



MODBUS RTU



DESCRIPTION

- Weight transmitter suitable for back panel mounting on Omega/ DIN rail.
- Space-saving vertical shape.
- Dimensions: 25x115x120 mm.
- Six-digit red LED semialphanumeric display (8 mm height), 7 segment.
- Six indicator LED.
- Four buttons for the system calibration.
- Extractable screw terminal boards.

INPUT/OUTPUT

- RS485 serial port for communication via ModBus RTU protocol, ASCII Laumas bidirectional or continuous one way transmission.
- 3 relay digital 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.

FIELDBUSES

MODBUS RTU

MODBUS/TCP

ETHERNET
POWERLINK
certified product

DeviceNet

EtherNet/IP

PI CERTIFIED
PROFIBUS - PROFINET

PROFI
NET

CC-Link

CANopen

SERCOS
interface

ETHERNET
TCP/IP

EtherCAT

	DESCRIPTION	CODE
	RS485 serial port Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s)	TLB485
	16 bit analog output = 65535 divisions 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). It is equipped with RS485 serial port.	TLB
	CANopen port Baud rate: 10, 20, 25, 50, 100, 125, 250, 500, 800, 1000 (kbit/s). The instrument operates as <i>slave</i> in a synchronous CANopen network. It is equipped with RS485 serial port.	TLBCANOPEN
	DeviceNet port Baud rate: 125, 250, 500 (kbit/s). The instrument operates as <i>slave</i> in a DeviceNet network. It is equipped with RS485 serial port.	TLBDEVICENET
	CC-LINK port 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. It is equipped with RS485 serial port.	TLBCCLINK
	PROFIBUS DP port Baud rate: up to 12 (Mbit/s). The instrument operates as <i>slave</i> in a Profibus-DP network. It is equipped with RS485 serial port.	TLBPROFI
	Modbus/TCP port Type: RJ45 10Base-T or 100Base-TX (auto-sensing) The instrument operates as <i>slave</i> in a Modbus/TCP network. It equipped with RS485 serial port.	TLBMODBUSTCP
	Ethernet TCP/IP port Type: RJ45 10Base-T or 100Base-TX (auto-sensing). The instrument operates as <i>slave</i> in an Ethernet TCP/IP network and it is accessible via web browser. It is equipped with RS485 serial port.	TLBETHETCP
	Ethernet/IP port Type: RJ45 10Base-T or 100Base-TX (auto-sensing) The instrument operates as <i>adapter</i> in an Ethernet/IP network. It is equipped with RS485 serial port.	TLBETHEIP
	PROFINET IO port Type: RJ45 10Base-T or 100Base-TX (auto-sensing) The instrument operates as <i>device</i> in a Profinet IO network. It is equipped with RS485 serial port.	TLBPROFINETIO
	2x EtherCAT ports Type: RJ45 10Base-T or 100Base-TX (auto-sensing) The instrument operates as <i>slave</i> in an EtherCAT network. It is equipped with RS485 serial port.	TLBETHERCAT
	2x POWERLINK ports Type: RJ45 10Base-T or 100Base-TX (auto-sensing) The instrument operates as <i>slave</i> in a Powerlink network. It is equipped with RS485 serial port.	TLBPOWERLINK
	2x SERCOS III ports Type: RJ45 10Base-T or 100Base-TX (auto-sensing) The instrument operates as <i>slave</i> in a Sercos III network. It is equipped with RS485 serial port.	TLBSERCOS

CERTIFICATIONS



OIML R76:2006, III class, 3x10000 divisions 0.2 μ V/VSI

OIML R61 - WELMEC Guide 8.8:2011 (MID)

CERTIFICATIONS ON REQUEST

M	Initial verification (Legal Metrology)
c RU US	UL Recognized component - Complies with the United States and Canada regulations
ERC	Complies with the Eurasian Custom Union regulations (Russia, Belarus, Kazakhstan)
NTEP	NTEP - n_{max} 5000 - Class III - United States and Canada

TECHNICAL FEATURES

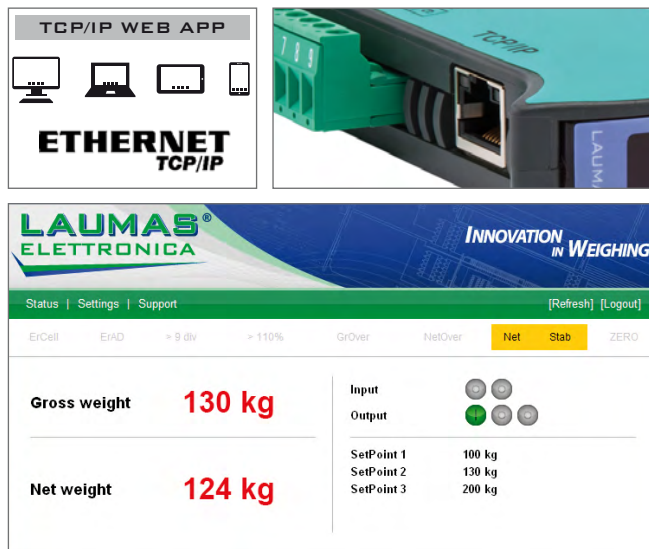
Power supply and consumption	12÷24 VDC \pm 10%; 5 W	
Number of load cells • Load cells supply	up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA	
Linearity • Linearity of the analog output (only for TLB)	<0.01% full scale • <0.01% full scale	
Thermal drift • Thermal drift of the analog output (only for TLB)	<0.0005% full scale/ $^{\circ}$ C • <0.003% full scale/ $^{\circ}$ C	
A/D Converter	24 bit (16000000 points) - 4.8 kHz	
Divisions (with measure range \pm 10 mV and sensitivity 2 mV/V)	\pm 999999 • 0,01 μ V/d	
Measure range	\pm 39 mV	
Load cell's sensitivity	\pm 7 mV/V	
Conversion per second	300/s	
Display range	\pm 999999	
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100	
Digital filter • Conversion rate	0.012÷7 s • 5÷300 Hz	
Relay logic outputs	n. 3 - 115 VAC/150 mA	
Optoisolated logic inputs	n. 2 - 5÷24 VDC PNP	
Serial ports	RS485	
Baud rate	2400, 4800, 9600, 19200, 38400, 115200 (bit/s)	
Analog output (only for TLB)	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	
c RU US	Relay digital outputs	n. 3 - 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
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

MAIN FUNCTIONS

- Connections to:
 - PLC via analog output or fieldbuses
 - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters).
 - remote display via RS485.
 - max. 8 load cells in parallel by junction box.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real (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 predetermined tare.
- Semi-automatic zero.
- Displaying 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 Ethernet TCP/IP version, for supervision, management and remote control of the weight transmitter.



CE-M version: 2014/31/EU-EN45501:2015-OIML R76:2006


- Weight subdivisions displaying (1/10 e).
- Two operation mode: single interval or multi-interval.
- Net weight zero tracking.
- Calibration correction via buttons is protected through seals for the access to a setting jumper or installer password or hardware device.
- Alibi memory (option on request)



SPACE SAVING COMPACT DESIGN



OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Alibi memory	OPZWALIBI



The Company reserves the right to make changes to the technical data, drawings and images without notice.