

# W200

## WEIGHT INDICATOR - WEIGHING AND BATCHING

LAUMAS®



| PROGRAM       | OIML      | M | NMI Trade Approved | G | EAC | 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 R76:2006, class III, 3x10000 divisions, 0.2  $\mu$ V/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

#### CERTIFICATIONS ON REQUEST



Conformity assessment (initial verification) in combination with Laumas weighing module



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



Complies with the regulations of the Russian Federation for legal use with third parties

### FIELDBUSES

MODBUS RTU  
MODBUS/TCP



ETHERNET  
TCP/IP



### DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting.
- Dimensions: 96x130x96 mm (drilling template: 92x92 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 5-key keyboard.
- IP54 front panel protection rating (IP65 front optional).
- Real-time clock/calendar with buffer battery.
- Extractable screw terminal blocks.
- The instrument can be configured and managed using the free "Instrument Manager" PC software, which you can download from [www.laumas.com](http://www.laumas.com).

### 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 8 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 (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

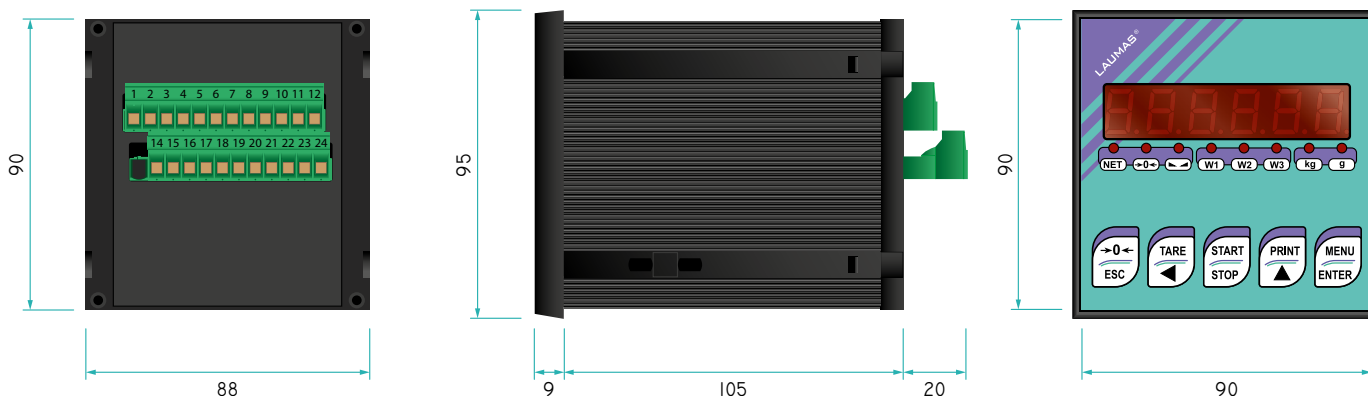
- The Multiprogram instruments do not have any selected program but can be set by the installer with different operating modes: BASE, LOAD, UNLOAD, 3 PRODUCTS, 6 PRODUCTS, 14 PRODUCTS.

### TECHNICAL FEATURES

|  |  |                                 |
|--|--|---------------------------------|
| Power supply and consumption                                     | 12÷24 VDC ±10%; 5 W (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)<br>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                   |
|  | Equipment to be powered by 12-24 VDC LPS or Class 2 power source                                   |                                 |













### 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                                   |



Rev. 0.0

### OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS

|   | POWER SUPPLY  | CODE  |
|---|---|---|
| <br>115/230<br>VAC               | Power supply 115/230 VAC; 50/60 Hz; 6 VA.<br>→ Not compatible with fieldbuses and USB port.   | B C S 3P 6P 14P<br>• • • • • •                      |
| <b>ACCESSORIES</b>  |   |   |
|                                  | IP65 panel gasket.  | OPZW96X96IP65<br>B C S 3P 6P 14P<br>• • • • • •     |
| <b>INTERFACES AND FIELDBUSES</b>  |   |   |
| <br>ANALOG<br>OUTPUT             | Optoisolated 16 bit <b>analog output</b> .<br>→ One input and one output not available.   | * OPZW1ANALOGICA<br>B C S 3P 6P 14P<br>• • • • • •  |
| <br>RS485 <sup>+</sup>           | <b>Additional RS485</b> port.<br>→ One input and one output not available.<br>→ Not compatible with E/EC option.  | * OPZW1RS485<br>B C S 3P 6P 14P<br>• • • • • •      |
| <br>CANopen                    | <b>CANopen</b> protocol.<br>→ Not compatible with 115 VAC and 230 VAC.  | * OPZW1CAW200<br>B C S 3P 6P 14P<br>• - - - - -     |
| <br>DeviceNet                  | <b>DeviceNet</b> protocol.<br>→ Not compatible with 115 VAC and 230 VAC.  | * OPZW1DEW200<br>B C S 3P 6P 14P<br>• - - - - -     |
| <br>PROFIBUS<br>DP             | <b>Profibus DP</b> protocol.<br>→ Not compatible with 115 VAC and 230 VAC.  | * OPZW1PRW200<br>B C S 3P 6P 14P<br>• • • • • •     |
| <br>Ethernet/IP                | <b>Ethernet/IP</b> protocol - Ethernet port.<br>→ Not compatible with 115 VAC and 230 VAC.  | * OPZW1ETIPW200<br>B C S 3P 6P 14P<br>• - - - - -   |
| <br>ETHERNET<br>TCP/IP         | <b>Ethernet TCP/IP</b> protocol - Ethernet port.<br>Integrated software for remote supervision, management and control of the instrument.<br>→ Not compatible with 115 VAC and 230 VAC.   | * OPZW1ETTCPW200<br>B C S 3P 6P 14P<br>• • • • • •  |
| <br>MODBUS/TCP                 | <b>Modbus/TCP</b> protocol - Ethernet port.<br>→ Not compatible with 115 VAC and 230 VAC.   | * OPZW1MBTCPW200<br>B C S 3P 6P 14P<br>• • • • • •  |
| <br>PIV<br>PROFIBUS • PROFINET | <b>Profinet IO</b> protocol - Ethernet port.<br>→ Not compatible with 115 VAC and 230 VAC.  | * OPZW1PNETIOW200<br>B C S 3P 6P 14P<br>• - - - - - |
|                                | <b>USB</b> 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.<br>→ Not compatible with 115 VAC and 230 VAC. | OPZWUSBW200<br>B C S 3P 6P 14P<br>• • • • • •       |

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

### OPTIONS ON REQUEST AND COMPATIBILITY WITH BATCHING PROGRAMS




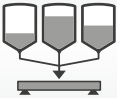




|  |   | CODE  |
|--|---|---|
|  | USB male/female extension cable with IP68 panel connector; length: 50 cm, sealing cap and cover included.                       | OPZWCONUSBIP68<br>B C S 3P 6P 14P<br>• • • • • •  |
|  | Ethernet male/female extension cable with IP68 panel connector; length: 30 cm, sealing cap included.                            | OPZWCONETHEIP68<br>B C S 3P 6P 14P<br>• • • • • • |
|  | Ethernet male/male extension cable with IP68 connector; length: 5 m, to be used in combination with the OPZWCONETHEIP68 option. | OPZWCONETHE5MT<br>B C S 3P 6P 14P<br>• • • • • •  |
|  | Weight reading from 0-10 VDC input (15 kΩ).   | OPZWING010<br>B C S 3P 6P 14P<br>• • • • • •      |
|  | Weight reading from 4-20 mA input (120 Ω).  | OPZWING420<br>B C S 3P 6P 14P<br>• • • • • •      |

### EXPANSIONS

|  |   |   |
|--|---|---|
|  | 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<br>B C S 3P 6P 14P<br>• • • • • •  |
|  | 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<br>B C S 3P 6P 14P<br>• • • • • •   |
|  | Simultaneous use of E/EC option with the analog output.   | OPZWAEC<br>B C S 3P 6P 14P<br>• • • • • •   |
|  | External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.   | RELE5M<br>B C S 3P 6P 14P<br>• • • • - -  |
|  | 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<br>115 VAC<br>230 VAC<br>RELE6PROD24V<br>RELE6PROD115V<br>RELE6PROD230V<br>B C S 3P 6P 14P<br>- - - - • • |

\* 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<br>B C S 3P 6P 14P<br>- - - - - •  |
| <b>APPLICATIONS - SOFTWARE</b>  |  |   |
|    | Formulas setting in percentage.  | OPZWFORPERC<br>B C S 3P 6P 14P<br>- - - • • • |
|    | Setting a quantity to be batched greater than the scale capacity with automatic calculation of cycles.<br>→ Not available for CE-M approved version.   | OPZWQMC<br>B C S 3P 6P 14P<br>- • - • • •     |
|    | Intermediate unloadings during the batching.<br>→ Not available for CE-M approved version.   | OPZWSCARI<br>B C S 3P 6P 14P<br>- - - • • •   |
|   | Partial unloadings at cycle end.<br>→ Not available for CE-M approved version.   | OPZWSCARP<br>B C S 3P 6P 14P<br>- - - • • •   |
|  | Alibi memory.  | OPZWALIBI<br>B C S 3P 6P 14P<br>• • • • • •   |
|  | 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<br>B C S 3P 6P 14P<br>• • • • • •  |
|  | 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<br>B C S 3P 6P 14P<br>- • • • • •  |