

# W100

## WEIGHT INDICATOR

LAUMAS®



### MODBUS RTU



### DESCRIPTION

- Weight indicator in DIN box.
- Front panel mounting.
- Dimensions: 96x48x130 mm (drilling template: 92x45 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 4-key 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).
- 12 groups selection by 5 setpoint via external selector switch or contact (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.
- Hysteresis and setpoint value setting.
- Weight value printing with date and time via keyboard or external contact.
- The indicator can be used as a remote display with setpoint.



→ On request: label support for initial verification

### 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).

### CERTIFICATIONS



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

#### CERTIFICATIONS ON REQUEST

<b>M</b>	Conformity assessment (initial verification) in combination with Laumas weighing module Support for metric label (dimensions: 124x77x1.5 mm)
<b>UL US</b>	UL Recognized component - Complies with the United States and Canada standards
<b>ERC</b>	Complies with the Eurasian Custom Union standards
<b>NMI TRADE APPROVED</b>	NMI Trade Approved - Complies with the Australian standards for legal use with third parties
<b>RU</b>	Complies with the regulations of the Russian Federation for legal use with third parties





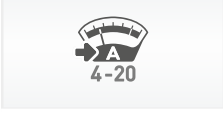

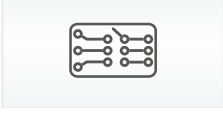



### TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC $\pm$ 10%; 5 W	
Number of load cells • Load cells supply	up to 8 (350 $\Omega$ ) - 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 $\pm$ 10 mV and sensitivity 2 mV/V)	$\pm$ 999999 • 0,01 $\mu$ V/d	
Measurement range	$\pm$ 39 mV	
Usable load cells sensitivity	$\pm$ 7 mV/V	
Conversions per second	300/s	
Display range	$\pm$ 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 $\Omega$ ) 0÷10 V; 0÷5 V; $\pm$ 10 V; $\pm$ 5 V (min 10 k $\Omega$ )	
Humidity (condensate free)	85%	
Storage temperature	-30 °C +80 °C	
Working temperature	-20 °C +60 °C	
<b>UL US</b>	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 $\mu$ V/VSI
Working temperature	-10 °C +40 °C

### OPTIONS ON REQUEST

	ACCESSORIES	CODE
	IP65 panel gasket.	OPZW48X96IP65
<b>INTERFACES</b>		
	Optoisolated 16 bit <b>analog output</b> . → One input and one output not available.	* OPZW1ANALOGICA
	<b>Additional RS485</b> port. → One input and one output not available.	* OPZW1RS485
	Weight reading from 0-10 VDC input (15 k $\Omega$ ).	OPZWING010
	Weight reading from 4-20 mA input (120 $\Omega$ ).	OPZWING420
* Select one option among those marked with an asterisk.		
<b>EXPANSIONS</b>		
	12 groups selection by 5 setpoint via external selector switch.	* EC
	12 groups selection by 5 setpoint via external contact.	* E
	Simultaneous use of E/EC option with the analog output.	OPZWAEC
	External 5-relay module to increase the capacity of SPDT contacts to 115 VAC/2 A.	RELE5M
* Select one option among those marked with an asterisk.		
<b>APPLICATIONS - SOFTWARE</b>		
	Alibi memory.	OPZWALIBI