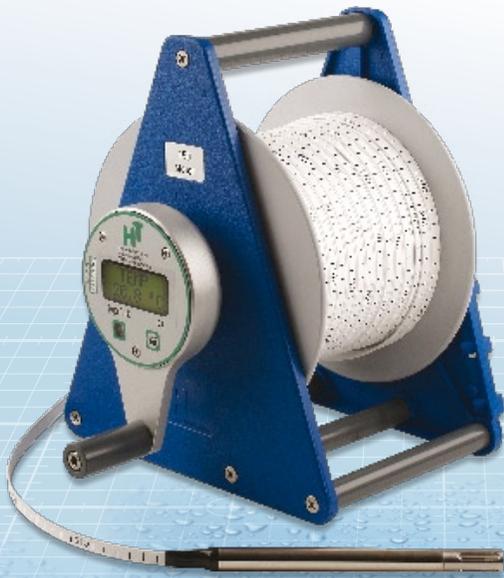


Water Meters type 110

For mobile **measurements**
of **water level** and **water temperature**
in wells and groundwater observation pipes



• Type 110 Triangular frame (from 120 m)



• Type 110 (up to 100 m)



■ Description

The Water Meter type 110 is an ideal measuring appliance for the manual measurements of water level and water temperature in wells, boreholes, tanks and groundwater observation pipes. This device is especially designed to ascertain temperature profiles and water level in wells.

Thanks to its high-quality processing in a sophisticated operation, our unit offers you extreme robustness, highest operating comfort and absolutely precise measurements. The optionally available bottom sensor further extends the capability of the Water Meter type 110 to measure additionally the depth of the groundwater well.



■ Areas of application

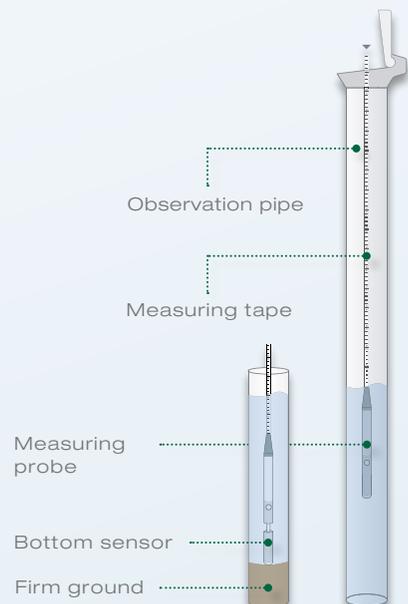
- Determination, or indirect estimation, of water replacement rates
- Determination of external thermal ingress in shallow groundwater, particularly in cities, congested urban areas and industrial estates
- Quantification of groundwater influx in surface water and estimation of the biolithosphere development of lakes
- Long-term operation in pumping tests for continuous measurements of water level and temperature
- Determination of foreign inflow into the ground water



■ Properties

Unit

The Water Meter type 110 is an electronic precision measuring unit with digital transmission of data from the sensor to the display. Because of this, it is possible to securely carry out exact measurements with no problems and without disturbances from, for example, pumps or other electro-magnetic equipment. The Water Meter is equipped with a high-contrast LCD display and a water resistant touch keyboard. A functional and battery test can be carried out before putting the unit into operation.



Standard measuring probe



Measuring probe with bottom sensor

Measuring probe

The measuring probe is made of stainless steel and nickel-plated brass, with a diameter of 15 mm and a length of 180 mm. The response characteristic of the sensor has been designed for extremely low conductivity and also for highly contaminated water or sea water. Thanks to its construction, the time span for the sensor to conform to the surrounding medium is very short. Furthermore, the assembly allows for easy cleaning.

Functional principles

The measuring probe is let down into the well by cranking the handle. When the sensor makes contact with water, an acoustic-visual signal is given off at the instrument. This turns off after about 10 seconds in the immersed state. Only the display showing the actual temperature remains in operation for the duration of the water contact. The water level can be read off from the measuring tape, which is divided into centimetres, decimetres and metres.

■ Versions

2 models are available, according to the length of the measuring tape:

Type 110 (up to 100 m)

For the convenience of the operator, the cast aluminium frame with reinforced steel back can be placed on the dip pipe. The electronics and the display are compactly integrated in the cable drum and do not distract when winding.

- Available measuring lengths:

15 / 30 / 50 / 60 / 80 / 100 m

Special lengths available on request.



Type 110 Triangular frame (from 120 m)

For measuring tape lengths from 120 m, a stable support frame made from a high-tensile special acrylic resin is used. This offers extreme robustness with minimum weight and always provides easy handling, despite the large tape length. The whole electronics and the display are just as compactly integrated in the cable drum.

This robust version guarantees successful measuring over innumerable years.

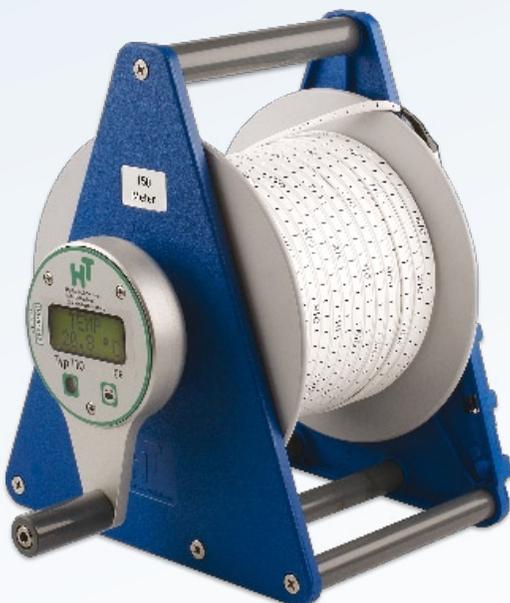
- Available measuring lengths:

120 / 150 / 200 / 250 / 300 / 400 / 500 m

Special lengths available on request.

Measuring tape

- Bifilar strip made of white polyethylene with 2 stainless steel wires
- Resistant to UV-radiation and contaminated water or salt water
- Metres printed in red, cm divisions and dm figures in black



■ Special features

- Optical and acoustic signal on water contact
- LCD display for temperature values
- Robust construction with low weight
- No disturbing parts or supports when winding
- Bottom sensor for depth sounding (accessory)
- 2 versions for variable cable lengths
- No re-calibration necessary
- Accuracy: < 0.1 °C



■ Technical data

	Type 110 Triangular frame	Type 110
Measuring tape lengths	120 up to 500 m	15 up to 100 m
Power supply	4 x 1,5 Volt baby cells	
Operating temperature range	-30 °C up to +75 °C	
Measuring temperature range	-15 °C up to +80 °C	
Accuracy of measuring	< 0.1 °C in a range from 0 °C up to +50 °C	
Measuring probe	Diameter 15 mm, length 180 mm, made of stainless steel (316) and nickel-plated brass	
Long term stability	permanently stable, no re-calibration necessary	
Safety class for probe	IP 68, permanently pressure resistant	
Safety class for tape drum	IP 64, spray water resistant	
Measuring tape	<ul style="list-style-type: none"> ■ Bifilar strip made of white polyethylene with 2 stainless steel wires ■ Resistant to ultraviolet rays and to contaminated or salt water ■ Metres printed in red; cm divisions and dm figures in black 	
■ Accessories		
Bottom sensor for additional sounding of drilling depth	■	■
Protection bag (adjusted to the respective measuring tape length)	■	■

Changes in performance features and technical data are permitted.

