1 Description EN

The mEsstronic is an instrument for measuring lengths that consists of several telescopic elements. The respective extension length is determined electronically and shown to the exact millimetre in the display. Measurements are easily taken and are carried out by extending the telescopic elements within the relevant area to be measured.

std This symbol indicates special features of the standard mEsstronic model (Ref.-No. 583111, 585111, 588111, 584111).

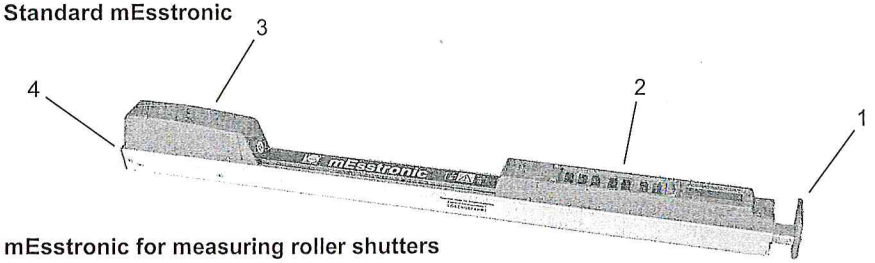
easy This symbol indicates special features of the mEsstronic Easy (Ref.-No. 583121, 585121).

2 Models

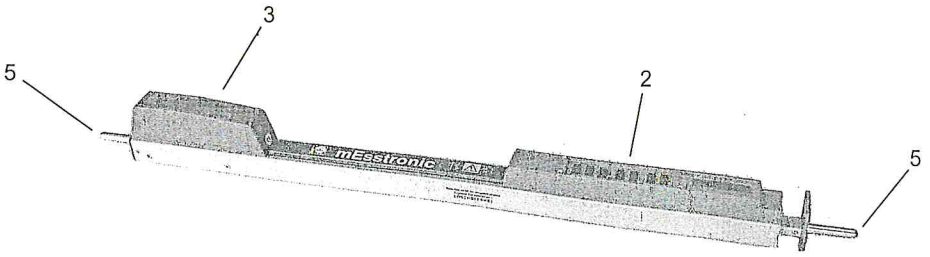
The mEsstronic models are equipped with different stops depending on their fields of application and are operated via different keypads.

2.1 Stops

Standard mEsstronic



mEsstronic for measuring roller shutters

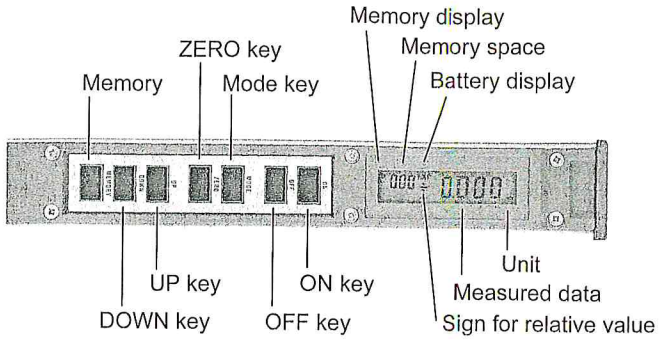


1 – Front stop	4 – Back stop
2 – Display housing	5 – Measuring spike
3 – Rewind mechanism housing with battery compartment	

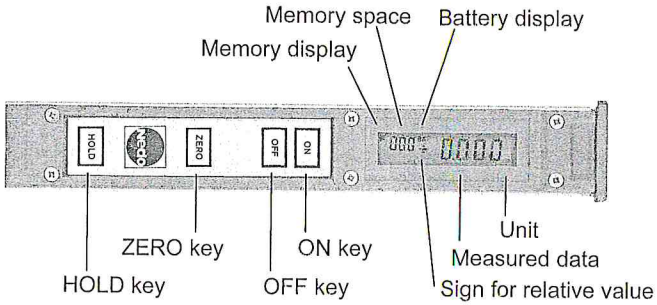
Contents

2.2 Control panels

std



easy



3 Operation

3.1 Initial start-up

- Read operating manual!
- Insert batteries (refer to 3.10).

3.2 Switching on and off, automatic switch-off

The device is switched on when retracted by pressing the ON key. On the display either the shortest measurable length or the relative value based on the entered zero point are shown in metres or inches. The device switches automatically off after three minutes of non-use, or it can be switched off by pressing the OFF key.

3.3 Measuring system

std

Change from the metric system (m) to inches (in) by pressing the MODE key. The selected measuring system is shown in the display. The metric system is preset.

3.4 Relative measuring mode (setting zero point)

Change to the relative measuring mode by pressing the ZERO key. The current measurement is then set to zero. All the following measured values then refer to this zero point! The measured values are shown in the display with the correct sign. The reference measurement can be displayed by pressing the ZERO key once more during the relative measuring process. The relative measuring mode can be left by pressing the ON key and then the true measured values (absolute measurement) are displayed. Before setting a new zero point, select the absolute measuring mode.

3.5 Storage of values in memory module [Ref.-No. 585115]

std The memory module allows 511 measured values to be stored in memory spaces 000 to 510.

Note: Insert and pull out the memory module only when the mEsstronic is switched off.

Note: Never plug a memory module into a mEsstronic without batteries or when batteries are flat!

Pressing the MEMORY key stores the currently displayed measured data value. The memory space is automatically incremented by one, and the display shows the stored measured value and the letter "M". The measuring process is continued by pressing the ON key or by extending or retracting the telescopic elements by more than 7 mm. Please refer to chapter 3.7 regarding the recall of the stored data. New memory modules or those which have been used in other Nedo devices must be formatted for use with the mEsstronic; otherwise an error message [Err.3] is displayed. The memory module is formatted by pressing the ON key first and, keeping it pressed, activating the UP and DOWN keys simultaneously. This clears the entire memory.

3.6 Storage of values in internal memory

std The internal memory allows to store 10 measured values in the memory spaces 000 to 009. In order to store a measured value and then to reinitialise the instrument further measurements, the MEMORY, UP and ON keys must be pressed one after the other. This applies when no memory module has been inserted.

3.7 Recalling measured data

std

The display for stored data is activated by pressing the UP or DOWN key and confirmed by displaying the letter "M" in the memory display. The measured data stored are shown with their memory location. By pressing the UP and DOWN keys once again, the memory is scrolled forwards and backwards. The measuring process can be continued by pressing the ON key.

3.8 Clear memory

std

The memory can be cleared by pressing the ON key first and, keeping it pressed, activating the UP and DOWN keys simultaneously; this also formats the memory.

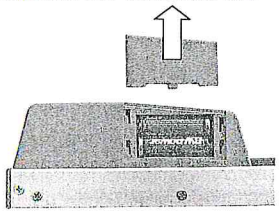
3.9 "Freezing" measured data in display

easy

Pressing the HOLD key stores the currently displayed data. At the same time, the letter "M" appears in the memory display. As long as the "M" remains visible, the stored measured values are displayed. Press the ON key to continue the measuring process.

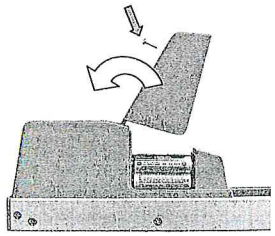
3.10 Replacing batteries/rechargeable batteries

The batteries must be replaced when the battery display flashes. When replacing the batteries the measured data stored in the internal memory as well as any existing reference values are deleted! The batteries should be replaced when the device is switched off. There are two different types of battery housings:



- **Small housing**

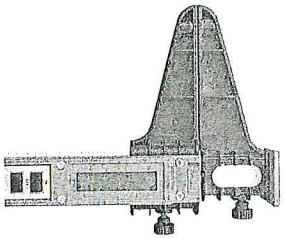
Open the battery compartment by pushing the two battery compartment covers **slightly** upwards and removing them **sideways.** Take out the two batteries from each side, replace them and close the battery compartment.

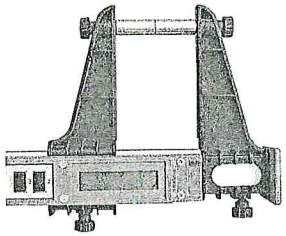


- **Large housing**

The battery compartment cover can be removed by undoing the retaining screw. Fold the cover of the battery compartment upwards. Replace the four batteries, fold the battery compartment cover down again and close by tightening the screw.

4.1 Measuring jaws [Ref.-No. 583500]





In order to attach the measuring jaws, the innermost telescopic tube must be extended by approx. 100 mm. Move the measuring jaw with the large clip is over the outer tube of the mEsstronic. When the small plastic stud of the measuring jaw rests in the first/second notch of the display housing, measurements can be carried out with/without measuring spikes. Now move the measuring jaw with the small clip over the narrow side of the small tube and snap it onto the tube. When taking measurements with spikes fix them onto the measuring jaws, retract the mEsstronic and screw the two locking screws tight.

Note: Before taking measurements, set the mEsstronic to zero by pressing the ZERO key when retracted. Otherwise, there is a danger of incorrect measurements being taken.

4.2 RS 232-module [Ref.-No. 585226]

std

The RS 232-module is inserted like the memory module into the display housing. This module must also be inserted and pulled out when the device is switched off. After connecting the module to a target device and switching on the mEsstronic as well as the target device, the currently displayed measured values are transferred by pressing the MEMORY key. At the beginning of the transfer, the display of the mEsstronic is switched off for a short time in order to provide the operator with a visual signal. Note: The data transfer may be disturbed by electrostatic discharge in unfavourable conditions. The target device must be set to following transfer parameters: 2400 baud, 1 start bit, 7 data bits, 2 stop bits, no parity.

4.3 Bluetooth module *Blue*Connect [Ref.-No. 585228]

*Blue*Connect uses a mEsstronic for wireless transfer of specific inside dimensions to a PC, pocket PC or a machine control. The Bluetooth® *Blue*Connect module can transfer measured values from the following Nedo products:

- mEsstronic Ref.-No. 58x111 (resolution 1.0 mm)
- mEsstronic Ref.-No. 583115 (resolution 0.1 mm)

*Blue*Connect cannot be used with mEsstronic Easy Ref.-No. 58x121.

5.1 Intended use

The mEsstronic is suitable for measuring lengths within a measuring range area and within its limits of use. The operating company is responsible for ensuring the intended use of the equipment, giving instructions to the user and maintaining the operational safety of the equipment.

The following obligations apply:
- The instructions contained in the operating manual are understood.
- The local regulations regarding the prevention of accidents are known.

5.2 Adverse use

- Use of mEsstronic without instructions.
- Use outside of limits of use.
- Opening of device supplied by Nedo by removing screws (except the removal of the screw in order to open the battery compartment in large housing).
- Deliberate or imprudent activities on scaffolding, climbing of ladders, taking measurements near machines in operation, open machine elements or plants.
- Modifying or making changes to the product .
- Using accessories of other manufacturers which have not been authorized by Nedo (e.g. memory modules, stops etc.).
- Never activate the end switch contact by hand or with an object.

Note: The guarantee expires if the equipment is used for any purpose other than its intended use or if it is used outside its limits of use and storage.

5.3 Hazards of use

- Lack of, or incomplete instruction lead to faulty operation and adverse use. This may cause accidents involving serious harm to persons, objects, assets and the environment.
  Remedial action: All users must follow the safety instructions provided by the manufacturer and the instructions given by the operating company.

- Beware of faulty length measurements when using a defective mEsstronic after it has been dropped, subjected to severe mechanical stress or changed in some way.
  Remedial action: Carry out regular control measurements, especially after excessive demand of the mEsstronic. Establish an easily accessible measuring area near your daily place of work (minimum length: retracted length + 1 m) and carry out two to three control measurements per week.

- Be careful not to bend the instrument out of line and watch out for dirty or deformed stops as these will seriously affect the accuracy of the measurements.
  Remedial action: Like every measuring tool, the mEsstronic should be handled with appropriate care and kept in good condition.

- Make sure of environmental-friendly disposal of the mEsstronic, the batteries and the rechargeable in accordance with the applicable national laws

- Be careful when taking measurements near high-voltage lines as the telescopic elements are conductive.
  Remedial action: Do not allow contact between the telescopic elements and live parts – keep adequate distance between them.

- The mEsstronic may suffer damage in a damp environment.
  Remedial action: Use the mEsstronic in a dry environment and store it in a dry place. Make sure it is dry after cleaning.

6 Maintenance

6.1 Care

In principle, the mEsstronic is maintenance-free. Nevertheless, the following points are to be observed:

- Appropriate care of the mEsstronic increases its service life, as is true for all measuring instruments.
- If possible, use the original packaging material or transport bag for protection against dirt and for transport
- Use a dry cloth to clean the display housing, the cover and the windup mechanism housing.
- Do not use aggressive cleaning materials to clean the telescopic elements and stops.
- Never lubricate the telescopic elements.

6.2 Storage

- Store in a closed, dry, dust-free place.
- Remove the batteries if the device is to be stored for a longer period.

6.3 Error messages

Message	Cause	Remedy
Err.0	Warning end switch	Accurately push the mEsstronic together before switching it on.
Err.1	Error (internal memory)	Switch mEsstronic off and on. If no improvement, send mEsstronic in for servicing.
Err.2	Counting error due to counterproductive rapid movement of the telescopic sections	Switch mEsstronic off and on. If no improvement, send mEsstronic in for servicing.
Err.3	Memory module cannot be read	Switch mEsstronic off and on again – the module is automatically formatted and the contents are deleted. If ERR3 cannot be remedied in this way, send in module for servicing.
Err.4	Negative counter overflow	Switch off mEsstronic, push together accurately and switch on again. If no improvement, send mEsstronic in for servicing.
Err.5	Unknown module code	Plug in the correct module.

Power supply	4 x 1.5 V type (AA) batteries or corresponding rechargeable batteries
Resolution	1 mm
Accuracy	± 1 mm + 1 ‰ of measurement
Storage temperature	- 20°C to + 70°C. With batteries inserted max. + 55°C
Working temperature	- 10°C to + 40°C
Operating lifetime with a set of full	Quality batteries: approx. 200 hours NiMH rechargeable batteries: approx. 150 hours NC rechargeable batteries: approx. 75 hours
Remaining operating time after *initial* BAT display	A few minutes to a few hours depending on type of batteries or rechargeable batteries
Remaining operating time when BAT *flashes*	None remaining operating time. The device is about to switch off. Replace batteries/rechargeable batteries immediately.

Ref.-No.	Model/stops	Control panel	Min. length	Max. length	Ref.-No. bag
583111	Standard	Standard	700 mm	3000 mm	593111
583121	Standard	Easy	700 mm	3000 mm	593111
584111	With measuring spike	Standard	800 mm	3100 mm	-
585111	Standard	Standard	1042 mm	5000 mm	595111
585121	Standard	Easy	1042 mm	5000 mm	595111
588111	Standard	Standard	1544 mm	8000 mm	598111