

# W200BOX

WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

**LAUMAS®**  
ELETTRONICA



ATEX/IECEX version  
(on request)



PVC end-fittings for sheath  
(on request)



PROGRAM	OIML	IECEX	Ex	M	NMI	EAC	cULus	CODE
BASE	R76 - R61	•	•	•	•	•	•	W200BOX-B
LOAD	R76 - R61	•	•	•	•	•	•	W200BOX-C
UNLOAD	R76 - R61	•	•	•	•	•	•	W200BOX-S
3 PRODUCTS	R76 - R61	•	•	•	•	•	•	W200BOX-3
* 6 PRODUCTS	R76 - R61	•	•	•	•	•	•	W200BOX-6
* 14 PRODUCTS	R76 - R61	•	•	•	•	•	•	W200BOX-14
Multiprogram	R76 - R61	•	•	•	•	•	•	W200BOX-MU

\* External 8-relay modules included.

ON REQUEST

## CERTIFICATIONS



OIML R76:2006, class III, 3x10000 divisions, 0.2 μV/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

### CERTIFICATIONS ON REQUEST



Initial verification in combination with Laumas weighing module



ATEX II 3GD (zone 2-22)

→ The external relay modules must be protected.



IECEX (zone 2-22)

→ The external relay modules must be protected.



UL Recognized component - Complies with the United States and Canada standards



Complies with the Eurasian Custom Union standards



NMI Trade Approved - Complies with the Australian standards for legal use with third parties

## FIELDBUSES

**MODBUS RTU**  
**MODBUS/TCP**



**ETHERNET**  
TCP/IP



### DESCRIPTION

- Weight indicator in IP67 polycarbonate waterproof box with 4+2 PG9 cable glands-plugs, suitable for wall mounting (dimensions: 170x140x95 mm; 4 fixing holes Ø 4 mm; centre distance: 152x122 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 5-key membrane keyboard.
- Real-time clock/calendar with buffer battery.

### MAIN FUNCTIONS

- Connections to:
  - PLC via analog output (on request);
  - 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;
  - up to 8 load cells in parallel by junction box;
  - intelligent junction box or other multichannel instruments: allow the use of advanced functions as digital equalization, load distribution analysis and automatic diagnostics.
- Digital filter to reduce the effects of weight oscillation.
- 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.
- Displaying of the maximum weight value reached (peak).
- Direct connection between RS485 and RS232 without converter.
- Weight value printing with date and time via keyboard or external contact.
- **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 range or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).
- The following values can be printed via keyboard or external contact: gross weight, net weight, tare, preset tare, date, time, ID code (alibi memory).

### INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas bidirectional or continuous one way transmission.
- 5 relay outputs controlled by the setpoint values or via protocols (4 outputs if analog output is present).
- 3 optoisolated PNP digital inputs: status reading via serial communication protocols (2 inputs if analog output is present).
- 1 load cell dedicated input.
- Current or voltage 16 bit optoisolated analog output (option on request).

#### BASE PROGRAM

- Hysteresis and setpoint value setting.
- The indicator can be used as a remote display with setpoints.
- 12 groups selection by 5 setpoint via external selector switch or contact (option on request).

#### BATCHING PROGRAM

- 99 settable formulas.
- Batching resume after a blackout.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Printing of batching data.
- Alarm contact management.
- Selection of the first 12 formulas via external selector switch or contact (option on request).
- Batching start via external contact or keyboard.

Only for:

LOAD and 3/6/14 PRODUCTS programs

- Autotare at batching start.

UNLOAD program

- Automatic loading of the product into the weighed structure.
- Management of batching with big bags.

3/6/14 PRODUCTS program

- Formulas programming in fixed or variable steps.

#### MULTIPROGRAM

- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

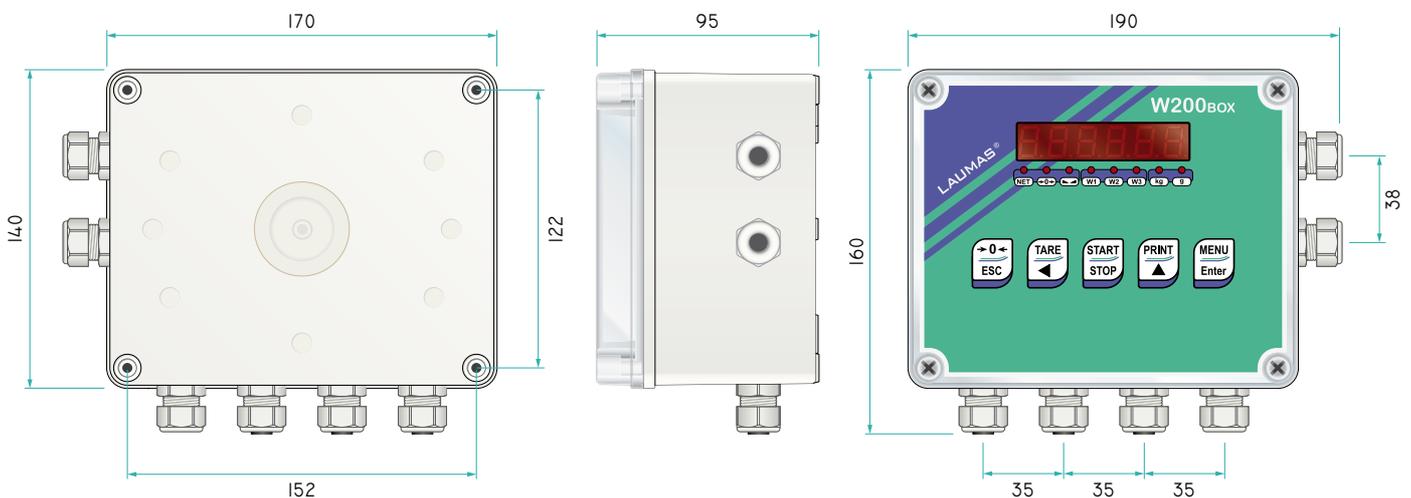
### TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/240 mA
Linearity • Analog output linearity	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift	<0.0005% full scale/°C • <0.003% full scale/°C
A/D Converter	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	300/s
Display range	±999999
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷300 Hz
Relay outputs	5/4 - max 115 VAC/150 mA
Optoisolated digital inputs	3/2 - 5÷24 VDC PNP
Serial ports	RS485, RS232
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (option on request)	16 bit = 65535 divisions. 0÷20 mA; 4÷20 mA (up to 300 Ω) 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ)
Humidity (condensate free)	85%
Storage temperature	-30°C +80°C
Working temperature	-20°C +60°C

	Relay outputs	5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature	-20°C +50°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 mode	single interval, multi-interval, multiple range
Accuracy class	III or IIII
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)
Minimum input signal for scale verification division	0.2 μV/VSI
Working temperature	-10°C +40°C



### OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	ACCESSORIES	CODE
	6 PVC end-fittings for sheath.	W200BOX-U B C S 3P 6P 14P • • • • • •
<b>INTERFACES AND FIELD BUSES</b>		
	Optoisolated 16 bit <b>analog output</b> . → One input and one output not available.	* OPZW1ANALOGICA B C S 3P 6P 14P • • • • • •
	<b>Additional RS485</b> port. → One input and one output not available. → Not compatible with E/EC option.	* OPZW1RS485 B C S 3P 6P 14P • • • • • •
	<b>CANopen</b> protocol.	* OPZW1CAW200 B C S 3P 6P 14P • - - - - -
	<b>DeviceNet</b> protocol.	* OPZW1DEW200 B C S 3P 6P 14P • - - - - -
	<b>Profibus DP</b> protocol.	* OPZW1PRW200 B C S 3P 6P 14P • • • • • •
	<b>Ethernet/IP</b> protocol - Ethernet port.	* OPZW1ETIP B C S 3P 6P 14P • - - - - -
	<b>Ethernet TCP/IP</b> protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument.	* OPZW1ETTCP B C S 3P 6P 14P • • • • • •
	<b>Modbus/TCP</b> protocol - Ethernet port.	* OPZW1MBTCP B C S 3P 6P 14P • • • • • •
	<b>Profinet IO</b> protocol - Ethernet port.	* OPZW1PNETIO B C S 3P 6P 14P • - - - - -
	Weight reading from 0-10 VDC input (15 kΩ).	OPZWING010 B C S 3P 6P 14P • • • • • •
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420 B C S 3P 6P 14P • • • • • •

\* Select one option among those marked with an asterisk.

# W200BOX

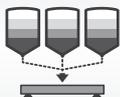
## WEIGHT INDICATOR INTO BOX - WEIGHING AND BATCHING

### OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	EXPANSIONS	CODE
	Base: 12 groups selection by 5 setpoint via external selector switch. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external selector switch.	* EC B C S 3P 6P 14P • • • • • •
	Base: 12 groups selection by 5 setpoint via external contact. Load, Unload, 3/6/14 Products: selection of the first 12 formulas via external contact.	* E B C S 3P 6P 14P • • • • • •
	Simultaneous use of E/EC option with the analog output.	OPZWAEC B C S 3P 6P 14P • • • • • •
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M B C S 3P 6P 14P • • • • - -
	External 8-relay module to manage from 1 to 6 products; 8 relays up to max 115 VAC/2 A. Module included with models 6/14 PRODUCTS.	12 ÷ 24 VDC 115 VAC 230 VAC RELE6PROD24V RELE6PROD115V RELE6PROD230V B C S 3P 6P 14P - - - - inc. inc.
	External 8-relay module to manage from 7 to 14 products to be added to RELE6PROD module; 8 relays up to max 115 VAC/2 A. Module included with model 14 PRODUCTS.	RELE14PROD B C S 3P 6P 14P - - - - - inc.

\* Select one option among those marked with an asterisk.

### OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	APPLICATIONS - SOFTWARE	CODE
	Formulas setting in percentage.	OPZWFORPERC B C S 3P 6P 14P - - - • • •
	Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles. → <i>Not available for CE-M approved version.</i>	OPZWQMC B C S 3P 6P 14P - • - • • •
	Intermediate unloadings during the batching. → <i>Not available for CE-M approved version.</i>	OPZWSCARI B C S 3P 6P 14P - - - • • •
	Partial unloadings at cycle end. → <i>Not available for CE-M approved version.</i>	OPZWSCARP B C S 3P 6P 14P - - - • • •
	Alibi memory.	OPZWALIBI B C S 3P 6P 14P • • • • • •
	Data transfer from the instrument to the PC, via RS232 (directly) or RS485 (by converter) serial port. These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included. We suggest to use this option when the indicator is always connected to the PC.	OPZWDATIPC B C S 3P 6P 14P • • • • • •
	Manual batching with remote displays connected in parallel to the instrument via RS485 serial port; allows to display on different remote displays the following batching information: formula and product number, remaining quantity to be batched, gross weight.	OPZWLAUMAN B C S 3P 6P 14P - • • • • •