sauermann®

MP 120

Manometer

Description of the device

1. OK key
2. Backlight key
3. Select key
4. On/Off/Esc key
5. Hold/min/max key

General features

Measuring element	Piezoresistive sensor
Tolerated overpressure	250 mbar
Connector	Ø 6.2 mm threaded connectors made of nickelled brass
Display	4 lines, LCD technology. Dimensions 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
Ambience	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

Technical specifications

Parameters	Measuring units	Accuracy*	Measuring range	Resolution
Pressure	Pa, mmH$_2$O, 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.

Perform a measurement

- Turn on the device by pressing on "On/Off/Esc".
  The device displays its name "MP120", then performs an autozero.
- Connect the pressure tubes or a differential pressure element to the device (Pitot tube, Debimo blades,..).
  The device displays the pressure or/and the measured velocity.

Perform an autozero

The device is on and displays the pressure and velocity measurements.
- Disconnect the pressure tubes.
- Press on "OK".
  "Autozero" displays on the screen, the device performs an autozero, then returns to the measurement display.

Freeze the measurement

During a measurement:
- Press on "Hold/min/max".
  "Hold" appears on the screen and the measurements are frozen.
- Press on "On/Off/Esc" to exit the hold function
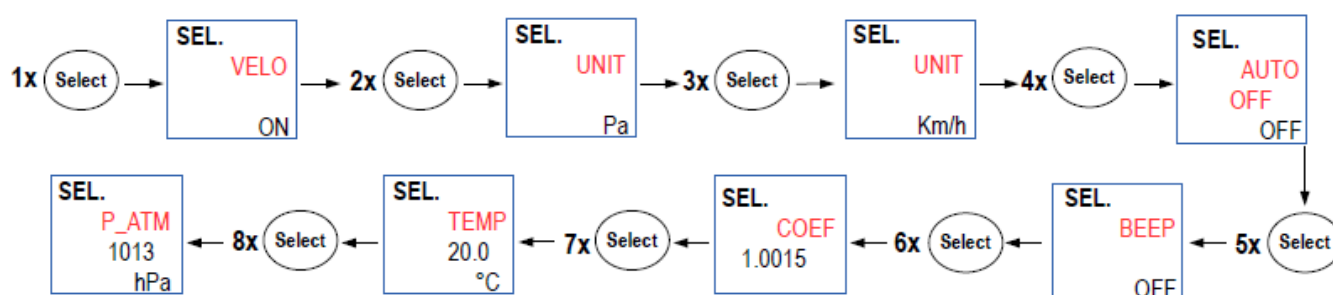 The device returns to the measurement display.

Display the minimum and the maximum

Once the measurement is frozen:
- Press on "Hold/min/max".
  The device displays the maximum value of pressure measured during the last questioning at the top of the screen and the minimum value of pressure measured since the last questioning at the bottom of the screen.
- Press again on "Hold/min/max".
  The device displays the maximum value of velocity measured since the last questioning at the top of the screen and the minimum value of velocity since the last questioning at the bottom of the screen.
- Press on "On/Off/Esc" to returns to the measurement display.

Adjust the device

Device drop-down menu

Measure and display the velocity

It's possible to measure and display the velocity on a MP120 manometer. A differential pressure element (Pitot tube, debimo blades,...) must be necessarily connected to the manometer.
The device is on and displays the pressure measurement.
- Press on "Select".
  "VELO" blinks on screen.
- Press on "OK".
  "OFF" blinks on screen.
- Press on "Select" to select "ON" then press on "OK" to validate.
  "VELO" blinks on screen.
- Press on "On/Off/Esc" to return to the measurements display.

Select the measuring unit in pressure

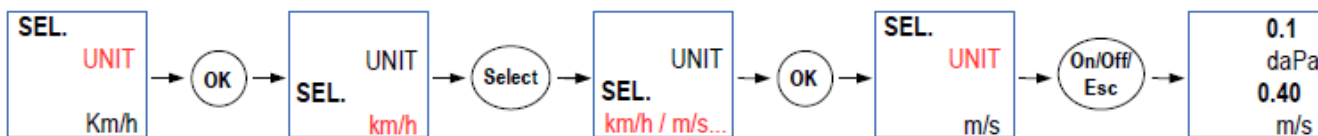The device is on and displays the measurement.

- Press on "Select" until "UNIT" appears on screen with the pressure unit indicated at the bottom of the screen.
- Press on "OK".
  The unit currently used blinks on screen.
- Press on "Select" until the required unit appears: Pa, mmh$_2$O, inWg or daPa.
- Press on "OK" to validate the unit selection.
  "UNIT" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Select the measuring unit in velocity

The device is on and displays the measurement.

- Press on"Select" until "UNIT" appears on screen with the velocity unit indicated at the bottom of the screen.
- Press on "OK".
  The unit currently used blinks on screen.
- Press on "Select" until the required unit appears: fpm, km/h, mph or m/s.
- Press on "OK" to validate the unit selection.
  "UNIT" blinks on screen
- Press on "On/Off/Esc" to return to the measurement display.

Adjust the auto shut-off

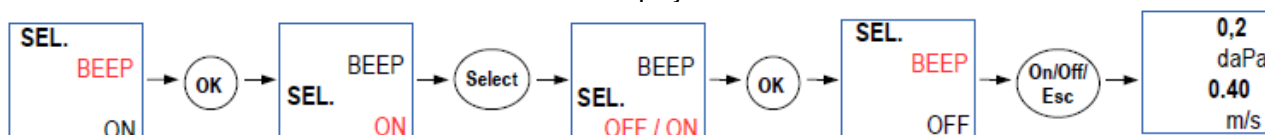The device is on and displays the measurement.

- Press on "Select" until "AUTO OFF" blinks on screen.
- Press on "OK".
  The time before device auto shut-off blinks at the bottom of the screen.
- Press on "Select" until the required time before auto shut-off appears: 15, 30, 45, 60, 75, 90, 105, 120 minutes or off.
- Press on "OK" to validate.
  "AUTO OFF" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Activate or deactivate the keys beep

The device is on and displays the measurement.

- Press on "Select" until "BEEP" blinks on screen.
- Press on "OK".
  "OFF" or "ON" blinks on screen.
- Press on "Select" to activate the keys beep "ON" or deactivate it "OFF".
- Press on "OK" to validate.
  "BEEP" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Adjust the coefficient

This coefficient corresponds to the coefficient of the differential pressure element used to measure the velocity (Pitot L tube (coeff: 1.0015) or S (coeff: 0.84), Debimo blades...).

The device is on and displays the measurement.

- Press on "Select" until "COEF" blinks on screen.
- Press on "OK".
  The first digit blinks.
- Press on "Select" to select the first digit value and press on "OK" to validate, performs the same procedure for the following digits (press on "On/Off/Esc", to return to the previous digit).
- When the first digit is adjusted, press on "OK" to validate.
  "COEF" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement.

Adjust the temperature

To have a precise and representative measurement, the temperature of the location where are performed the measurements must be entered in the device. The temperature must be between -20 and +80 °C.

The device is on and displays the measurement.

- Press on "OK".
  The first digit blinks.
- Press on "Select" to select the temperature sign: - for a negative temperature and 0 for a positive temperature.
- Press on "OK" to validate and pass to the following digit.
- Press on "Select" to select the value of this second digit and press on "OK" to validate, perform the same procedure for the following digit (press on "On/Off/Esc", to return to the previous digit).
- When the last digit is adjusted, press on "OK" to validate.
  "TEMP" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Adjust the atmospheric pressure

To have a precise and representative measurement, the atmospheric pressure of the location where are performed the measurements must be entered in the device. The atmospheric pressure must be between 800 and 1200 hPa.

The device is on and displays the measurement.

- Press on "OK".
  The first digit of the atmospheric pressure blinks.
- Press on "Select" to select its value.
- Press on "OK" to validate and pass to the following digit, perform the same procedure for the following digits (press on "On/Off/Esc"to return to the previous digit).
- When the first digit is adjusted, press on "OK" to validate.
  "P_ATM" blinks on screen.
- Press on "On/Off/Esc" to return to the measurement display.

Activate the backlight

The device is on.

- Press on "Backlight" to activate the device backlight.
- Press again on this key to deactivate the backlight.

Change the batteries

- Remove the front part at the back of the device.
- Change the old batteries by AAA LR03 1.5V batteries.
- Replace the front.

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