



**MODBUS RTU**

### DESCRIPTION

- WiFi weight transmitter in IP67 polycarbonate box with 2 M16x1.5 cable glands.
- Dimensions: 80x170x65 mm (four fixing holes Ø4 mm; centre distance: 60x120 mm).
- Backlit alphanumeric LCD display, two-line by 8-digit (5 mm height), visible area: 38x16 mm.
- 6 signalling LED.
- 4-key keyboard.

### INPUTS/OUTPUTS AND COMMUNICATION

- WiFi module for wireless connection via integrated web server (for remote supervision, management and control of the instrument) or via ModBus RTU, ASCII Laumas protocols.
- RS485/RS232 serial ports for communication via protocols ModBus RTU, ASCII Laumas or continuous one way transmission.
- 4 relay outputs controlled by the setpoint values or via protocols or web.
- 2 PNP digital inputs: status reading via serial communication protocols or web.
- 1 load cell dedicated input.



### MAIN FUNCTIONS

- Connections to:
  - PC via WiFi/virtual Ethernet port;
  - PC/PLC via RS485/RS232 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - others TLKWF devices and Laumas W series instruments (equipped with OPZW1RADIO optional module) via WiFi;
  - PC/smartphone/tablet via web browser (point-to-point direct connection);
  - up to 8 load cells in parallel by junction box;
  - W series weight indicator via RS485.
- TCP/IP WEB APP: integrated software for remote supervision, management and control of the instrument.
- Communication with existing WiFi networks.
- 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).
- Hysteresis and setpoint value setting.
- Energy saving mode.
- All functions can be managed by a W series weight indicator connected via RS485 serial port or WiFi (excluding instruments with graphic display).

#### Approved versions for legal for trade use

- 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.

### CERTIFICATIONS

- OIML R76:2006, class III, 3x10000 divisions, 0.6 µV/VSI
- UL Recognized component - Complies with United States and Canada regulations
- Complies with the Eurasian Customs Union regulations
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use


CERTIFICATIONS ON REQUEST

**M** Conformity assessment (initial verification) in combination with Laumas weighing module (CE - UK CA)

### TECHNICAL FEATURES

|  |  |
|--|--|
| Power supply and consumption                                     | 12÷24 VDC ±10%; 2 W  |
| Number of load cells • Load cells supply                         | up to 8 (350 Ω) - 4/6 wires • 5 VDC/120 mA   |
| Linearity  | <0.01% full scale  |
| Thermal drift  | <0.0005% 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  |
| Display range  | ±999999  |
| Decimals • Display increments                                    | 0÷4 • x1 x2 x5 x10 x20 x50 x100  |
| Digital filter • Readings per second                             | 10 levels • 5÷300  |
| Relay outputs  | 4 - max 115 VAC/150 mA   |
| Optoisolated digital inputs                                      | 2 - 5÷24 VDC PNP   |
| Serial ports   | RS485, RS232   |
| Baud rate  | 2400, 4800, 9600, 19200, 38400, 115200 (bit/s)   |
| Wireless   | WiFi module (2.4 GHz) with serial protocols in tunnel mode and integrated web server. Radio range up to 100 m line of sight. |
| Humidity (condensate free)                                       | 85%  |
| Storage temperature  | -30 °C +80 °C  |
| Working temperature  | -20 °C +60 °C  |



|   |  |                               |
|---|--|-------------------------------|
|  | Relay outputs  | 4 - max 30 VAC, 60 VDC/150 mA |
|   | Working temperature  | -20 °C +60 °C                 |
|   | Equipment to be powered by 12-24 VDC LPS or Class 2 power source |                               |

### METROLOGICAL SPECIFICATIONS OF TYPE-APPROVED INSTRUMENTS

### OIML

|  |   |
|--|---|
| Applied standards by region                          | EU: 2014/31/UE - OIML R76:2006 - EN45501:2015<br>United Kingdom: Non-automatic Weighing Instrument Regulations 2016 |
| 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 | 0.6 μV/VSI  |
| Working temperature                                  | -10 °C +40 °C   |

### OPTIONS ON REQUEST

|   | DESCRIPTION  | CODE      |
|---|--|-----------|
|  | <b>Rechargeable external lead battery.</b> <ul style="list-style-type: none"> <li>12 V - 2800 mAh capacity</li> <li>IP67 polycarbonate box 160x80x85 mm with transparent cover (4 fixing holes Ø4 mm; centre distance: 152x122 mm).</li> <li>Battery charger.</li> <li>26 hours operating time*.</li> </ul>    | BATEXT    |
|  | <b>Rechargeable internal NiMH battery.</b> <ul style="list-style-type: none"> <li>8 elements - 1.2 V - AA type - 2450 mAh capacity.</li> <li>Supplied already installed in the instrument, with external dedicated switch; overall box dimensions: 190x80x65 mm.</li> <li>24 hours operating time*.</li> </ul> | OPZBATTWF |

\* Approx. maximum operating time for typical use with fully charged battery, with 4 load cells (350 ohm) and energy saving mode enabled.

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