# WIMOD

## Transmitter
## *Wireless*

CE RoHS

Smart

**Resolution**
**± 30.000 div**

*DIGITAL CALIBRATIONS*

**Max distance 100 m**

| ON BOARD ASSEMBLY | STAND ALONE |
|---|---|

The **WIMOD** is a radio transmitter suitable for strain gauge sensors such as load cells, force transducers, pressure transducers, torque transducers and displacement transducers with 2mV/V output.

It can be applied directly on the body of the sensor or connected to the output cable (stand alone) to make measurements of **WEIGHT**, **FORCE**, **PRESSURE**, **TORQUE** and **DISPLACEMENT** at a distance, with the possibility to interface up to 32 sensors to a single control PC.

The module powered by an internal rechargeable battery guarantees an autonomy of 1000 hours covering a maximum distance of 100 m in free area.

The 433 MHz transmission frequency makes communication safe and reliable even in the presence of other transmission systems such as mobile phones, walkie talkies, radio microphones, remote controls etc. that normally work on other frequencies.

Due to its extreme simplicity of installation the system is used in various applications such as:

Weighing and balancing of plants, machinery, boats where it is necessary to change the position and number of load cells to be used from time to time.

Real time monitoring of load distribution on suspended metal structures used for lighting and stage installations.

For **point to point** applications an **RxWIMOD** receiver with **RS232** or **USB** output is available for direct connections to PLC or other devices in order to create specific software for every need.

## DATI TECNICI

| RF FREQUENCY | 433MHz |
|---|---|
| RF TRANSMISSION RANGE | 100 m (in free area) |
| MAX DATA TRANSMISSION FREQUENCY | 10 Hz [1] |
| POWER SUPPLY | Rechargeable Battery Li-Ion 3.6V |
| ACCURACY | $\leq \pm 0.05$ % |
| SENSOR INPUT | $\pm 2$ mV/V |
| STANDARD RESOLUTION (2mV/V) | $\pm 10.000$ div. |
| INTERNAL RESOLUTION | $\pm 30.000$ div. |
| TEMP. OF NOMINAL WORKING | 0 / +50 °C |
| TEMP. OF MAXIMUM WORK | -10 / +50 °C |
| STORAGE TEMPERATURE | -20 / +70 °C |
| LOW BATTERY INDICATION | SI |
| ZERO FUNCTION | 100 % |
| UNITS OF WEIGHT and FORCE MEASUREMENT | g, kg, t, N, daN, kN, MN, lb, klb |
| UNIT OF PRESSURE MEASUREMENT | mbar, bar, psi, Pa, kPa, MPa, mH2O inH2O, kg/cm2, mmHg, cmHg, inHg atm, mHg, mmH2O |
| UNIT OF MEASUREMENT TORQUE | N·m, N·mm, kN·m, in·lb, ft·lb kg·m g·cm, kg·mm |
| UNIT OF MEASUREMENT DISPLACEMENT | mm, inch |
| DEGREE OF PROTECTION (EN 60529): WIMOD (transmitter) RECEIVER | IP65 IP40 |
| CONTAINER | Aluminium |
| DIMENSIONS (HxWxD) | 35 × 84 × ~60 mm |
| WEIGHT | ~ 0.9kg |

[1] The transmission frequency used must be limited taking into account ETSI EN 300-220-1 which requires a commitment of the 433 MHz band for a maximum of 6 minutes every hour (10% duty cycle).
Each transmission packet commits the band for about 3 ms (3 % duty cycle in case of 10 Hz transmission frequency). The number of modules in the network must be taken into account when assessing the overall band commitment.

The module can be applied to different sensors to meet all requirements for the technical characteristics of the consultar sensors and the related data sheet.

**For outdoor applications** it is recommended to protect the WIMOD transmitter inside an IP67 ABS enclosure.

## Configuration of a NETWORK with PC

This solution allows to realize a network with up to **32 sensors** using WinWIMOD Software**.**

**NECESSARY COMPOSITIONS:**
- One or more WIMOD transmitters.
- Receiver with USB connection.
- Power supply to recharge the WIMOD battery.
- **WinWIMOD** application software.

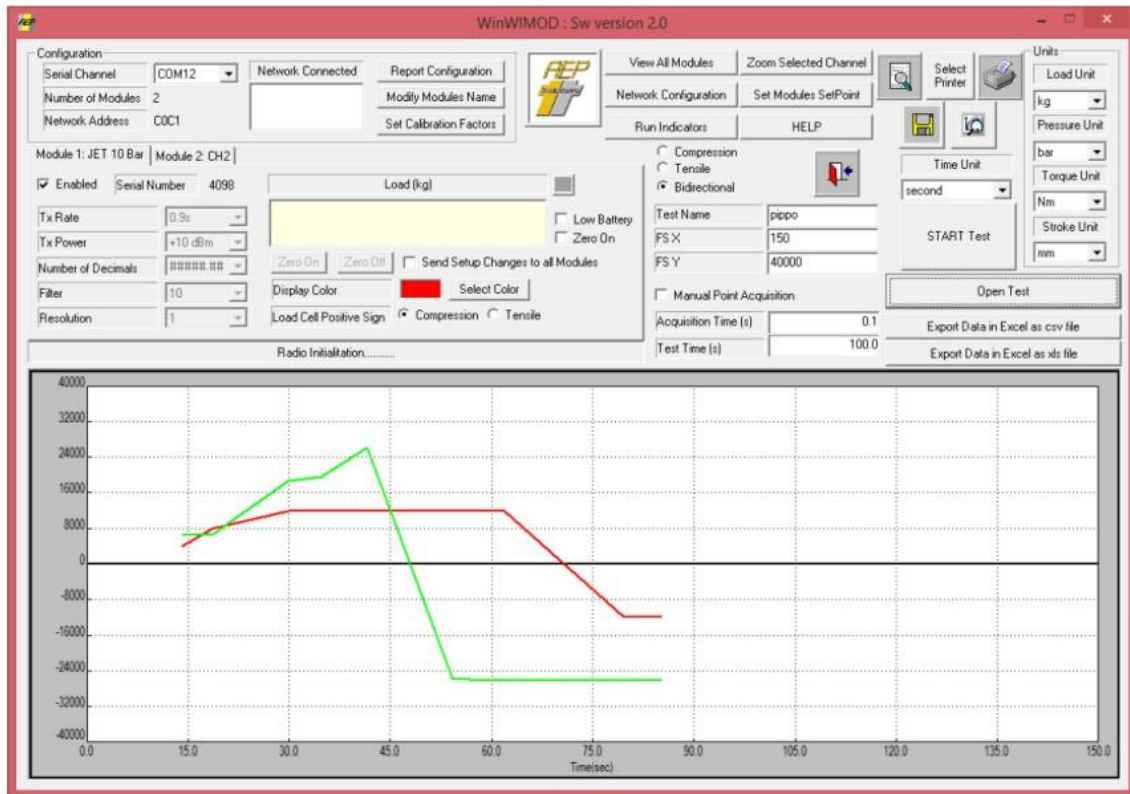## Configuring a POINT TO POINT network with a PC

This solution allows to realize a network with only one sensor using **WinWIMOD LIGHT** Software.
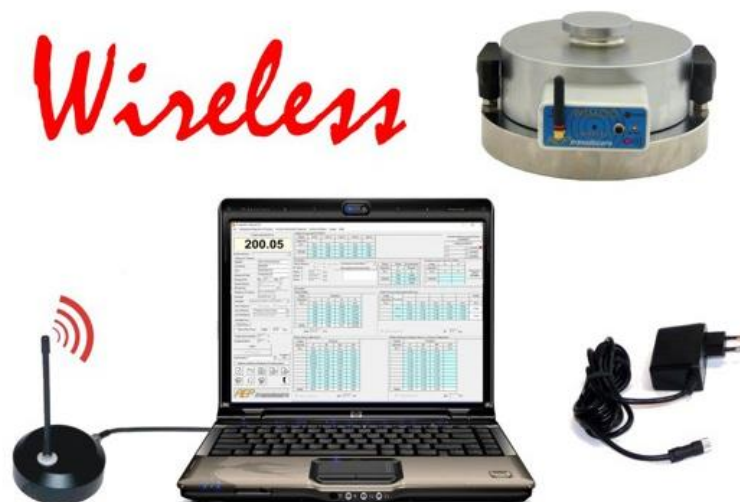
**NECESSARY COMPOSITIONS:**
- One WIMOD transmitter.
- Receiver with USB connection.
- Power supply to recharge the WIMOD battery.
- **WinWIMOD LIGHT** application software.

# Software **WinWIMOD** and **WinWIMOD LIGHT**



The software allows you to view and manage the various sensors connected to the network via PC in real-time.

The available functions allow to visualize in various ways the measurements of all the sensors on the PC video, graphically record the measurements of all the sensors, print the reports, save and export the acquired data to Microsoft Excel.

Each sensor can be assigned a name that describes its function within the system and a color of the test curve, making it easy and immediate recognition of the same within the network.

For each module it is possible to select the transmission frequency (max 10Hz), zero the load, define the unit of measurement of the sensor and display the battery status.

The print report can be configured with the customer's logo and explanatory notes of the test performed.

For applications requiring the development of custom software WinWIMOD allows access to data received via radio through a simple exchange of files containing the load data of the individual cells.

## Configuration of a POINT TO POINT network with RS232

For point-to-point applications an **RxWIMOD** receiver with RS232 or USB output is available for direct connections to PLC or other devices in order to realize specific software for every need.
The receiver can transmit continuously or on demand, this solution does not require any knowledge of RADIO communication.
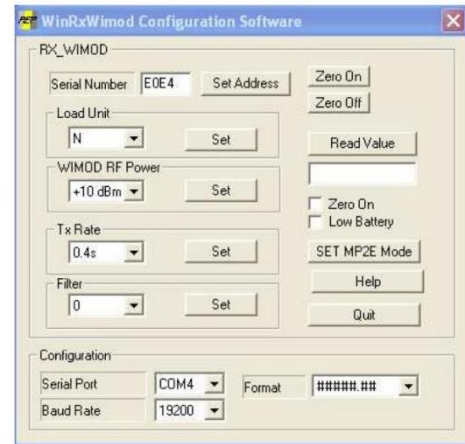
**NECESSARY COMPOSITIONS:**
- One WIMOD transmitter.
- Receiver **RxWIMOD** RS232 or Receiver **RxWIMOD** USB
- Power supply to recharge the WIMOD battery.

The system is always supplied with the communication protocol and a simple **WinRxWIMOD** application software for WIMOD configuration.

Receiver **RxWIMOD** USB output                    Receiver **RxWIMOD** RS232 output

**WARNING**: the receiver in the RS232 version must be externally powered by a 5Vdc power supply.

## Configuration of a NETWORK network with WiMP2plus

This solution allows to realize a network with up to **4 sensors** using the **WiMP2plus** panel indicator.
No application software is required.



**NECESSARY COMPOSITIONS:**
- 1, 2, 3 or 4 WIMOD transmitter.
- **WiMP2plus** panel indicator
- Power supply to recharge the WIMOD battery.



The system allows to manage different sensors to read simultaneously WEIGHT, FORCE, PRESSURE, TORQUE and DISPLACEMENT.

## Configuration of a NETWORK network with WiSTAR

This solution allows to realize a network with up to **4 sensors** using the handheld indicator **WiSTAR**.



**NECESSARY COMPOSITIONS:**

- 1, 2, 3 or 4 WIMOD transmitter.
- **WiSTAR** handheld indicator.
- Power supply to recharge the WIMOD battery.

The system allows to manage different sensors to read simultaneously WEIGHT, FORCE, PRESSURE, TORQUE and DISPLACEMENT.



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Measurements of WEIGHT, FORCE, PRESSURE and TORQUE since 1974

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