

## E-WLB Weighing transmitter



### DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/DIN rail.
- Space-saving vertical shape.
- Dimensions: 115x25x120 mm.
- 6-digit semi-alphanumeric red LED display (8 mm height).
- 6 signalling LED.
- Four buttons for the system calibration.
- Removable screw terminal blocks.

### INPUTS/OUTPUTS AND COMMUNICATION

- RS485 serial port for communication via protocols ModBus RTU, ASCII or continuous one way transmission.
- 3 relay outputs controlled by the setpoint values or via protocols.
- 2 optoisolated PNP digital inputs: status reading via serial communication protocols.
- 1 load cell dedicated input.

### FIELD BUSES

MODBUS RTU

MODBUS/TCP

ETHERNET  
POWERLINK  
certified product

DeviceNet

EtherNet/IP

PIV  
PROFIBUS - PROFINET  
CERTIFIED

PROFI  
BUS

CC-Link

CANopen

SERCOS  
interface

ETHERNET  
TCP/IP

EtherCAT

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	DESCRIPTION	CODE
	<b>RS485 serial port.</b> Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s).	WLB485
	<b>Optoisolated 16 bit analog output.</b> Current: 0÷20 mA; 4÷20 mA (up to 300 Ω). Voltage: 0÷10 V; 0÷5 V; ±10 V; ±5 V (min 10 kΩ). Equipped with RS485 serial port.	WLB
	<b>CANopen port.</b> Baud rate: 10, 20, 25, 50, 100, 125, 250, 500, 800, 1000 (kbit/s). The instrument works as <i>slave</i> in a synchronous CANopen network. Equipped with RS485 serial port.	WLBSCANOPEN
	<b>DeviceNet port.</b> Baud rate: 125, 250, 500 (kbit/s). The instrument works as <i>slave</i> in a DeviceNet network. Equipped with RS485 serial port.	WLBDEVICENET
	<b>CC-Link port.</b> Baud rate: 156, 625, 2500, 5000, 10000 (kbit/s). The instrument works as <i>Remote Device Station</i> in a CC-Link network and occupies 3 stations. Equipped with RS485 serial port.	WLBCCLINK
	<b>Profibus DP port.</b> Baud rate: up to 12 Mbit/s. The instrument works as <i>slave</i> in a Profibus DP network. Equipped with RS485 serial port.	WLBPROFI
	<b>Modbus/TCP port.</b> Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as <i>slave</i> in a Modbus/TCP network. Equipped with RS485 serial port.	WLBMODBUSTCP
	<b>Ethernet TCP/IP port.</b> Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works in an Ethernet TCP/IP network and it is accessible via web browser. Equipped with RS485 serial port.	WLBETHETCP
	<b>2x Ethernet/IP ports.</b> Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as <i>adapter</i> in an Ethernet/IP network. Equipped with RS485 serial port.	WLBETHEIPN
	<b>2x Profinet IO ports.</b> Type: RJ45 100Base-TX. The instrument works as <i>device</i> in a Profinet IO network. Equipped with RS485 serial port.	WLBPROFINETION
	<b>2x EtherCAT ports.</b> Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as <i>slave</i> in an EtherCAT network. Equipped with RS485 serial port.	WLBETHERCAT
	<b>2x POWERLINK ports.</b> Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as <i>slave</i> in a Powerlink network. Equipped with RS485 serial port.	WLBPOWERLINK
	<b>2x SERCOS III ports.</b> Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument works as <i>slave</i> in a Sercos III network. Equipped with RS485 serial port.	WLBSERCOS

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### CERTIFICATIONS

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

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

Complies with the Eurasian Custom Union standards

#### CERTIFICATIONS ON REQUEST

Conformity assessment (initial verification) in combination with weighing module

NTEP -  $n_{\text{max}}$  5000 - Class III - United States and Canada

### 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 (only for WLB)	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift (only for WLB)	<0.0005% full scale/ $^{\circ}\text{C}$ • <0.003% full scale/ $^{\circ}\text{C}$
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 $\mu\text{V}/\text{d}$
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	3 - max 115 VAC/150 mA
Optoisolated digital inputs	2 - 5÷24 VDC PNP
Serial ports	RS485
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)
Optoisolated analog output (only for WLB)	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 $^{\circ}\text{C}$ +80 $^{\circ}\text{C}$
Working temperature	-20 $^{\circ}\text{C}$ +60 $^{\circ}\text{C}$
Relay outputs	3 - max 30 VAC, 60 VDC/150 mA
Equipment to be powered by 12-24 VDC LPS or Class 2 power source	

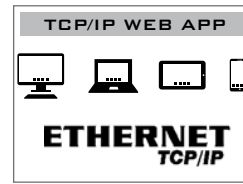
#### METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

	CE-M (NAWI)	NTEP (SCALES)
Applied standards	2014/31/UE - EN45501:2015 - OIML R76:2006	NIST Handbook 44, 2014; NCWM PUB 14, 2014
Operation modes	single interval, multi-interval	single interval, multi-interval
Accuracy class	III or IIII	III
Maximum number of scale verification divisions	10000 (class III); 1000 (class IIII)	5000 (class III)
Minimum input signal for scale verification division	0.2 $\mu\text{V}/\text{VSI}$	
Working temperature	-10 $^{\circ}\text{C}$ +40 $^{\circ}\text{C}$	-10 $^{\circ}\text{C}$ +40 $^{\circ}\text{C}$ (+14 $^{\circ}\text{F}$ +104 $^{\circ}\text{F}$ )

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## MAIN FUNCTIONS

- Connections to:
  - PLC via analog output or fieldbus;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - remote display via RS485;
  - up to 8 load cells in parallel by junction box.
- 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.
- Hysteresis and setpoint value setting.
- **TCP/IP WEB APP**  
Integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.



## CE-M (NAWI) e NTEP (SCALES) approved versions

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e).
- Two operation mode: single interval or multi-interval.
- Net weight zero tracking.
- Calibration.

## SPACE SAVING COMPACT DESIGN

