

Measurement of WEIGHT, FORCE, PRESSURE, TORQUE, DISPLACEMENT



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>WinUSB www.aep.it</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)



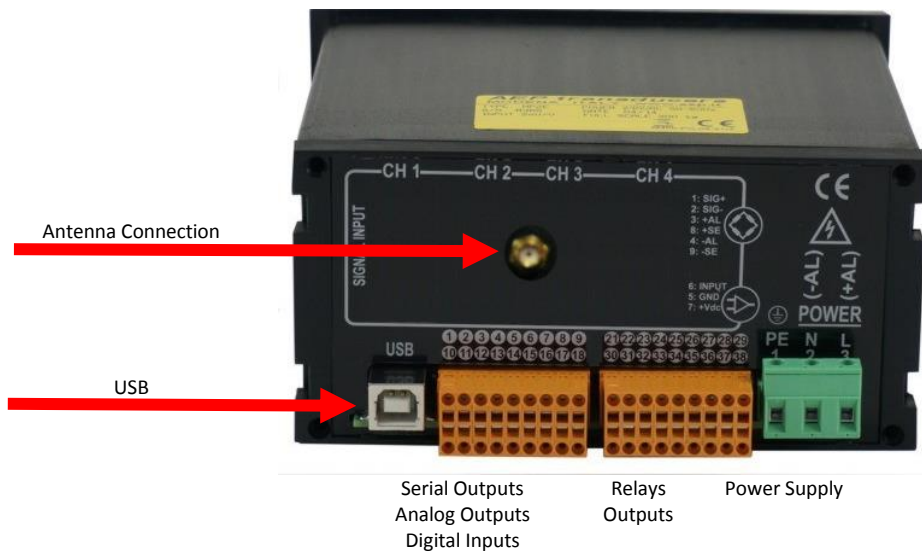
USB Cable



RS232 Serial Cable

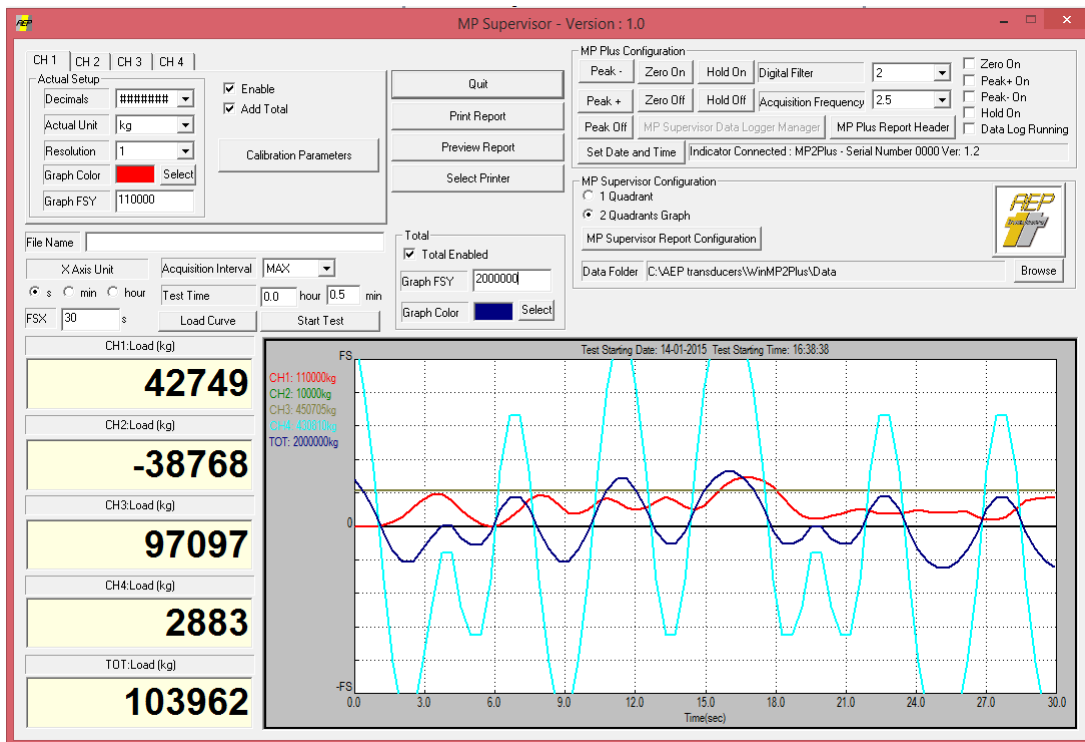
Desktop 24 columns
printer

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

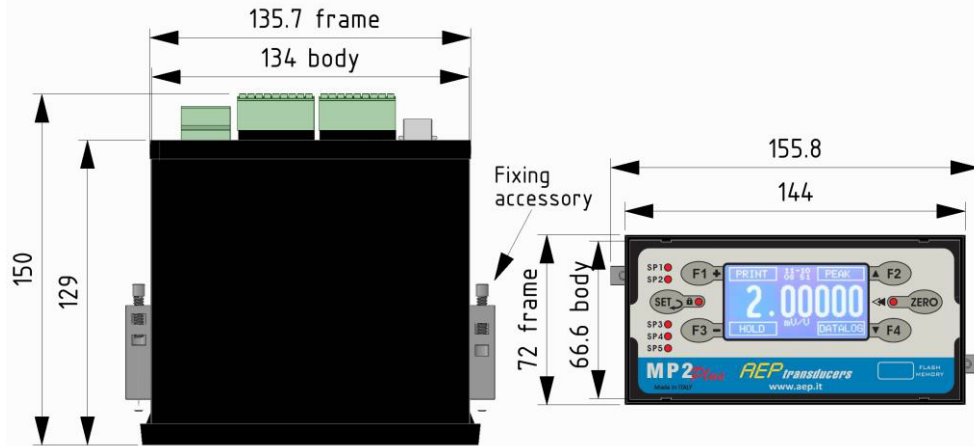


WEIGHT MEASURE: WIMP2Plus + 4 D200 WIMOD load cells
Ability to view both the weight measured by each cell that weight TOTAL



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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 (WIMP2Pplus 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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