

W100

WEIGHT INDICATOR - 5/4 OUTPUTS (SETPOINT) - 3/2 INPUTS

LAUMAS®
ELETTRONICA



MODBUS RTU



DESCRIPTION

- Weight indicator in DIN box suitable for front panel mounting (dimensions: 48x96x130 mm; drilling template: 45x92 mm).
- 6-digit semi-alphanumeric red LED display (14 mm height).
- 8 signalling LED.
- 4-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).
- 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 μ V/VSI / OIML R61 - WELMEC Guide 8.8:2011 (MID)

CERTIFICATIONS ON REQUEST

M	Initial verification in combination with Laumas weighing module Support for metric label (dimensions: 124x77x1.5 mm)
UL US	UL Recognized component - Complies with the United States and Canada standards
ERC	Complies with the Eurasian Custom Union standards
NMI	NMI Trade Approved - Complies with the Australian standards 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 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/ $^{\circ}$ C • <0.003% full scale/ $^{\circ}$ 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 μ 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 Ω) 0÷10 V; 0÷5 V; \pm 10 V; \pm 5 V (min 10 k Ω)
Humidity (condensate free)	85%
Storage temperature	-30 $^{\circ}$ C +80 $^{\circ}$ C
Working temperature	-20 $^{\circ}$ C +60 $^{\circ}$ C
UL US	Relay outputs 5/4 - max 30 VAC, 60 VDC/150 mA
	Working temperature -20 $^{\circ}$ C +50 $^{\circ}$ 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 μ V/VSI
Working temperature	-10 $^{\circ}$ C +40 $^{\circ}$ C

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OPTIONS ON REQUEST

	ACCESSORIES	CODE
	IP65 panel sealing gasket.	OPZW48X96IP65
	INTERFACES	
	Optoisolated 16 bit analog output . → One input and one output not available.	* OPZW1ANALOGICA
	Additional RS485 port. → One input and one output not available.	* OPZW1RS485
	Weight reading from 0-10 VDC input (15 k Ω).	OPZWING010
	Weight reading from 4-20 mA input (120 Ω).	OPZWING420
	* Select one option among those marked with an asterisk.	
	EXPANSIONS	
	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.	
	APPLICATIONS - SOFTWARE	
	Alibi memory.	OPZ WALIBI

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