CLM8

INTELLIGENT JUNCTION BOXES - 8 INDEPENDENT CHANNELS

LAUMAS® ELETTRONICA

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

MODBUS RTU

DESCRIPTION

- The CLM8 intelligent junction boxes series allow to have same benefits and performance of an advanced digital weighing system even using analog load cells.
- Backlit alphanumeric LCD display, 38x16 mm visible area, two-line by eight-digit (5 mm height).
- Four-key keypad for the system calibration.
- Lightning and electrical shock protection device.

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

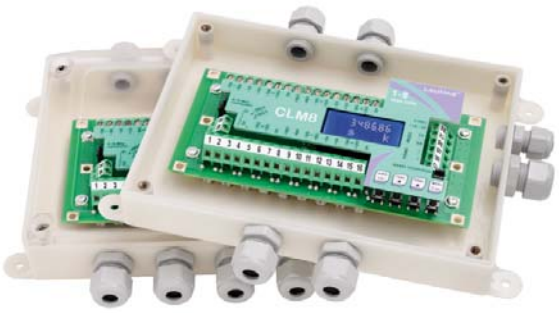
	CODE
8+2 PG9 cable glands-plugs	CLM8INOX

PVC FITTINGS FOR SHEATH

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

➔ *CLM8 instrument not included*

	CODE
cassetta senza fori	CASTL
4+2 PG9 cable glands-plugs	CASTLPG9
8+2 PG9 cable glands-plugs	CASTL8PG9
4+2 PVC fittings for sheath	CASTLGUA
8+2 PVC fittings for sheath	CASTL8GUA



- IP67 ABS box version; 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 fittings for sheath	CLM4ABSR
8+2 PVC 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 (four fixing holes; centre distance 140x65 mm).

CODE
CLM8I

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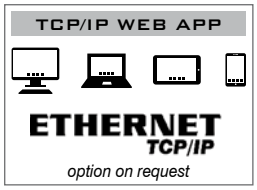
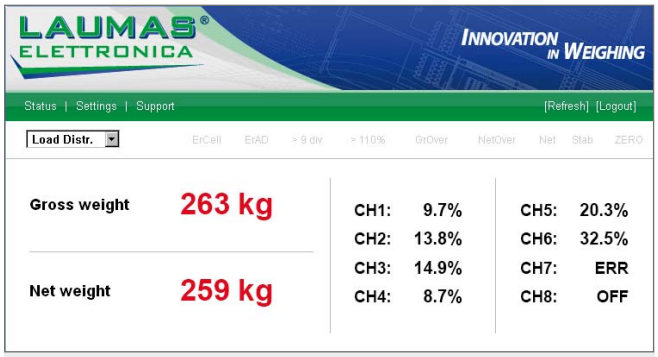
INPUT/OUTPUT AND FIELDBUSES

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





Integrated software in combination with Ethernet port and Ethernet TCP/IP protocol, for supervision, management and remote control of the CLM8 series intelligent junction boxes.

MAIN FUNCTIONS

- 8 independent channels for load cells: monitoring and direct management of the individual load cells connected.
- Instant anomalies report (also on the connected indicator display).
- All CLM8 series functions can be managed by a W series weight indicator connected.
- Digital equalization: the instrument allows to equalize the connected load cells response in a fast and reliable over time.
- Load distribution analysis on 8 channels with archive backups: storing, retrieving, printing.
- Automatic diagnostics: the instrument is designed to store the percentage value of load distribution for each channel. The diagnostic function makes comparisons between the recorded values and if a significant variation between the values is detected during normal operation, the instrument displays an alarm alternating with the weight value.
  Depending on the weighing system type it's possible to perform:
  - Load automatic diagnostics: load distribution control in constant barycentre systems (e.g. liquids silo).
  - Automatic diagnostics on zero: check on load cells drift state (eg. silo, weighbridge, platformes).
- Event log: data backups archive in chronological order of the last 50 events related to calibrations, zero settings, errors and equalizations. The information can be stored, retrieved and printed.
- Connections to:
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters) .
  - Remote display and printer via RS485/RS232.
  - max. 16 load cells in parallel.
- Digital filter and anti peak to reduce the effects of weight oscillation.
- RS232/RS485 communication (Modbus RTU) or TCP/IP (option on request) of the divisions for the 8 independent reading channels.
- Theoretical calibration (via keyboard) and real (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 predetermined tare.
- Semi-automatic zero.
- Direct connection between RS485 and RS232 without converter.

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

- Weight subdivisions displaying (1/10 e).
- Three operation mode: single interval or multiple ranges (max 3) or multi-interval (max 3).
- Net weight zero tracking.
- Calibration correction via keyboard is protected through seals for the access to a setting jumper or installer password or hardware device.
- Alibi memory (option on request).

CERTIFICATIONS

OIML R76:2006, III class, 3x10000 divisions 0.2 μV/VSI

CERTIFICATIONS ON REQUEST

M	Initial verification (Legal Metrology)
EAC	Complies with the Eurasian Custom Union regulations (Russia, Belarus, Kazakhstan)

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ISO 9001:2008
ISO 14001:2004

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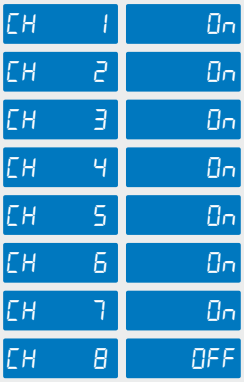
8 INDEPENDENT CHANNELS



The screen shows the activation/deactivation status of individual channels to indicate the presence/absence of connection with load cells.

Active Channels: there is a connection with the load cell.

Channel not active: no connection with the load cell.

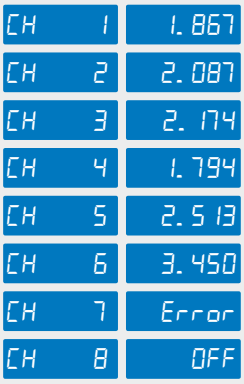
LOAD DISTRIBUTION

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

% of distributed load

ERROR: Connection problem

OFF: Channel not active



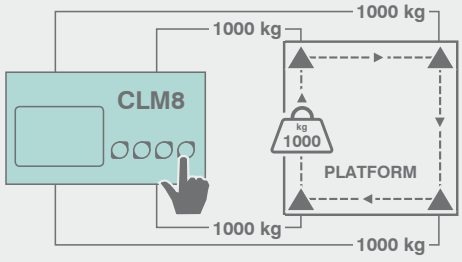
The CLM8 displays the **load cells response signal in mV** for each active channel.

ERROR: Connection problem

OFF: Channel not active

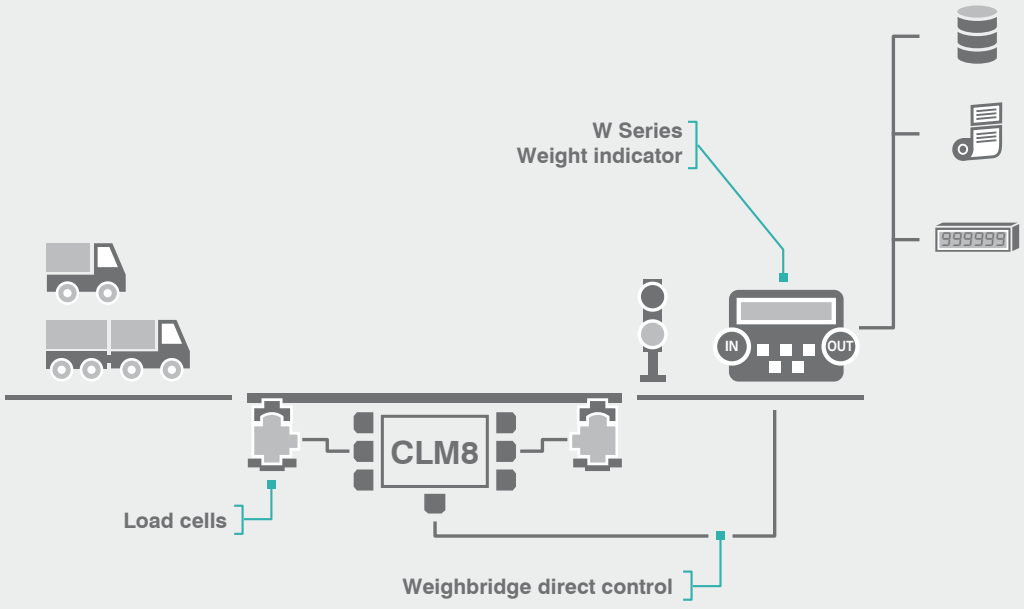
DIGITAL EQUALIZATION

the digital equalizer function simplifies the procedure to a single step and it is free of drift over time.



▲ = LOAD CELLS

EXAMPLE OF WEIGHBRIDGE OF APPLICATION



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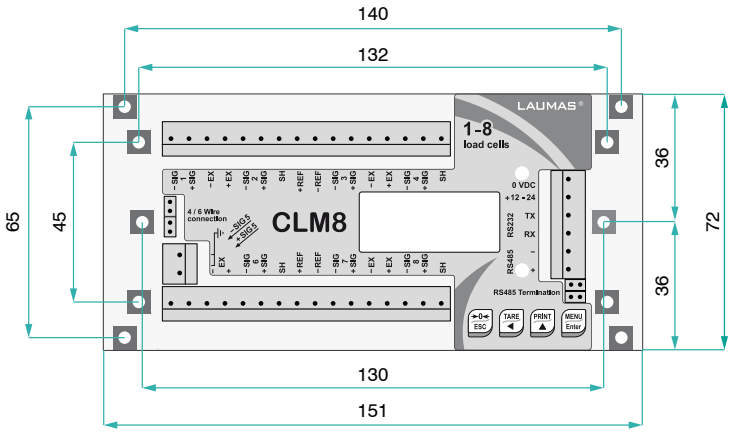
TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W power supply device marked “LPS” (limited power source) or “Class 2”
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) - 4.8kHz
Divisions (with measure range ±10 mV and sensitivity 2 mV/V)	±1000000 • 0.01 μV/d
Measure range	±39 mV
Load cell’s sensitivity	±7 mV/V
Conversion per second	600/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Conversion rate	0.006÷7 s • 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

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Minimum input signal for scale verification division	0.4 μV/VSI
Working temperature	-10°C +40°C



OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Alibi memory	OPZWALIBI
	Ethernet TCP/IP protocol - ethernet port with integrated software	OPZETTCPCLM

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

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