Unscrew front ring (1) and remove device (2) out of the holder.	
With a suitable tool (ex. paper clip) gently pull the battery out of the case and remove by hand.	
Insert the new battery (type CR2032). It can be inserted only in one position (see picture).	
Please check that the contacts are clean before inserting the manometer. The contacts are gold plated and cannot be touched (oxidation). Turn the unit until it snaps into place easily. Only in this position the screw ring should be mounted. Note: The sensor, together with the electronics is one unit and should never be swapped among different devices, otherwise the unit will show incorrect values.	

Morini® Competition Arm S.A.

MORINI

NEW

DIGITAL MANOMETER

Swiss Made

Insert Battery

After inserting the battery, the device starts as follows:

LCD-Test (2 Seconds)	Software/Version (1 Second)	Measurement Mode
8.8.8	2.04	189 bar

The device is switch ON / OFF by pressing the display. By pressing and holding down the display various functions can be called. The functions are activated by releasing the display.

Switch ON

By briefly pressing (on the display of the manometer) turns on the device.
It always shows first the pressure in BAR, then it switches to the number of shots. (it changes between pressure and number of shots automatically every 2 seconds.)

Switch OFF

By briefly pressing (on the display of the manometer) it shows on the LCD "OFF" (for maximal 1 Second) and it switchs OFF. Also by long pressing and holding, the device can be switch off. Just so long hold as displays "OFF", then release.
When pressed longer than 1 second, the display will return to measurement mode. If the unit is now released (not pressed), it will not switch off.
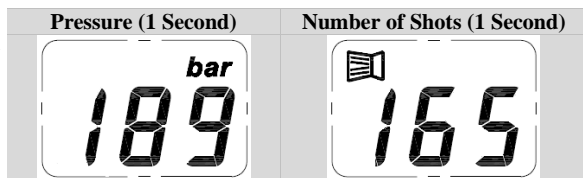
OFF
OFF

Auto switch OFF

60 minutes after the last display press, the device switches off automatically.

The display in measurement mode changes every 2 seconds between number of shots and pressure.

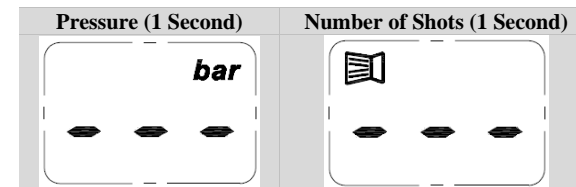| Pressure (1 Second)	Number of Shots (1 Second)
189 bar	165

Notes:

➢ At pressures less than -99 bar on the display a pressure of -99 bar is displayed (display range is limited to negative at -99).
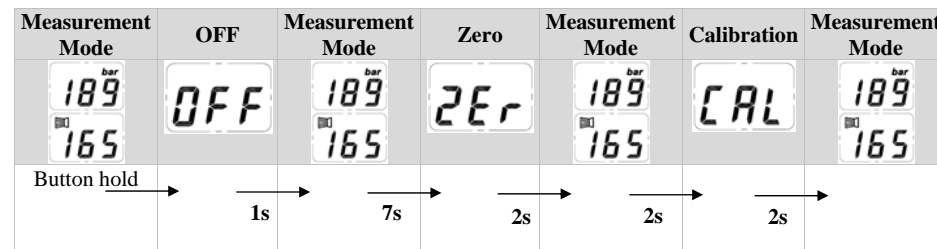➢ The number of shots never goes to a negative value (by pressure <90 bar, the number of shots is always 0).

If the display is not contacted with the pressure sensor or the device is taken out of the case to change the battery, the numeric display changes to "---"
Note: in this case it cannot be changed to CAL or ZERO mode.

Pressure (1 Second)	Number of Shots (1 Second)
bar - - -	- - -

Measurement Mode	OFF	Measurement Mode	Zero	Measurement Mode	Calibration	Measurement Mode
189 bar 165	OFF	189 bar 165	2Er	189 bar 165	CAL	189 bar 165
Button hold	1s	7s	2s	2s	2s	

The calibration is used to set the value (pressure drop per shot) for calculating the number of shots on the display.
To have an "exact" calibration you should note the following:

➢ After setting the pellet speed shoot a few shots.
➢ Leave pistol and cylinder at least 5 minute without shooting to have the cylinder at room temperature.
➢ Change of temperature in the cylinder will cause a change in pressure in the cylinder too (also vice versa). In the calibration we need to measure changes in pressure only.
➢ After shooting the 10 calibration shoots the cylinder must remain about 1 minute quiet to have a constant temperature before leaving the calibration mode.

Press the display until you can read „CAL" on the display. Release the display.

CAL

Shoot 10 shoots in a normal way (not to fast not to slow) and leave pistol with cylinder quiet for at least 1 minute.

10 x

Press the display until „CAL" disapear. At this moment the manometer will calculate the pressure. Release the display.
The display will show the pressure used to shoot the 10 shoots.

8.2 bar

If the pressure used is in the range of 3 - 17 bar, you will see „SAF" (safe) on the display and the results will be recorded.

If the pressure used is outside the range of 3 - 17 bar, you will see „Err" (error) on the display and the results will be not recorded. The manometer will use the last good recorded information.

SAF	Err

After showing the result of the recorded results (2 Seconds), the manometer will go back in mesurement mode. The calibration is finish.

189 bar