W200
Weight Indicator- Weighing and Batching

LAUMAS®
ELETTRONICA

CE OIML M cULus EHC NMI TRADE APPROVED RS485 RS232 ANALOG OUTPUT ALIBI

PROGRAM	OIML	M	NMI	EHC	cULus	CODE
BASE	R76 - R61	●	●	●	●	W200
LOAD	R76 - R61	●	●	●	●	W200-C
UNLOAD	R76 - R61	●	●	●	●	W200-S
3 PRODUCTS	R76 - R61	●	●	●	●	W200-3
* 6 PRODUCTS	R76 - R61	●	●	●	●	W200-6
* 14 PRODUCTS	R76 - R61	●	●	●	●	W200-14
Multiprogram	R76 - R61	●	●	●	●	W200-MU

* External 8-relay modules included

ON REQUEST

CERTIFICATIONS

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

CERTIFICATIONS ON REQUEST

M	Initial verification in combination with Laumas weighing module
cULus	UL Recognized component - Complies with the United States and Canada standards
EHC	Complies with the Eurasian Custom Union standards
NMI TRADE APPROVED	NMI Trade Approved - Complies with the Australian standards for legal use with third parties

FIELDBUSES

MODBUS RTU MODBUS/TCP CANopen PROFIBUS DeviceNet EtherNet/IP ETHERNET TCP/IP PI CERTIFIED PROFIBUS · PROFINET

DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting (dimensions: 96x96x130 mm; drilling template: 92x92 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 5-key membrane keyboard.
- IP54 front panel protection rating (IP65 front optional).
- Real-time clock/calendar with buffer battery.
- Extractable screw terminal blocks.

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).

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 ranges 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 (aliby memory).

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.
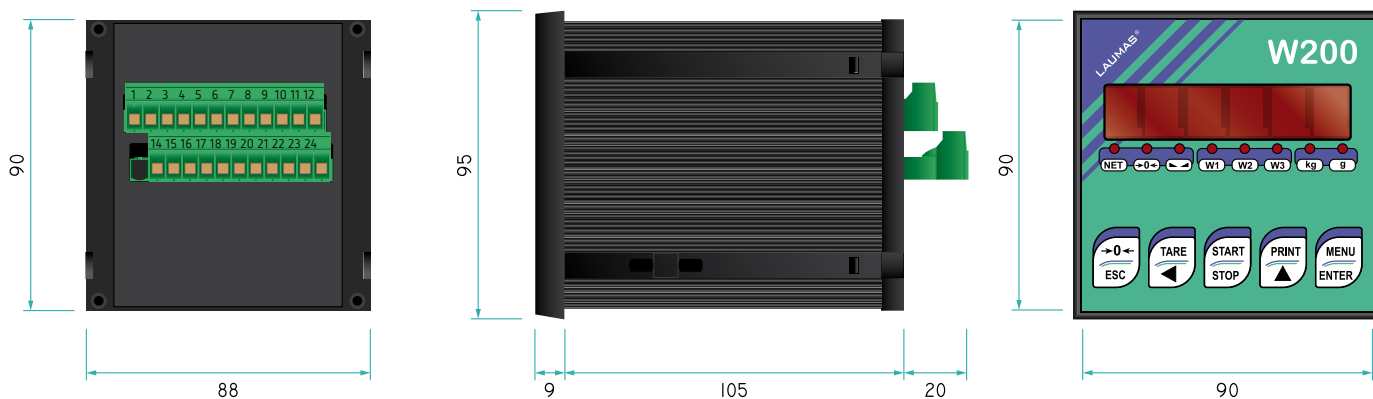
TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W (on request: 115÷ 230 VAC ; 50÷ 60 Hz; 6 VA)
Number of load cells · Load cells supply	up to 8 (350 Ω) – 4/6 wires · 5 VDC /120 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
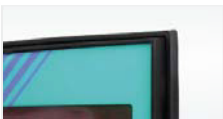
c🅴🅽us	Relay outputs	5/4 – max 30 VAC , 60 VDC / 150 mA
	Working temperature	-20 ˚C +50 ˚C
	Power supply device marked "LPS" (limited power source) or "Class 2"	

METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006
Operation modes	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

POWER SUPPLY

	CODE					
Power supply 115/230 VAC; 50/60 Hz; 6 VA. ➡ Not compatible with fieldbuses and USB port.	B	C	S	3P	6P	14P
	●	●	●	●	●	●

115/230
VAC

ACCESSORIES

	OPZW96X96IP65					
IP65 panel sealing gasket.	B	C	S	3P	6P	14P
	●	●	●	●	●	●

INTERFACES AND FIELDBUSES

ANALOG OUTPUT	✱ OPZW1ANALOGICA					
Optoisolated 16 bit **analog output** . ➡ One input and one output not available.	B	C	S	3P	6P	14P
	●	●	●	●	●	●
RS485+	✱ OPZW1RS485					
Additional RS485 port. ➡ One input and one output not available. ➡ Not compatible with E/EC option.	B	C	S	3P	6P	14P
	●	●	●	●	●	●
CANopen	✱ OPZW1CAW200					
CANopen protocol. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	—	—	—	—	—
DeviceNet	✱ OPZW1DEW200					
DeviceNet protocol. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	—	—	—	—	—
PROFIBUS	✱ OPZW1PRW200					
Profibus DP protocol. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	●	●	●	●	●
EtherNet/IP	✱ OPZW1ETIPW200					
Ethernet/IP protocol - Ethernet port. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	—	—	—	—	—
ETHERNET TCP/IP	✱ OPZW1ETTCPW200					
Ethernet TCP/IP protocol - Ethernet port. Integrated software for remote supervision, management and control of the instrument. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	●	●	●	●	●
MODBUS/TCP	✱ OPZW1MBTCPW200					
Modbus/TCP protocol - Ethernet port. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	●	●	●	●	●
PI	✱ OPZW1PNETIOW200					
Profinet IO protocol - Ethernet port. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	—	—	—	—	—
USB	OPZWUSBW200					
USB port for data storage to pen drive (included). These data (weighed values, batchings, alarms) can be imported and processed on the PC using the PROG-DB software included in the supply. ➡ Not compatible with 115 VAC and 230 VAC.	B	C	S	3P	6P	14P
	●	●	●	●	●	●

✱ Select one option among those marked with an asterisk.

Version 02.2020

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

	Description	CODE					
	USB male/female extension cable with IP68 sealed panel connector; lenght: 50 cm, sealing cap and cover included.	OPZWCONUSBIP68					
		B ●	C ●	S ●	3P ●	6P ●	14P ●
	Ethernet male/female extension cable with IP68 sealed panel connector; lenght: 50 cm, sealing cap included.	OPZWCONETHEIP68					
		B ●	C ●	S ●	3P ●	6P ●	14P ●
	Ethernet male/male extension cable with IP68 sealed connector; lenght: 5 m, to be used in combination with the OPZWCONETHEIP68 option.	OPZWCONETHE5MT					
		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 ●

EXPANSIONS

	Description	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 inc.	14P inc.

★ Select one option among those marked with an asterisk.

OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

CODE

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.

APPLICATIONS - SOFTWARE

FORM ⇩ %

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.
➡ Not available for CE-M approved version.

OPZWQMC

B	C	S	3P	6P	14P
–	●	–	●	●	●

Intermediate unloadings during the batching.
➡ Not available for CE-M approved version.

OPZWSCARI

B	C	S	3P	6P	14P
–	–	–	●	●	●

Partial unloadings at cycle end.
➡ Not available for CE-M approved version.

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
–	●	●	●	●	●

Althen – Your expert partner in Sensors & Controls | althensensors.com
Althen stands for pioneering measurement and custom sensor solutions. In addition we offer services such as calibration, design & engineering, training and renting of measurement equipment.

Germany/Austria/Switzerland	Benelux	France	Sweden	USA/Canada	Other countries
info@althen.de	sales@althen.nl	info@althensensors.fr	info@althensensors.se	info@althensensors.com	info@althensensors.com