



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 μ V/VSI



UL Recognized component - Complies with United States and Canada standards



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use


CERTIFICATIONS ON REQUEST



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

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

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

EXAMPLES OF UTILISATION



TLKWF



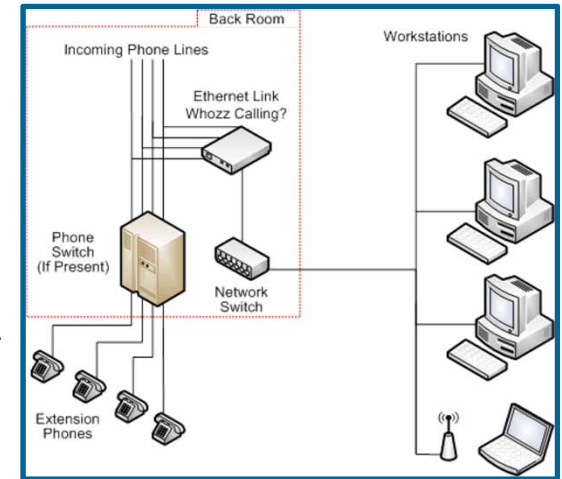
Load Cell



MODWF



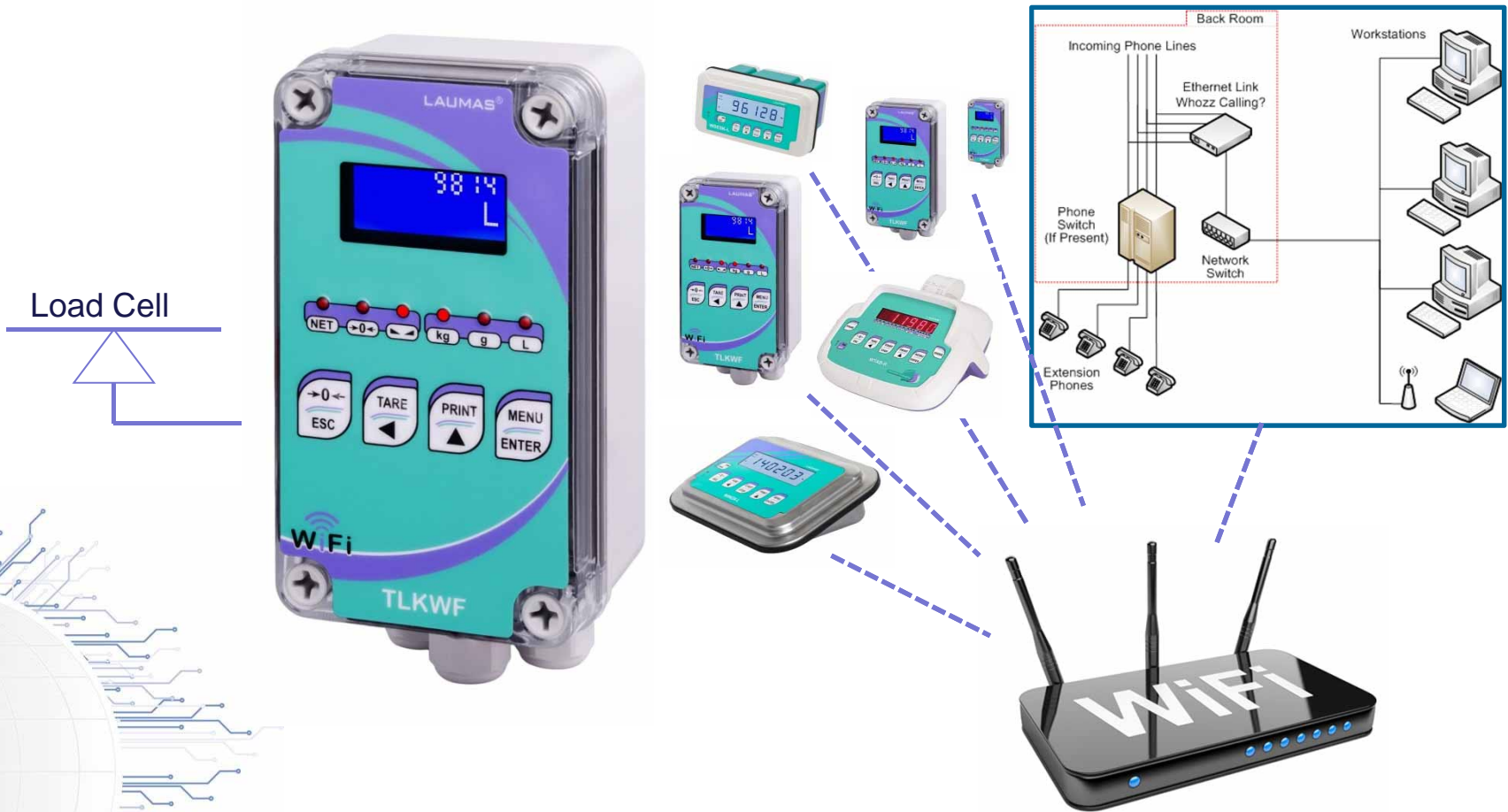
RS-485



W Series
(OPZW1RADIO)

TLKWF - W Series (OPZW1RADIO) - NETWORK

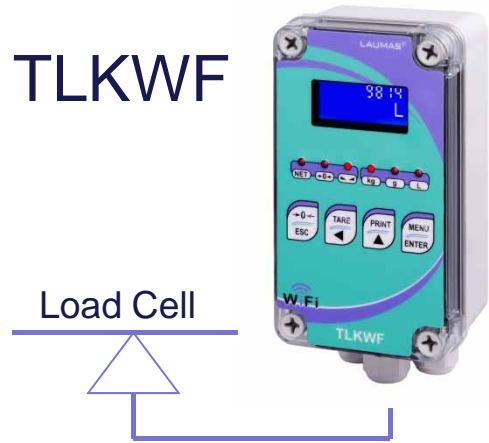
INSTRUMENTS SET AS CLIENT WITH DIFFERENT IP ADDRESSES



TLKWF - MODWF - PC/PLC



TLKWF

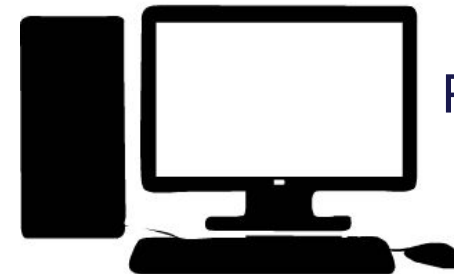


RIP, MODBUS, SLAVE, ASCII, etc.

MODWF



RS232 o RS485



PC/PLC



INSTRUMENTS - MODWF - PC/PLC



MODWF



RIP, MODBUS, SLAVE, ASCII, etc.

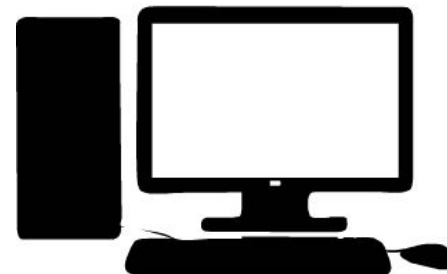


MODWF

RS-485



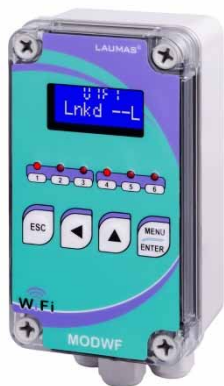
RS232 o RS485



MODWF - INSTRUMENTS/PC/PLC



MODWF



RIP, MODBUS, SLAVE, ASCII, etc.

MODWF



RS-232



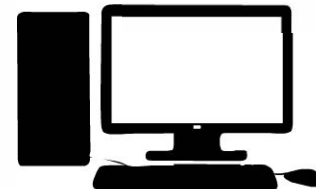
PC/PLC



RS232 o RS485



PC/PLC



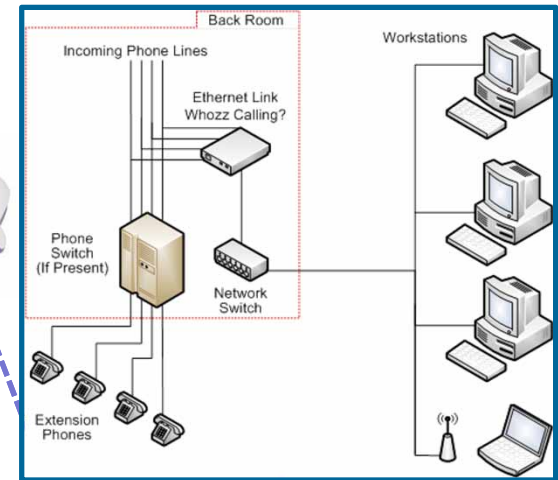
(OPZW1RADIO)



INSTRUMENTS – MODWF - NETWORK

INSTRUMENTS SET AS CLIENT WITH DIFFERENT IP ADDRESSES

MODWF



RS-485

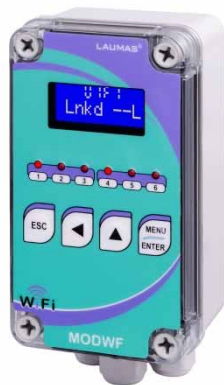


INSTRUMENTS - MODWF - APP



- APP AND SOFTWARE BY CUSTOMER
- LAUMAS CAN PROVIDE THE PROG-NG WITH THE VIRTUAL SERIAL PORT

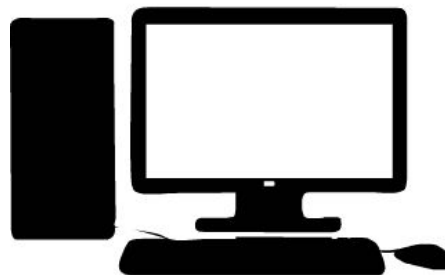
MODWF



RS-485



PC/PLC



W Series (OPZW1RADIO) - MODWF - PC/PLC

SOFTWARE BY CUSTOMER

(OPZW1RADIO)



Load Cell

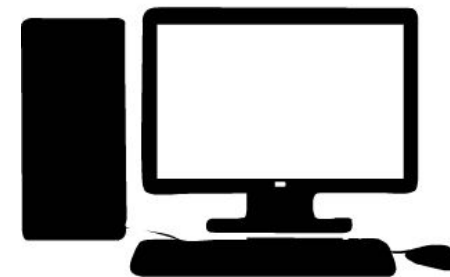
RIP, MODBUS, SLAVE, ASCII, etc.

MODWF



RS232 o RS485

PC/PLC



W Series (OPZW1RADIO) - TLKWF - PC/PLC

- TLKWF OPERATES AS REPEATER
- POSSIBILITY OF READING DATA FROM PC/PLC AND KEEPING THE WIFI CONNECTION AT THE SAME TIME

(OPZW1RADIO)

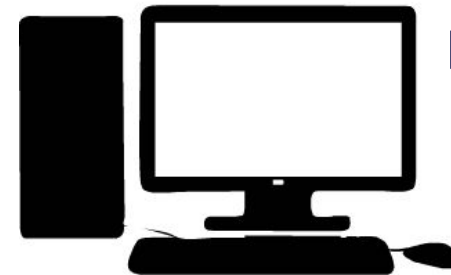


Load Cell



TLKWF

RS232 o RS485



PC/PLC

INTEGRATED WEBSITE

TLKWF and Instruments W Series with OPZW1RADIO

INSTRUMENTS SET AS CLIENT OR AS ACCESS POINT

