CLM8

INTELLIGENT JUNCTION BOX - 8 INDEPENDENT CHANNELS

LAUMAS® ELETTRONICA

IP67 · RS485 RS232 · ±10° · ALIBI · ETHERNET TCP/IP option on request · TCP/IP WEB APP

MODBUS RTU

DESCRIPTION

- Intelligent junction box with 8 independent channels for load cells; allows the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 4-key membrane keyboard.
- Lightning and electrical shock protection device.

- IP67 AISI 304 stainless steel version.
- Dimensions: 200x148x45 mm (four fixing holes Ø4 mm; centre distance: 148x132 mm).

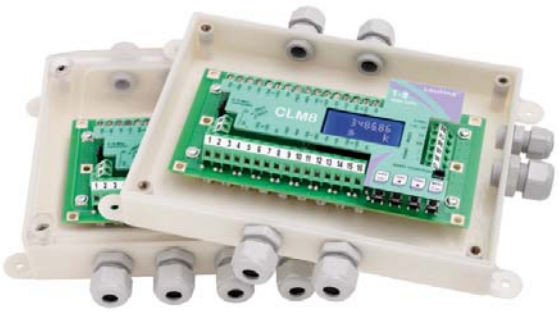
	CODE
8+2 PG9 cable glands - plugs	CLM8INOX

PVC END-FITTINGS FOR SHEATH

- IP67 polycarbonate waterproof box with transparent cover.
- Dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm).

➔ *CLM8 instrument not included.*

	CODE
box without holes	CASTL
4+2 PG9 cable glands - plugs	CASTLPG9
8+2 PG9 cable glands - plugs	CASTL8PG9
4+2 PVC end-fittings for sheath	CASTLGUA
8+2 PVC end-fittings for sheath	CASTL8GUA



- IP67 ABS version with transparent cover.
- Dimensions: 210x130x40 mm (four fixing holes Ø4 mm; centre distance: 196x112 mm).

	CODE
4+2 PG9 cable glands - plugs	CLM4ABS
8+2 PG9 cable glands - plugs	CLM8ABS
4+2 PVC end-fittings for sheath	CLM4ABSR
8+2 PVC end-fittings for sheath	CLM8ABSR

- Omega/DIN rail mounting version suitable for back panel or junction box; dimensions: 125x92x52 mm.

CODE
CLM8

- Naked version, board only; dimensions: 151x72x30 mm.

CODE
CLM8I

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INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas bidirectional or continuous one way transmission.
- 8 load cell dedicated inputs.
- Ethernet TCP/IP port (option on request).

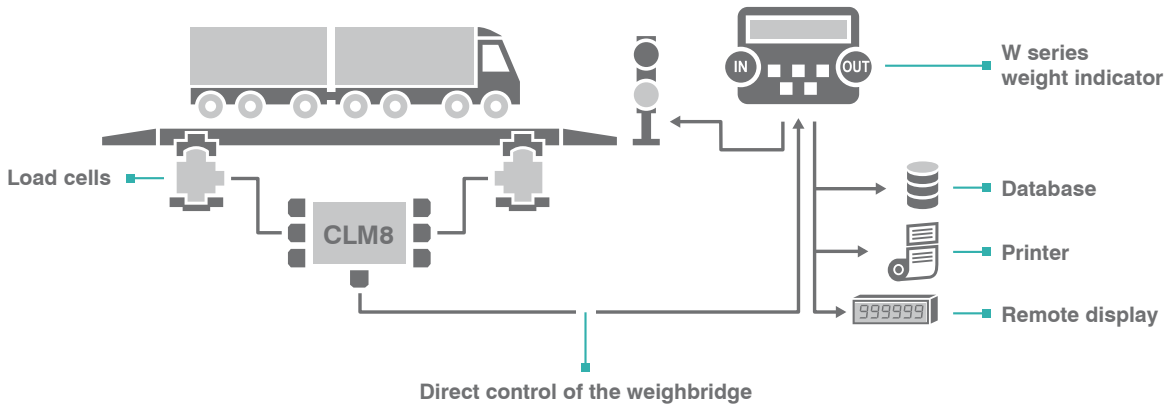
MAIN FUNCTIONS

- 8 independent channels for load cells: monitoring and direct management of each connected load cell.
- Immediate reporting of anomalies (also on the connected weight indicator display).
- All the CLM8 series functions can be managed by a connected W series weight indicator.
- Digital equalization of the 8 channels.
- Load distribution analysis on the 8 channels with backups archive: storing, consultation, printing.
- Detailed diagnostics of each load cell (max 8): depending on the type of weighing system you can perform:
  - load automatic diagnostics;
  - automatic diagnostics on zero.
- Tilt compensation of the weighing system up to ±10 degrees via inclinometer (not included). The weight correction is also valid for systems approved in relation to third parties.
- Significant events archive (zeroing, calibration, equalization, alarms): storing, consultation, printing.
- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display, inclinometer and printer via RS485/RS232;
  - up to 16 load cells in parallel.
- Digital filter to reduce the effects of weight oscillation.
- Transmission via RS232/RS485 (ModBus RTU) or TCP/IP (option on request) of the divisions for the 8 reading channels.
- Theoretical calibration (via keyboard) and real calibration (with sample weights and the possibility of weight linearization up to 5 points).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.
- Semi-automatic tare (net/gross weight) and preset tare.
- Semi-automatic zero.
- Direct connection between RS485 and RS232 without converter.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP option for remote supervision, management and control of the instrument.

CE-M version: 2014/31/EU-EN45501:2015-OIML R76:2006

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).

EXAMPLE OF APPLICATION - WEIGHBRIDGE



CERTIFICATIONS

OIML R76:2006, class III, 3x10000 divisions, 0.4 μV/VSI

CERTIFICATIONS ON REQUEST

M	Initial verification in combination with Laumas weighing module
c UL us	UL Recognized component - Complies with the United States and Canada standards
EAC	Complies with the Eurasian Custom Union standards

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ISO 9001
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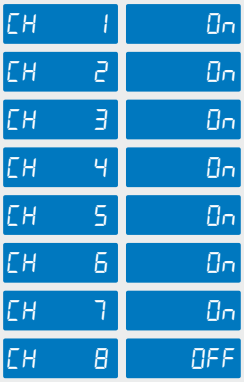
8 INDEPENDENT CHANNELS



The display shows the status of each channel to indicate the presence/absence of connection with the load cells.

Active channels: the load cell is connected

Inactive channel: the load cell is not connected

LOAD DISTRIBUTION

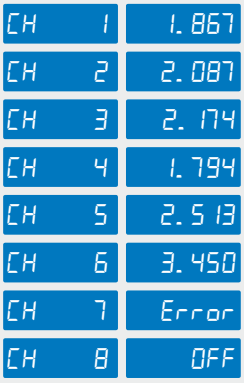
The CLM8 displays the current load distribution on each active channel.

Load percentage on each active channel

ERROR: connection problem

OFF: inactive channel

LOAD CELLS INPUT TEST



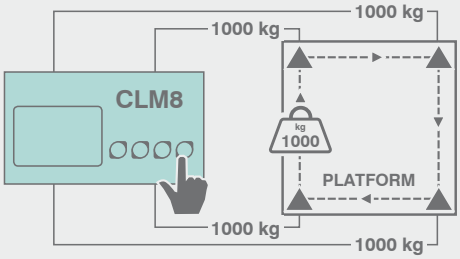
Load cells response signal in mV for each active channel

ERROR: connection problem

OFF: inactive channel

DIGITAL EQUALIZATION

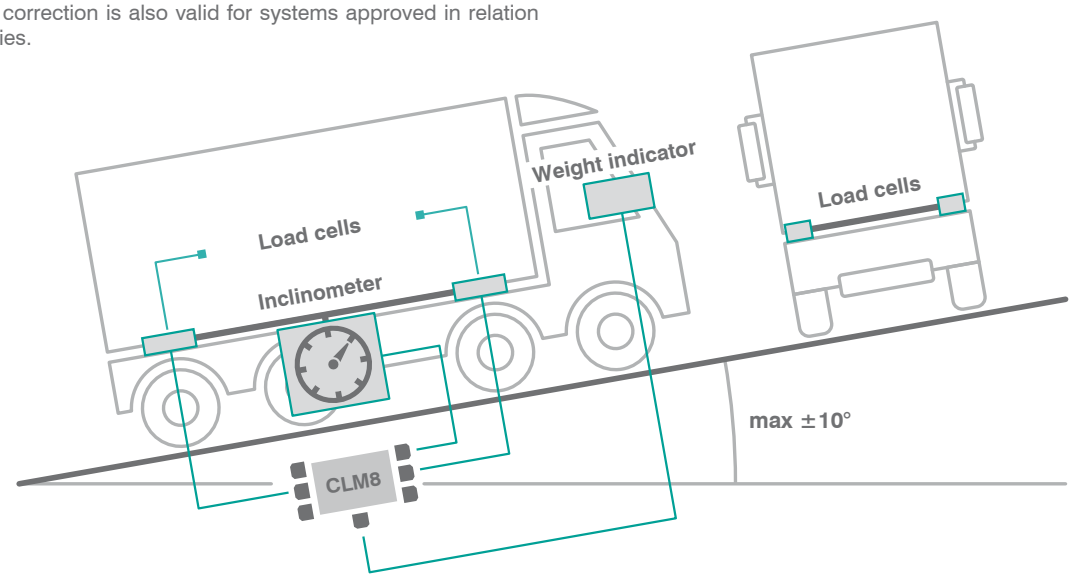
By placing a sample weight at each load cell, it is possible to perform the digital equalization of the weighing system.
The digital equalization function simplifies the procedure to a single step and it is free of drift over time.



▲ = LOAD CELLS

INCLINOMETER

The inclinometer function uses the tilt data provided by an external sensor connected to the weighing instrument, to compensate for the variations in the detected weight value due to a not perfectly levelled system. The range of allowed inclination values is ±10°.
The weight correction is also valid for systems approved in relation to third parties.



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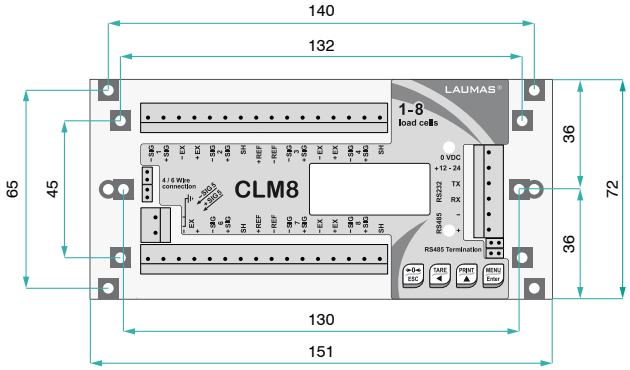
TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 16 (350 Ω) - 4/6 wires • 5 VDC/240 mA
Linearity	<0.01% full scale
Thermal drift	<0.0005% full scale/°C
A/D Converter	8 channels - 24 bit (16000000 points) - 4.8 kHz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 0.01 μV/d
Measurement range	±39 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	600/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	11 levels • 5÷600 Hz
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +60 °C

Working temperature	-20 °C +60 °C
Power supply device marked “LPS” (limited power source) or “Class 2”	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	single interval, multi-interval, multiple range
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Maximum number of scale verification divisions with inclinometer	1000 (class IIII); 5200 (class III) single interval; 2x5200 or 3x2000 (class III) multi-interval or multiple range
Minimum input signal for scale verification division	0.4 μV/VSI
Working temperature	-10 °C +40 °C



OPTIONS ON REQUEST

	DESCRIPTION	CODE
 ±10°	Inclinometer model NS-15/DPN2-RXG (TE Connectivity Sensors product).	INCDPN2-RXG
	Inclinometer model NS-15/DPN2-RUG with protective case (TE Connectivity Sensors product).	INCDPG2-RUG
	Alibi memory.	OPZWALIBI
	**Ethernet TCP/IP** protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument.	OPZETTCPCLM

The Company reserves the right to make changes to the technical data, drawings and images without notice.

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