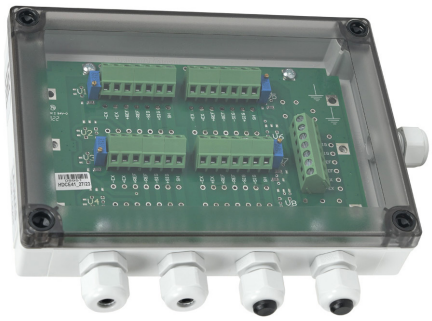
LAUMAS® Equalization Junction Box



Part No. CE41N

Overview

The Laumas CE41N equalization junction box provides an easy way to take multiple load cells in a weighing system and sum them up for a total weight. The CE41N's built-in potentiometers allow for trimming the individual load cells that make up the summed signal so the same load applied at each cell provides a consistent change to the combined output signal. Multiple units can be utilized to allow for even larger numbers of load cells to be used with electronics with multiple inputs (up to 16 load cells with the TLB4, for example).

Features

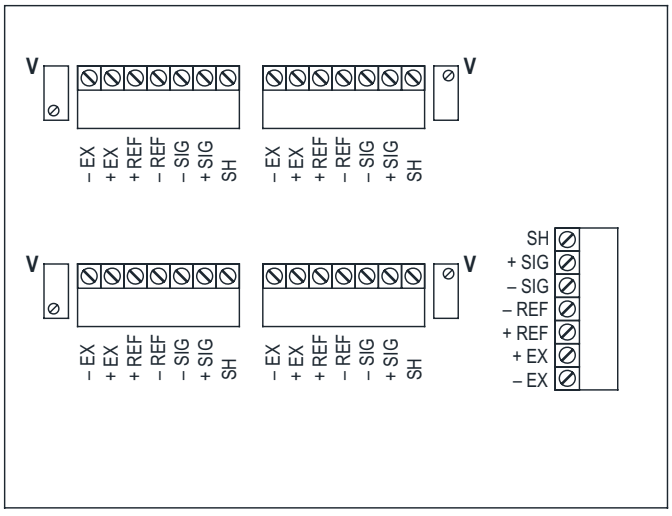
- Clear cover for easy inspection of wiring
- Trimmer potentiometers for signal equalization of up to 4 load cells
- IP67 protection rating
- Cable glands included
- Works with 4- or 6-wire load cells
- Made in Italy

Equalization Junction Box

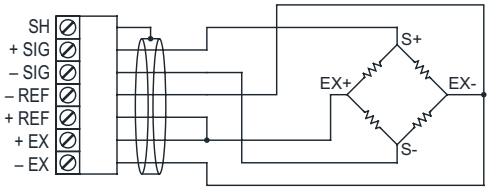
Part Number	Description	Price	Weight (lbs)	Drawing Link	Manufacturer Technical Specifications
CE41N	Laumas equalization junction box, ABS plastic. For use with up to (4) 4- or 6-wire load cells.	$89.00	0.952	PDF	PDF

Note: For additional wiring, specifications and installation information refer to the additional Manufacturer Specs PDFs.

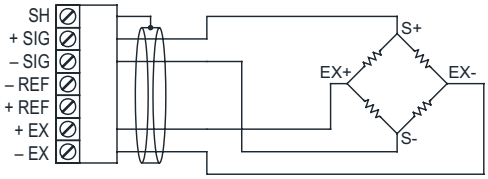
Wiring



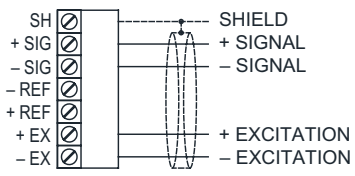
6-WIRE LOAD CELLS CONNECTION



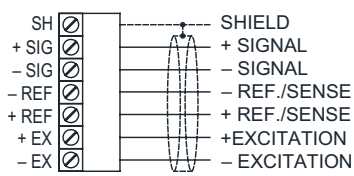
4-WIRE LOAD CELLS CONNECTION



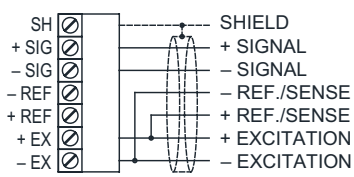
4-WIRE OUTPUT CABLE
WITH 4-WIRES LOAD CELL



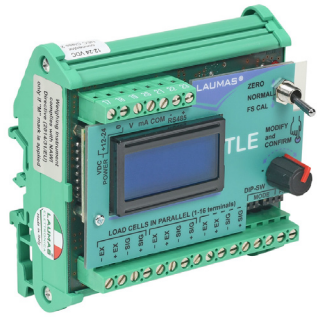
6-WIRE OUTPUT CABLE
WITH 6-WIRE LOAD CELL



6-WIRE OUTPUT CABLE
WITH 4-WIRE LOAD CELL



LAUMAS® TLE Series - Analog Load Cell Transmitter



Part No. TLE

Overview

The Laumas TLE analog load cell transmitter easily converts a load cell mV/V input into an analog (V or mA) signal or provides values which can be read by a PLC or computer via RS-485 Modbus RTU. Calibration is accomplished using a simple rotary encoder and switch with onboard display of the mV input and scaled analog output. Real-world values on the display prevent the need to take readings with a multimeter or other device. Easily perform either a theoretical calibration based on the load cell values or a real calibration with sample weights.

Features

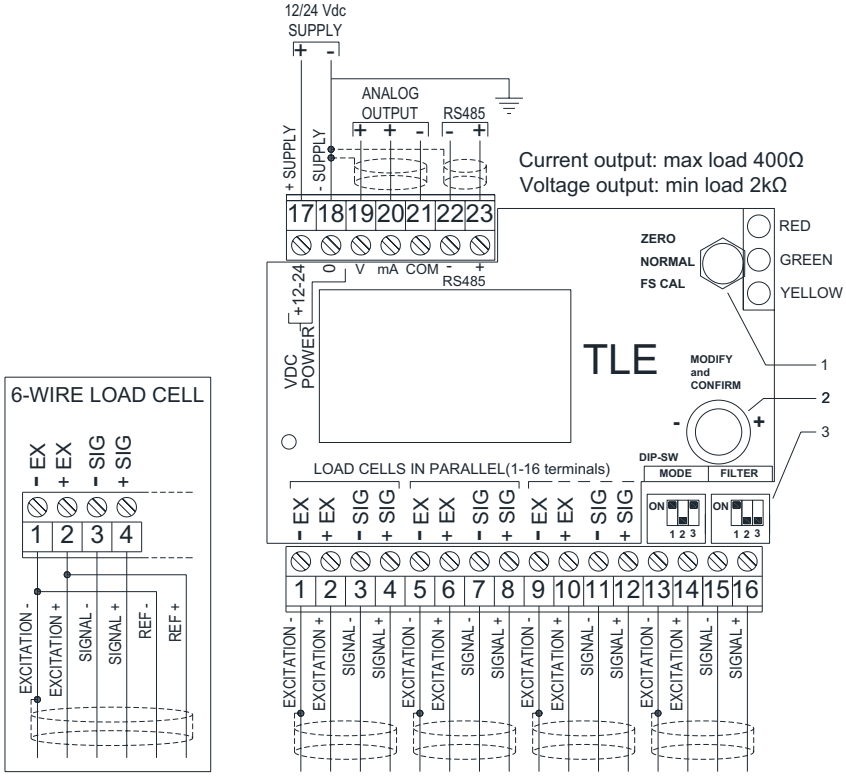
- Opto-isolated 16-bit analog output / 24-bit input
- RS-485 Modbus RTU communication
- Eight-digit backlit LCD alphanumeric two-line display
- Simple zero and full-scale setting via rotary encoder
- Power up to 8 parallel load cells (at 350Ω each) or 16 parallel load cells (at 700Ω each)
- Easy monitoring via RS-485
- DIN rail mounted
- Made in Italy

CE cULus

TLE Series Analog Load Cell Transmitter						
Part Number	***Description***	***Price***	***Weight (lbs)***	***Drawing Link***	***Manufacturer Technical Specifications***	***Manufacturer Manual***
TLE	Laumas analog load cell transmitter, (4) load cell input(s), +/- 39 mV, analog output, Modbus RTU, 12-24 VDC operating voltage. For use with 4- or 6-wire load cells. Up to (8) load cells can be connected.	$210.00	0.524	PDF	PDF	PDF

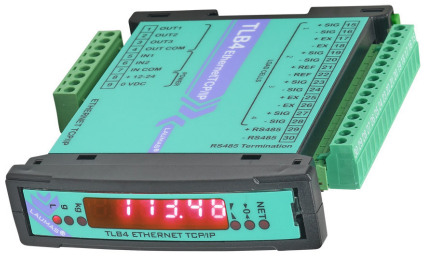
Note: For additional wiring, specifications and installation information, refer to the additional Manufacturer Specs and Manual PDFs.

Wiring



1: Selector switch 2: Knob control 3: DIP switch

LAUMAS® TLB4 Series - Analog Load Cell Transmitters



Part No. TLB4ETHETCP

Overview

The Laumas TLB4 series load cell transmitter easily converts four individual load cell mV/V inputs into an analog (V or mA) signal or into values which be read by a PLC or computer via RS-485 Modbus RTU or, depending on the model, via EtherNet/IP or Modbus/TCP. The TLB4ETHETCP model provides a TCP/IP Webserver for remote monitoring and control. Easily perform either a theoretical calibration based on the load cell values or a real calibration with sample weights. The TLB4 can be mounted on DIN rail or enclosure mounted. Display and LEDs allow for quick reference. The TLB4 also provides inputs and outputs for control of batching, alarming, taring, and other input and output actions.

Features

- 4 channel 24-bit input
- 16-bit analog output (TLB4), EtherNet/IP (TLB4ETHEIP), or Modbus/TCP (TLB4MODBUSTCP)
- RS-485 Modbus RTU communication on all models
- 2 logic inputs, 3 relay outputs
- Six-digit LED display
- Simple setting via four front panel buttons
- Power up to 16 parallel load cells (at 350 ohms)
- Easy configuration and monitoring via RS-485 using Instrument Manager software
- DIN rail or panel mounted
- IP30 front panel protection rating
- Made in Italy

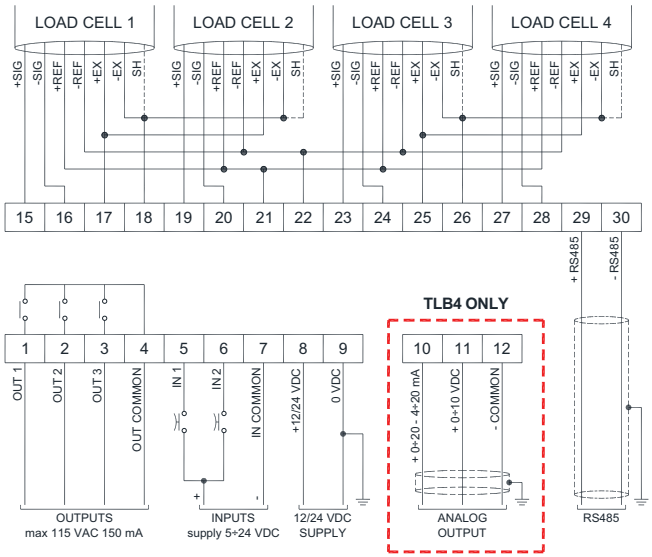
CE cULus

TLB4 Series Analog Load Cell Transmitter Selection

Part Number	Load Cell Inputs	Load Cell Signal Range	Port Protocol(s)	Operating Voltage	Use With	Price	Weight (lbs)	Drawing Link	Manufacturer Technical Specifications	Manufacturer Manual	Manufacturer Protocols Manual
TLB4	4	+/- 39 mV	• Modbus RTU Slave	12-24 VDC	4- or 6-wire load cells (up to 16 can be connected)	$289.00	0.534	PDF	PDF	PDF	PDF
TLB4ETHETCP			• Modbus RTU Slave • webserver (non-secure HTTP)			$425.00	0.528	PDF			
TLB4MODBUSTCP			• Modbus RTU Slave • Modbus TCP Server			$485.00	0.534	PDF			
TLB4ETHEIP			• EtherNet/IP Server • Modbus RTU Slave			$550.00	0.57	PDF			

Note: For additional wiring, specifications and installation information, refer to the Manufacturer Specs and Manual PDFs.

Wiring



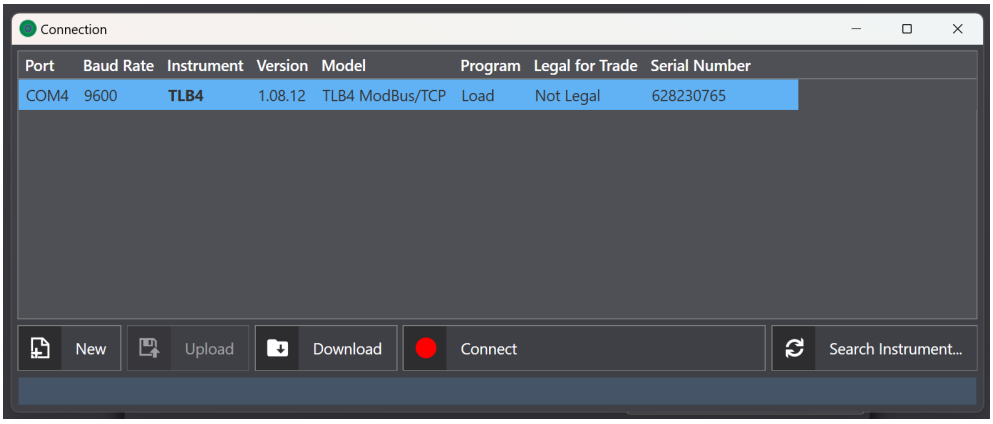
LAUMAS® Instrument Manager Software

LAUMAS-MANAGER-SW FREE Download

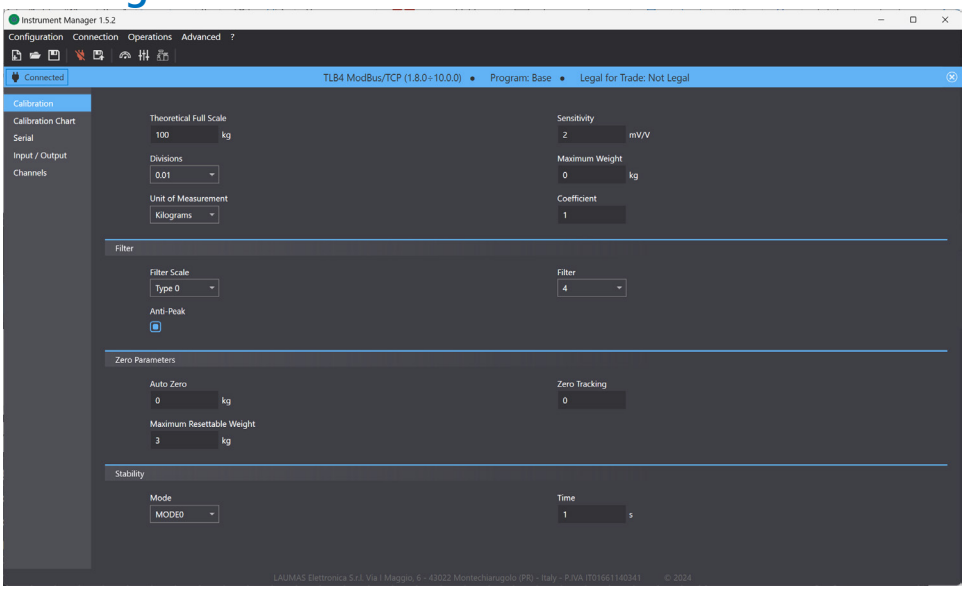
Unlock the full potential of your LAUMAS TLB4 series load cell transmitters with Instrument Manager - the free, powerful software designed for seamless PC management. Compatible with the TLB4 series, this intuitive tool empowers you to configure parameters, monitor performance, perform real calibrations, and update firmware effortlessly. It allows you to create and compare configurations, track real-time weight data, and streamline diagnostics with multichannel insights - all from your desktop. Simplify your setup, boost precision, and keep up-to-date with automatic firmware updates straight from LAUMAS. Download Instrument Manager at AutomationDirect.com and get started!

Use the USB-485M AutomationDirect PC adapter to connect to the RS-485 communications ports on the TLB4.

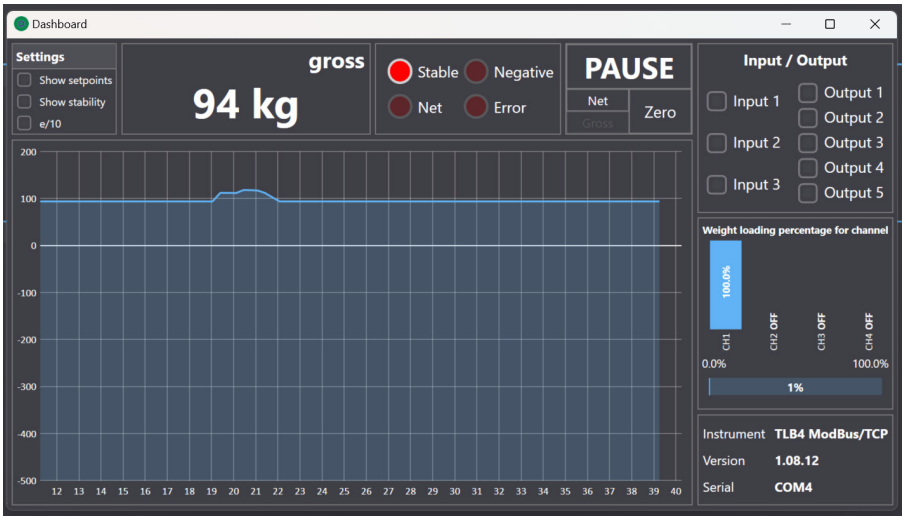
Easily Connect...



...configure...



...monitor



LAUMAS® FCAL Series - Bending Beam Load Cells

Part No. FCAL75

Overview

The Laumas bending beam load cell delivers exceptional accuracy with capacities ranging from 50 kg to 300 kg. An IP68 rating ensures reliable performance in tough environments. The FCAL is a great solution for industrial weighing applications and has several accessories that allow for mounting in many different applications (sold separately). Laumas load cells are manufactured in Europe to high quality specifications and standards.

Features

- High level of accuracy +/- 0.017% full scale
- Tough corrosion-resistant stainless steel construction
- 150% overload rating prevents damage and extends sensor lifespan
- Ideal for platform scales, conveyor systems, and small hopper applications
- Integrated shielded 4-conductor cable
- IP68 protection rating
- Made in Spain

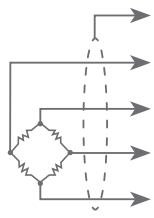
CE

FCAL Series Bending Beam Load Cells

Part Number	Load Rating	Material	Accuracy	Voltage Signal Range	Operating Voltage	Output Resistance	Electrical Connection	Price	Weight (lbs)	Drawing Link	Manufacturer Technical Specifications	Manufacturer Installation Guidelines
FCAL50	110 lb/50 kg	420 Stainless Steel PVC cable	+/- 0.017% of full scale	2 mV/V	3-15 VDC	350Ω	9.8ft/3m integral 4-wire shielded cable	$295.00	1.55	PDF	PDF	PDF
FCAL75	165 lb/75 kg							$295.00	1.55	PDF		
FCAL150	330 lb/150 kg							$295.00	1.57	PDF		
FCAL300	660 lb/300 kg							$295.00	1.59	PDF		

Note: For additional wiring, specifications and installation information, refer to the additional Manufacturer Specs and Manual PDFs.

Wiring

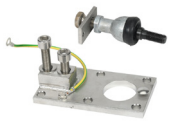


SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

Sizing of load cells capacity

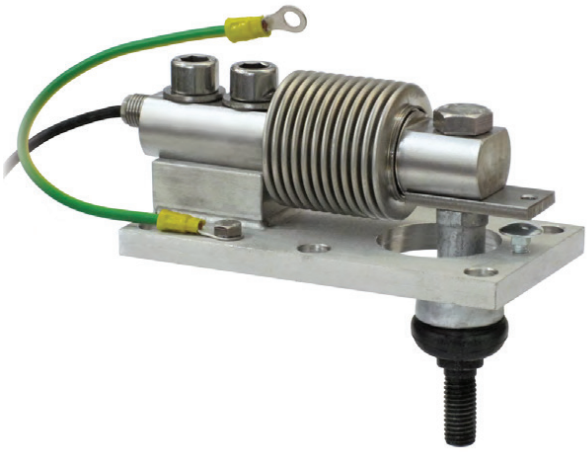
For static weighing, it is advisable to implement a safety factor and only use load cells at a maximum of 70-80% of its nominal capacity (assuming that the load is uniformly distributed over the entire weighed structure). Further reduction may be required for loads that are not uniform; for example, forklift handling and bridge crane applications. Dynamic loads require the consideration of additional introduced forces that contribute to the total maximum load on the load cell.

LAUMAS® FCAL Series - Bending Beam Load Cell - Accessories

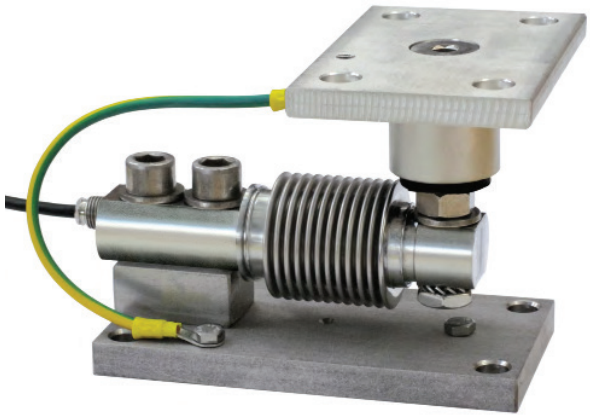
FCAL Series Bending Beam Load Cell - Accessories								
Item Photo	*Part No.*	*Description*	*Price*	*Material*	*Weight (lbs)*	*Drawing Link*	*Manufacturer Technical Specifications*	*Manufacturer Installation Guidelines*
	***ANTIV45***	Laumas compression joint, stainless steel/ rubber, 4409 lb/2000 kg. For use with Laumas FCAL series load cells.	$49.00	304 Stainless Steel and rubber	0.276	PDF	PDF	PDF
	***TFGP***	Laumas alignment mounting hardware, stainless steel/rubber, 1102 lb/500 kg. For use with Laumas FCAL series load cells.	$120.00		5.156	PDF	PDF	
	***TFAST***	Laumas hanging alignment mounting hardware, aluminum/stainless steel/rubber, 1102 lb/500 kg. For use with Laumas FCAL series load cells.	$115.00		3.002	PDF	PDF	
	***STAFFEFCAMONT***	Laumas tension bracket, stainless steel, 660 lb/300 kg. For use with Laumas FCAL series load cells.	$79.00	304 Stainless Steel	1.618	PDF	PDF	

Note: For additional wiring, specifications and installation information refer to the additional Manufacturer Specs and Manual PDFs.

TFAST Example



TFGP Example



LAUMAS®

CTL Series - Tension and Compression Load Cells

Part No. CTL500

Part No. CTL5000

Overview

Laumas CTL Series tension/compression load cells provide a force reading in either direction with capacities ranging from 100 kg to 12,500 kg. An IP68 rating ensures reliable performance in tough environments, making the CTL a great solution for industrial weighing applications. Laumas load cells are manufactured in Europe to high quality specifications and standards.

Features

- Measures compression and/or tension
- Tough corrosion-resistant stainless steel construction
- 150% overload rating prevents damage and extends sensor lifespan
- Ideal for cranes, hoppers, and tank applications
- Integrated shielded 6-conductor cable
- IP68 protection rating
- Made in Italy

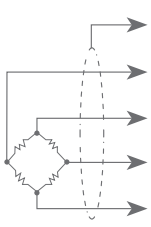
CE

CTL Series Tension and Compression Load Cells

Part Number	Load Rating	Material	Accuracy	Voltage Signal Range	Operating Voltage	Output Resistance	Electrical Connection	Price	Weight (lbs)	Drawing Link	Manufacturer Technical Specifications	Manufacturer Installation Guidelines
CTL100	220 lb/100 kg	17-4PH Stainless Steel PVC cable	+/- 0.02% of full scale	2 mV/V	3-15 VDC	350Ω	32.8 ft/10m integral 4-wire shielded cable	$320.00	1.93	PDF	PDF	PDF
CTL200	440 lb/200 kg							$320.00	1.94	PDF		
CTL300	660 lb/300 kg							$320.00	1.99	PDF		
CTL500	1102 lb/500 kg							$320.00	3.33	PDF		
CTL1000	2204 lb/1000 kg							$320.00	3.35	PDF		
CTL2500	5510 lb/2500 kg							$320.00	3.32	PDF		
CTL5000	11020 lb/5000 kg							$465.00	6.54	PDF		
CTL7500	16530 lb/7500 kg							$465.00	6.60	PDF		
CTL10000	22040 lb/10000 kg							$585.00	8.56	PDF		
CTL12500	27550 lb/12500 kg							$625.00	11.67	PDF		

Note: For additional wiring, specifications and installation information, refer to the additional Manufacturer Specs and Manual PDFs.

Wiring



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK YELLOW

Sizing of load cells capacity

For static weighing, it is advisable to implement a safety factor and only use load cells at a maximum of 70-80% of its nominal capacity (assuming that the load is uniformly distributed over the entire weighed structure). Further reduction may be required for loads that are not uniform; for example, forklift handling and bridge crane applications. Dynamic loads require the consideration of additional introduced forces that contribute to the total maximum load on the load cell.

LAUMAS®

CBL Series - Low Profile Compression Load Cells

Part No. CBL500

Overview

Laumas CBL Series low-profile compression load cells provide a force reading in compression applications with capacities ranging from 250 kg to 12,500 kg. An IP68 rating ensures reliable performance in tough environments, making the CBL a great solution for industrial tank weighing applications. Horizontal constraint mounting accessories are available for tanks and other applications requiring limited horizontal force. Laumas load cells are manufactured in Europe to high quality specifications and quality standards.

Features

- Low profile for easy installation in tight spaces
- Tough corrosion-resistant stainless steel construction
- 150% overload rating prevents damage and extends sensor lifespan
- Ideal for tanks, hoppers, and heavy industrial applications
- Integrated shielded 6-conductor cable
- IP68 protection rating
- Made in Italy

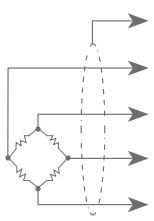
CE

CBL Series Low Profile Compression Load Cells

Part Number	Load Rating	Material	Accuracy	Voltage Signal Range	Operating Voltage	Output Resistance	Electrical Connection	Price	Weight (lbs)	Drawing Link	Manufacturer Technical Specifications	Manufacturer Installation Guidelines
CBL250	550 lb/250 kg	17-4PH Stainless Steel PVC cable	+/- 0.03% of full scale	2 mV/V	3-15 VDC	700Ω	16.4ft/5m integral 4-wire shielded cable	$325.00	2.75	PDF	PDF	PDF
CBL500	1102 lb/500 kg							$325.00	2.78	PDF		
CBL1000	2204 lb/1000 kg							$325.00	2.79	PDF		
CBL2500	5510 lb/2500 kg							$325.00	2.84	PDF		
CBL5000	11020 lb/5000 kg							$325.00	2.90	PDF		
CBL7500	16530 lb/7500 kg							$325.00	3.00	PDF		
CBL10000	22040 lb/10000 kg							$325.00	3.01	PDF		
CBL12500	27550 lb/12500 kg		+/- 0.02% of full scale					$405.00	3.48	PDF		

Note: For additional wiring, specifications and installation information, refer to the additional Manufacturer Specs and Manual PDFs.

Wiring



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK YELLOW

Sizing of load cells capacity

For static weighing, it is advisable to implement a safety factor and only use load cells at a maximum of 70-80% of its nominal capacity (assuming that the load is uniformly distributed over the entire weighed structure). Further reduction may be required for loads that are not uniform; for example, forklift handling and bridge crane applications. Dynamic loads require the consideration of additional introduced forces that contribute to the total maximum load on the load cell.

LAUMAS®

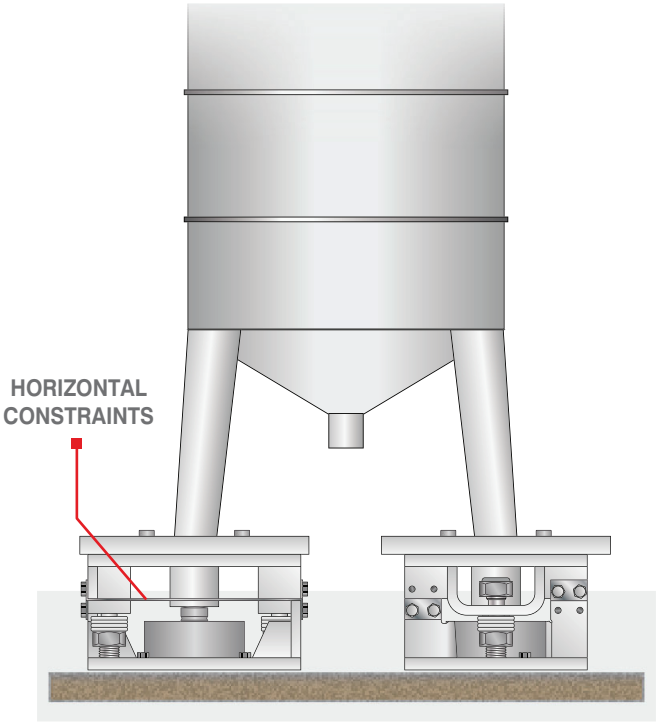
CBL Series - Low Profile Compression Load Cells

CBL Series Low Profile Compression Load Cell - Accessory								
Item Photo	*Part No.*	*Description*	*Material*	*Price*	*Weight (lbs)*	*Drawing Link*	*Manufacturer Technical Specifications*	*Manufacturer Installation Guidelines*
	***V10000***	Laumas compression mounting hardware, stainless steel, 33060 lb/15000 kg. For use with Laumas CBL series load cells.	304 Stainless Steel	$249.00	12.926	PDF	PDF	PDF

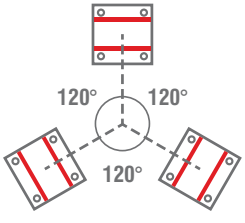
Note: For additional wiring, specifications and installation information refer to the additional Manufacturer Specs and Manual PDFs.

Assembly Example

Application Example



HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 3-POINT SUPPORT



HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 4-POINT SUPPORT