

Measurement of WEIGHT, FORCE, PRESSURE, TORQUE, DISPLACEMENT

Stabilità a
lungo termine
Long term
high stability



WIRELESS Professional Panel Mounting indicator able to handle simultaneous from 1 to 4 transmission devices WIMOD, WISTAR and WIJET.

The transmitters can be equipped with different types of sensors to measure quantities such WEIGHT, FORCE, PRESSURE, TORQUE and DISPLACEMENT.

Particularly suitable for applications in industrial or laboratory where it is necessary to make measurements with multiple sensors at a maximum distance of 100m in free space.

The system makes very simple and fast to change the setup of the entire measuring system without having to change the wiring between the sensor and the instrument.

To **FIT EVERY APPLICATION** the instrument can be configured and customized: the function keys F1, F2, F3 and F4 can be programmed for the function of interest such as: PEAK, HOLD, RELEASE, TX DATA DATALOG, DISCHARGE, ZOOM.

For each channel, it is possible to customize the frequency of reading which can be set from 1 sample per second up to 10 sample per second and then being able to meet the needs of applications that require a higher speed of response.

Each input channels can be supplied in 4 different configurations:

- WEIGHT and FORCE input: to receive signals from the transmitters WIMOD WISTAR connected to load cell or strain gauge force transducers.
- PRESSURE Input : to receive signals from the transmitters WIMOD, WISTAR and WIJET connected to pressure transducers RELATIVE, ABSOLUTE and VACUUM.
- TORQUE Input: to receive signals from the transmitters WIMOD and WISTAR connected to STATIC or ROTATING strain gauge torque transducers.
- DISPLACEMENT Input: to receive signals from the transmitters WIMOD or WISTAR connected to linear strain gauge displacement transducers.

WIMP2Plus has in the standard configuration:

- **4 DIGITAL INPUT** 24Vdc with function programmable.
- **5 programmable SET POINT.**
- **4 RELAYS** type DPDT. The relays can be programmed, in combination of the setpoint, to create a simple automation or logics of intervention.
- A rear **USB** port to connect directly to a PC or Tablet.

As **OPTIONS** the instrument can be equipped with:

- One or two **Analog Outputs** programmable as voltage ($\pm 10V$, 0/5V, 0/10V, $\pm 5V$) or current (4-20mA, 0-20mA, 0-24mA) that can be associated to different channels or to the TOTAL (sum of two channels). The refresh rate of the analog signals is equal to the frequency of acquisition of the respective channels in input.
- A serial **RS232** line to directly connect the device to a PC, PLC, a serial **PRINTER** or to an external **REPEATER**.
- A serial **RS485** line with protocol MODBUS RTU normally used to connect multiple instruments in a same network to a PLC.
- A powerful **DATALOGGER** with non-volatile memory, which allows to store data at the maximum acquisition speed, synchronize recordings with an internal clock-calendar and eventually export data to a file using an USB stick in .csv file format that can be transferred directly to Microsoft Excel.

Other features and functions of importance are:

- Graphical, large and high resolution LCD display with backlit.
- Automatic **UNIT CONVERSIONS** in many specific units for each type of transducers.
- User selectable language : **ITALIAN or ENGLISH**.
- Function **ZERO**.
- Function of **HOLD, PEAK**, programmable **FILTER**.
- Function of **DISCHARGE** in order to measure the amount of product discharged for example from a tank.
- Function **TOTAL** to perform the sum of all enabled channels .
- Function **KEY LOCK** to protect the instrument settings by unauthorized persons.
- Function **CLOCK-CALENDAR** (Option) with date and time.
- 24 columns **PRINTER** (option) connected to the serial port through which it is possible to print the measuring points with the date and time and the data of the company that carried out the survey.

WIMP2^{Plus} can be accompanied by the PC program **MP Supervisor** (Option) which allows immediate interface via the USB port with the instrument and allows you to display graphs, export to Microsoft Excel. The program also allows you to download the data logger performed using the internal memory and those on performed on USB stick and view their acquisition curves.

Typical applications:

Automatic weighing systems and small dosages.
Systems for monitoring levels of tanks, silos and hoppers.
Integrated measuring systems on test benches and testing.
Measurement systems integrated into automated processes.
Control systems of industrial processes.
Automatic systems Testing and Quality Control in production lines.
Control measures on board for materials testing machines.
Control measures on springs, friction detection, breakout forces, leakage tests.
Tests on protective and safety devices.

STANDARD CONFIGURATION



INPUT: CH1 - CH2 - CH3 - CH4



WISTAR



WIJET (PRESSURE)



WIMOD + LOAD CELL (WEIGHT and FORCE)



WIMOD + LDT (DISPLACEMENT)



WIMOD + TP1 (PRESSURE)



WIMOD + TRX (TORQUE)

| | | | | | |
|-----------------|---|-----------------------|---|---|---|
| FUNCTION | <p>POWER SUPPLY 220 Vac</p> <p>NO External Power Supply</p> | <p>USB 2.0</p> | <p>PEAK TOTAL DISCHARGE DIGITAL FILTER ZERO UNIT CONVERSION</p> | <p>5 Set Point 4 RELAYS programmable</p> <p>Can be used for:</p> <ul style="list-style-type: none"> motors ON / OFF solenoid ON / OFF | <p>4 Programmable Digital Inputs</p> <p>Used for:</p> <ul style="list-style-type: none"> Remote Function key PLC Commands |
| | | | | | |

ADDITIONAL OPTIONS

| | | |
|---------------|---|---|
| OPTION | <p>RS232C and RS485 MODBUS</p> <p>PLC PC PRINTER REPEATER</p> | <p>1 or 2 ANALOG OUTPUTS Associated to any channel CH1 or CH2 or CH3 or CH4 or to TOTAL (CH1+CH2+CH3+CH4) The refresh rate of the analog signals is equal to the frequency of acquisition of the respective channels in input.</p> <p>INVERTER PLC RECORDER</p> |
| | | |

| | | | | |
|---------------|--|---|--|---|
| OPTION | <p>Data Logger</p> <p>+</p> <p>Internal CLOCK CALENDAR</p> | <p>Front panel USB port to download data logger using a USB sticks and to bring data directly to a PC. File type : csv or txt</p> | <p>Power Supply</p> <p>115 Vac</p> <p>24Vdc</p> | <p>APPLICATION SOFTWARE</p> <p>MP Supervisor</p> <p>Instrument Configuration Data Analysis DataLogger Management Graphics</p> |
| | | | | |

TECHNICAL DATA

| | |
|---|---|
| WIRELESS INPUT CHANNELS CONNECTABLE INSTRUMENTS | from 1 to 4 (CH1 - CH2 - CH3 - CH4) WIMOD - WIJET - WISTAR |
| Carrier Frequency | 433MHz |
| Max distance in free space | 100m |
| Type of measurement for each channel | WEIGHT, FORCE, PRESSURE, TORQUE, DISPLACEMENT |
| Unit Conversions for WEIGHT and FORCE | kg, t, N, daN, kN, MN, lb, klb |
| Unit Conversions for PRESSURE | bar, mbar, psi, MPa, kPa, Pa, mH ₂ O inH ₂ O kg/cm ² , mmHg, cmHg, inHg, atm |
| Unit Conversions for TORQUE | N·m, N·mm, kN·m, kg·m, g·cm, kg·mm, ft·lbf, in·lbf |
| Unit Conversions for DISPLACEMENT | mm, m, foot, inch, cm, dm, μm |
| BACKLIT GRAPHIC DISPLAY CHARACTER SIZE | 128 x 64 dots ~ 4 mm (~13 mm when ZOOM function is active) |
| SENSOR CALIBRATION | performed on the instrument that transmits |
| FUNCTION OF ZERO | 100% (on all the measurement range) |
| FUNCTION OF PEAK | POSITIVE and NEGATIVE |
| FUNCTION OF DISCHARGE | YES |
| FUNCTION OF KEY BLOCK | Enabled through a Password |
| FUNCTION OF TOTAL (on all enabled channels) | YES |
| PROGRAMMABLE RESOLUTION | 1 ... 100 |
| DIGITAL FILTER | 0 ... 5 |
| PROGRAMMABLE ACQUISITION RATE | from 1 to 10 points per seconds |
| INSTRUMENT LANGUAGE | ITALIAN and ENGLISH |
| SET POINT PROGRAMMABLE | 5 |
| PROGRAMMABLE DIGITAL INPUTS | 4 |
| RELAY OUTPUT (DPDT form) | 4 |
| <ul style="list-style-type: none"> • MAX TENSION • MAX CURRENT • MAX POWER | 220Vdc – 250Vac 2A 60W – 62,5VA |
| Rear Panel USB output, Connector type B | Max Cable Length 3.5m |
| NOMINAL WORKING TEMPERATURE | 0... +50°C |
| MAX WORKING TEMPERATURE | 0... +50°C |
| STORAGE TEMPERATURE | -20... +70°C |
| POWER SUPPLY | 230 Vac +/-10% |
| FREQUENCY | 50/60 Hz |
| EXTERNAL PROTECTION FUSE | 250mA / 250 V |
| MAX. POWER REQUIRED | 10VA |
| PANEL MOUNTING CASE | DIN 43700 |
| CASE MATERIAL | NORYL UL94 V-O |
| FRONT AND REAR PANEL MATERIAL | UL94 V-2 |
| PROTECTION CLASS (EN 60529) | IP40 (only front panel) |
| DEGREE OF ENVIRONMENTAL CONT. | 1 |
| DIMENSIONS (HxLxD) mm | 72 x 144 x 150 mm |
| DRILLING TEMPLATE (A x L) mm | 68 x 138 mm |
| WEIGHT | ~ 0,8 kg |

OPTIONS

| | |
|--|---|
| RS232 SERIAL LINE | MAX cable Length 13m |
| RS485 MODBUS RTU (max 32 in multipoint) | MAX cable Length 1000m |
| PRINTER | 24 columns (RS232) |
| Analog Outputs | 1 or 2 outputs independent |
| Current Output | 0-20mA, 4-20mA, 0-24mA |
| Voltage Output (max 20mA – RL min: 1kΩ) | 0-5V, 0-10V, ±10V, ±5V |
| INTERNAL DATA LOGGER (non volatile memory) | |
| Max storing points | 1 channel enabled : max. 130.000 2 channels enabled: max. 65.000 3 channels enabled: max. 32.000 4 channels enabled: max. 43.000 4 channels enabled +TOTAL: max. 26.000 |
| MAX TIME | 100 days |
| CLOCK CALENDAR | Year, Month, Day, Hour, Minute, Seconds |
| FRONT PANEL USB | File types csv or txt |
| to download data logger USB Flash Drive (Flash Memory) and take them directly to a PC. | |
| OUTPUT RELAYS DPDT type | 5° Relay |
| POWER SUPPLY | 115 Vac or 24Vdc |

COMPONENTS SUPPLIED



Mounting Brackets

Antenna Extension
CableCD with
Manual and USB Driver

Antenna Extension cable Length 70cm (standard)
On one side SMA Male Connector
On the other side SMA Female Panel connector

COMPONENTS IN OPTION (purchased separately)



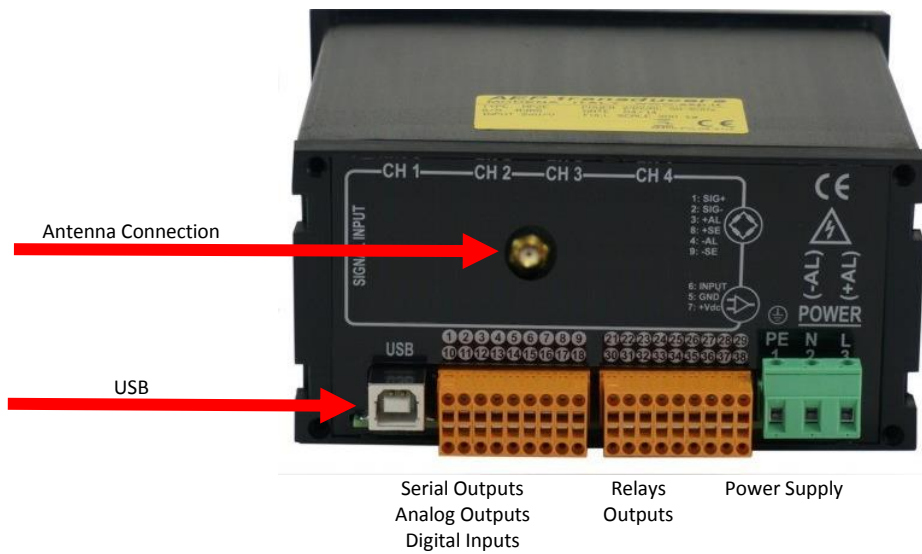
USB Cable



RS232 Serial Cable

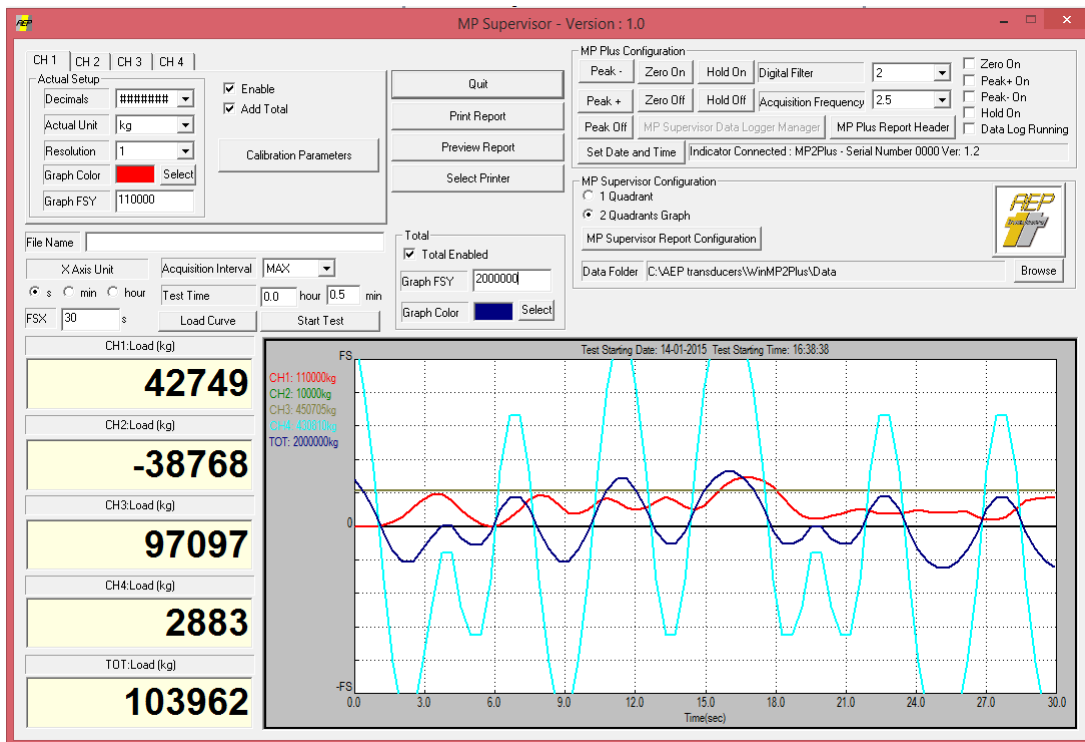
Desktop 24 columns
printer

ELECTRICAL CONNECTION



MP Supervisor (Option)

A dedicated program that allows an immediate interfacing through the USB port with the MP2Plus and allows you to view graphs, export data to Microsoft Excel directly from the PC and set all configuration parameters. The program also allows you to download a Data Logger carried out using the internal memory or the USB Flash Memory and display the respective curves of acquisition.



TYPICAL APPLICATION

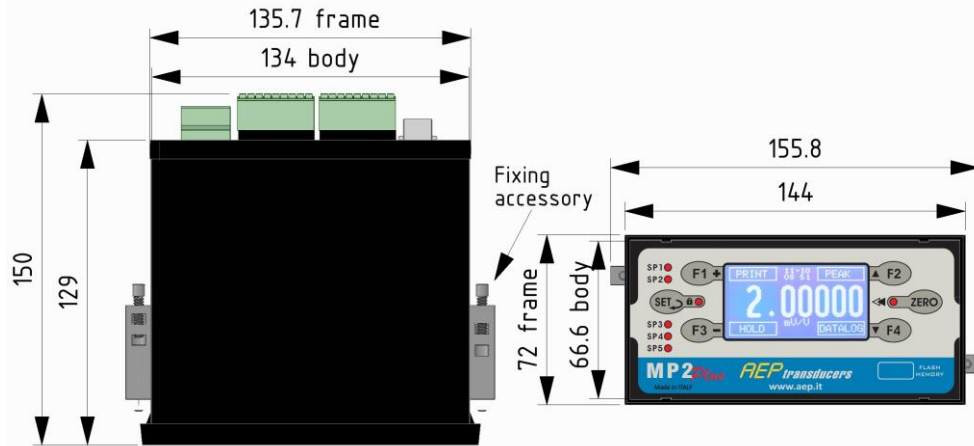


WEIGHT MEASURE: WIMP2Plus + 4 D200 WIMOD load cells
Ability to view both the weight measured by each cell that weight TOTAL



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Dimensions (mm)



MOUNTING PANEL APPLICATION



PURCHASE CODES

| | Power | Analog Output | Serial Output | Relay Output | Data logger |
|---------------|-----------------------|------------------------|---|----------------------|--|
| WIMP2P | XXX | XX | X | XX | X |
| | 230 230 Vac | A1 1° uscita | S RS232, RS458 Modbus, Printer | R5 5° Relè | D Data logger Clock- Calendar |
| | 115 115Vac | A2 2° uscita | | | F Data logger Clock- Calendar USB Flash Memory |
| | 24 24Vdc | | | | |

Example: WIMP2P230 (WIMP2Plus 230Vac Base Version)

Example: WIMP2P24A2S (WIMP2Plus 24Vdc power supply + 2 analog output + Serial Output)

Example: WIMP2P115SF (WIMP2Plus 115Vac Power Supply+ Serial Output + USB Flash Memory)



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In order to improve the technical performance of the product, the company reserves the right to make changes without notice.