KIMO INSTRUMENTS

DATA SHEET

MP120

Manometer

- **Easy to use**
- **Selection of units**
- **Hold-min-max function**
- **Manual autozero**

Features

- Pressure measurement
- Air velocity measurement
- Coefficient of the adjustable differential pressure element
- Temperature and atmospheric pressure compensation
- Selection of units
- Manual autozero
- Hold function
- Display of minimum and maximum values
- Configurable auto shut-off
- Backlight

Technical specifications

Parameters	Measuring units	Accuracy*	Measuring range	Resolution
Pressure	Pa, mmH_2O, inWg, daPa, m/s, fpm	±0.5% of reading ±2 Pa	From -1000 to +1000 Pa	1 Pa
Air velocity	m/s, fpm, km/h	From 2 to 5 m/s: ±0.7 m/s From 5 to 40 m/s: ±0.5% of reading ±0.3 m/s	From 0 to 40 m/s	0.1 m/s

*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

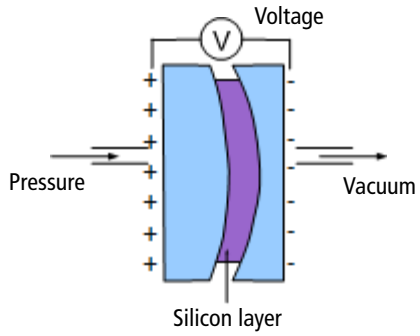
General features

Measuring element	Piezoresistive sensor
Tolerated overpressure	250 mbar
Connector	Ø6.2 mm threaded connectors made of nickelled brass
Display	4 lines, LCD technology. Sizes 50 x 36 mm. 2 lines of 5 digits with 7 segments (value) 2 lines of 5 digits with 16 segments (unit)
Housing	ABS, protection IP54
Keypad	5 keys
European directives	2014/30/EU EMC ; 2014/35/EU Low Voltage ; 2011/65/EU RoHS II ; 2012/19/EU WEEE
Power supply	4 batteries AAA LR03 1.5 V
Battery life	180 hours
Ambiance	Neutral gas
Conditions of use (°C,%RH, m)	From 0 to +50°C. In non condensing conditions. From 0 to 2000 m.
Storage temperature	From -20 to +80°C
Auto shut-off	Adjustable from 0 to 120 minutes
Weight	220 g

Operating principle

Piezoresistive sensor

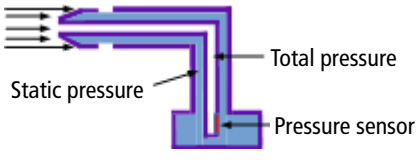
The pressure deforms the silicon layer. This layer deformation generates a voltage at its terminates. This voltage is proportional to the pressure applied.



Pitot tube

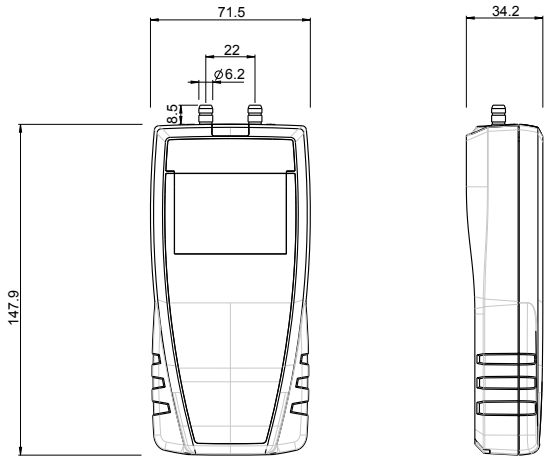
Dynamic pressure is measured by Pitot tube:
Pd = Total pressure **(Pt)** – Static pressure **(Ps)**
Air velocity is calculated according to Bernoulli simplified formula.
Formula with temperature correction:

$$V_{m/s} = K \times \sqrt{\frac{574{,}2\,\theta + 156842{,}77}{P_o}} \times \sqrt{\Delta P_{Pa}}$$



Po = Barometric pressure in Pa
θ = temperature in °C
K = Pitot tube coefficient

Dimensions (in mm)



Kit content

- Calibration certificate (except class 110 S)
- 2 x 1 m of silicone tube, Ø4 x 7 mm
- Stainless steel tip, Ø6 x 100 mm
- Transport case (ref: ST 110)

Accessories

Name	Reference
Magnetic protective housing	CQ 15
Straight junctions, in T or Y for tube Ø 5x8 mm	JTC or JTY
Pitot tubes Different lengths, Ø 3/6 or 8mm, bent or straight	See specific data sheet
ABS transport case	MT 51

Maintenance

We carry out calibration, adjustment and maintenance of your instruments to guarantee a constant level of quality of your measurements.

As part of Quality Assurance Standards, we recommend you to carry out a yearly checking.

Guarantee

Instruments have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).