MODBUS RTU

INTELLIGENT JUNCTION BOXES

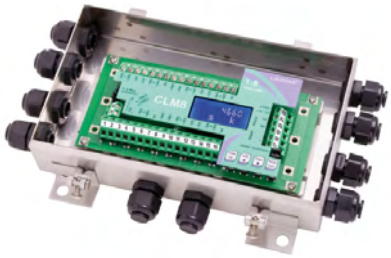
8 INDIPENDENT READING CHANNELS FOR LOAD CELLS

SHOCK PROTECTION DEVICE

TCP/IP WEB APP

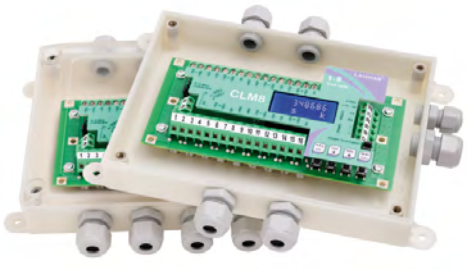
ETHERNET TCP/IP

(option on request)



- IP67 AISI 304 stainless steel version.
- Dimensions: 200x148x45 mm; centre distance 148x132 mm.

CLM8INOX	8+2 cable glands-plugs



- IP67 ABS version with transparent cover.
- Dimensions: 210x130x40 mm; centre distance 196x112 mm.

CLM4ABS	4+2 cable glands-plugs
CLM8ABS	8+2 cable glands-plugs
CLM4ABSR	4+2 PVC end fittings
CLM8ABSR	8+2 PVC end fittings

- IP67 polycarbonate CLM8 boxes with transparent cover.
- Dimensions: 170x140x95 mm; centre distance 152x122 mm.

→ *CLM8 instrument not included*

CASTL	-
CASTLPG9	4+2 PG9 cable glands-plugs
CASTL8PG9	8+2 PG9 cable glands-plugs
CASTLGUA	4+2 PVC end fittings
CASTL8GUA	8+2 PVC end fittings

CLM8

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

CLM8I

- Naked version, board only.
- Dimensions: 151x72x30 mm.

centre distance: see diagram after table "Technical Features" table

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CERTIFICATIONS

OIML R76:2006, III class, 3x5000 divisions 0.4 μV/VSI

CERTIFICATIONS ON REQUEST

EAC - Certification and Declaration of Conformity for the Eurasian Custom Union

OPTIONS ON REQUEST

DESCRIPTION	CODE
Initial verification (Legal Metrology)	-
Alibi memory	-
Ethernet TCP/IP protocol (ethernet port)	OPZETTCPCLM

DESCRIPTION

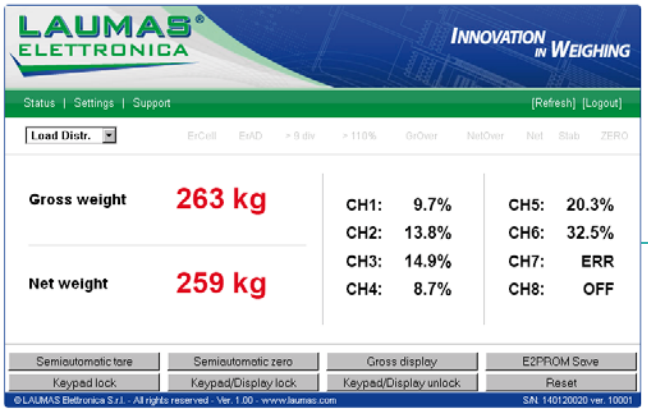
- The CLM8 intelligent junction boxes series allow to have same benefits and performance of an advanced digital weighing system even using analog load cells.
- Backlit alphanumeric LCD display, 38x16 mm visible area, two-line by eight-digit (5 mm height).
- Four-key keypad for the system calibration.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

INPUT/OUTPUT AND FIELDBUSES

- RS232 and RS485 serial ports for connection to PC/PLC, remote display and printer.
- ModBus RTU or ASCII Laumas protocol.
- Ethernet TCP/IP port for remote management (option on request).

SHOCK PROTECTION DEVICE

TCP/IP WEB APP screen shot



ETHERNET TCP/IP PORT

for remote management via internet by PC, smartphone or tablet.

TCP/IP WEB APP

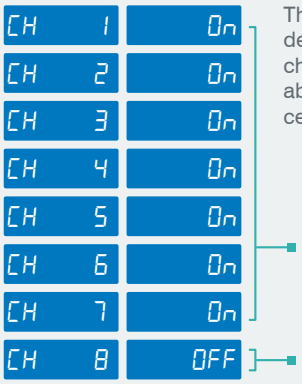
ETHERNET TCP/IP

(option on request)

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 (graphic display indicators excluded).
- RS232/RS485 (Modbus RTU) or TCP/IP (option on request) of the divisions for the 8 independent reading channels.
- 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.
- Zero-setting of weighing system.
- Theoretical calibration by using buttons.
- Real calibration with linearization up to 5 points.
- Anti-peak.
- Filter to stabilize the weight variations.
- Semi-automatic tare and predetermined tare (net/gross weight).
- Automatic zero setting at power-on.
- Zero tracking.
- Semi-automatic zero.

8 INDEPENDENT CHANNELS

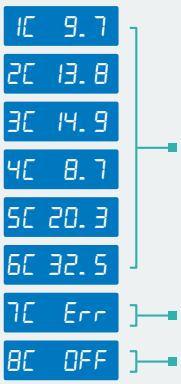


The screen shows the activation/deactivation status of individual channels to indicate the presence/absence of connection with load cells.

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

Channel not active: no connection with the load cell.

LOAD DISTRIBUTION

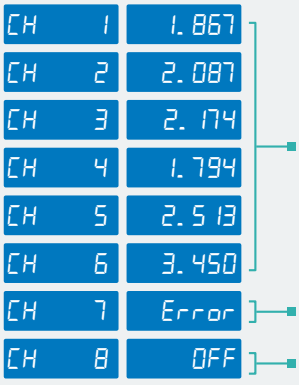


The CLM8 displays the current load distribution on each active channel.

% of distributed load

ERROR: Connection problem

OFF: Channel not active

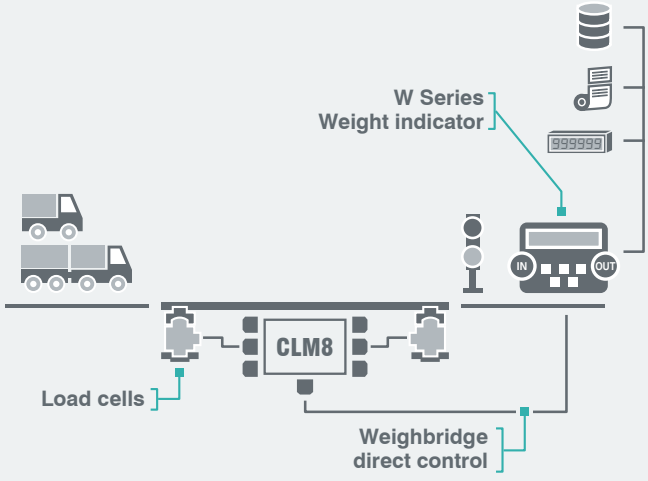


The CLM8 displays the **load cells response signal in mV** for each active channel.

ERROR: Connection problem

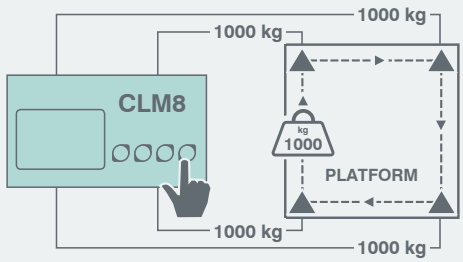
OFF: Channel not active

EXAMPLE OF WEIGHBRIDGE OF APPLICATION



DIGITAL EQUALIZATION

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



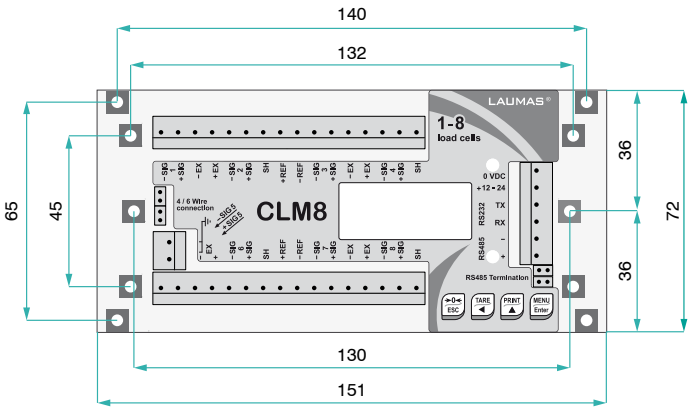
METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

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

TECHNICAL FEATURES

Power supply and Consumption	12-24 VDC ±10%; 5 W
Number of load cells • Connection	max 16 (350 Ω) • 4 or 6 wires
Load cells supply	5 VDC/240 mA
Load cell's sensitivity • Measure range	max 7 mV/V • max ±39 mV
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	max 999999 • 0,01 μV/d *(with measure range ±10 mV and sensitivity 2 mV/V)*
Divisions *(CE-M approved)*	max 3x5000e • 0,4 μV/VSI *(with measure range ±10 mV and sensitivity 2 mV/V)*
Conversion per second	max 600
Decimals • Display increments	0 - 4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Conversion rate	0.006 - 7 s • 5 - 600 Hz
Serial port	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 *(CE-M approved)*	-10°C +40°C

CLM8I DETAIL: centre distance



Dimensions in mm