TM2
DIGITAL THERMOMETER

References marked on instrument or in instruction manual

⚠ Warning of a potential danger, comply with instruction manual.

Caution, hot surface.

CE Conformity symbol, the instrument complies with the valid directives. It complies with the EMV Directive (2014/30/EU), Standards EN 61000-6-3:2007 and EN 61000-6-1:2007 are fulfilled.

The instruction manual contains information and references, necessary for safe operation and maintenance of the instrument. Prior to using the instrument (commissioning / assembly) the user is kindly requested to thoroughly read the instruction manual and comply with it in all sections. Failure to read the instruction manual or to comply with the warnings and references contained herein can result in serious bodily injury or instrument damage.

1.0 Introduction/scope of supply

The TM2 is a waterproof penetration thermometer for simple and fast measurement of temperatures °C or °F.

Scope of supply:

1 pc TM2

1 pc battery 3 V, CR 2032

1 pc Instruction Manual

1 pc Protective sleeve

2.0 Safety Measures

Measurements in dangerous proximity of electrical installations are only to be executed when instructed by a responsible electrical specialist, and never alone.

⚠ Warnings

The respective accident prevention regulations established by the professional associations for electrical systems and equipment must be strictly met at all times.

If the operator's safety is no longer ensured, the instrument should be withdrawn from service and further use prevented. The safety is no longer insured, if the instrument:

- shows obvious damage
- does not carry out the desired measurements
- has been stored for too long under unfavourable conditions
- has been subjected to mechanical stress during transport.

The instrument may only be used within the operating ranges as specified in the technical data section.

Note: Avoid heating of the instrument electronics by direct sunlight to ensure perfect operation and a long instrument life.

Never try to disassemble battery cells! The battery contains highly alkaline electrolyte which is caustic! If electrolyte gets in contact with skin or clothing, rinse immediately with water. If electrolyte gets in contact with the eyes, immediately flush by using pure water and consult a doctor.

Never try to make contact between both battery cell poles, for example by using a wire connection. The resulting short-circuit current is very high and causes extreme heat. Danger of fire and explosion!

Never throw battery cells into a fire as this could cause an explosion.

Never expose batteries to humidity.

When replacing or changing the battery, make certain the correct polarity is observed.

In the event of swallowing coin cells (for ex. infants) consult a doctor.

Only use batteries as described in the technical data section.

2.1 Appropriate Usage

The instrument may only be used under those conditions and for those purposes for which it was conceived. For this reason, the safety references and the technical data including environmental conditions must be followed. When modifying or changing the instrument, the operational safety is no longer ensured.

3.0 Transport and Storage

Please keep the original packaging for later transport, e.g. for calibration. Any transport damage due to faulty packaging will be excluded from warranty claims. However, should the instrument be contaminated by leaking battery cells, you are kindly requested to return it to the factory for inspection. Instruments must be stored in dry and closed areas. In the case of an instrument being transported in extreme temperatures, a recovery time of minimum 2 hours is required prior to instrument operation.

4.0 Carrying out measurements

⚠ Prior to any temperature measurement it has to be ensured, that the surface to be measured is not live. Failure to comply with this prescription can lead to serious operator injury or instrument damage.

⚠ Specified temperature sensor measurement ranges must be respected.

⚠ Hold the thermometer by the plastic casing. Any contact with metal parts should be avoided.

⚠ In order to avoid burns, do not touch the test object use the measurement probe only.

In order to obtain the most accurate results the following points must be observed:
For measurement of liquid, paste or solid material, the insertion depth of the sensor must be approx. 30 mm.

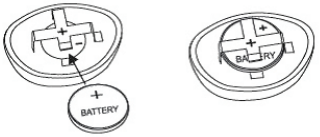
- Switch “on” instrument with key ON/ OFF
- Make contact with the temperature sensor. **Note:** The HOLD-function has to be switched “off”.
- Wait until a steady value is displayed. Please note that the time required to obtain the actual measurement value depends upon each individual application (up to 30 seconds).
  Note: Over or Under range is displayed as „OL” or. „-OL” .
- The value displayed can be stored by use of the „HOLD“ button. The display shows „H“.

5.0 Maintenance
When using the instrument in compliance with the instruction manual, no special maintenance is required.

5.1 Cleaning
If the instrument is dirty after daily usage, it is advised to clean it by using a damp cloth and a mild household detergent
⚠ Prior to cleaning, ensure that instrument is switched off
⚠ Never use acidic detergents or solvents for cleaning.
⚠ After cleaning do not use the instrument until it is dried completely.

5.2 Replacement of batteries
If you can’t switch on the instrument or if the display (segments) are hard to read after switch on the instrument the batteries must be changed.

The references described in section 2 regarding the handling of batteries must be met! Only use batteries as described in the technical data section!



- Lift the upper case cover.
- Remove the discharged batteries.
- Insert new batteries.
- Replace the upper case cover.

Note: Please consider your environment when you dispose of your batteries. They should be treated as hazardous waste. In most cases, the batteries can be returned to their point of sale for disposal.

⚠ Please, comply with the respective valid regulation regarding the return, recycling and disposal of used batteries.

6.0 Technical Data
(for 23 °C ± 5 °C, < 70 % rel. humidity).
Display: LCD, 31/2 digit, with symbols for units and HOLD-function
Over range display: „OL” is displayed or „-OL” for under range
Range: -40 to +250°C

Range	**Resolution**	**Accuracy:**
-40 ... -20°C	0.1°C	± 3°C
-19.9 ... +200°C	0.1°C	± 0.5°C
+200.1... +250°C	0.1°C	± 3°C

Temperature change/response time:
> 5 K/s
Working temperature:
-10°C ..+50°C / at max. 80% rel. humid.
Storing temperature:
-20°C ...+60°C / 30 ... 75% RH
Power supply: 1 pc. 3 V CR 2032
Battery live: approx. 200 h
Dimensions: approx. 50 x 30 x 160 mm
Weight: approx. 16g incl. batteries
Protection degree: IP 67
Hight above MSL: up to 2000m

Warranty
This Martindale product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is 2 years and begins on the date of receipt by the end user. This warranty extends only to the original buyer or end user customer, and does not apply to fuses, disposable batteries or to any product which, in Martindale’s opinion, has been misused, altered, neglected, contaminated, or damaged by accident or abnormal conditions of operation, handling or storage.

Order codes

TM2RD	Red thermometer
TM2WH	White thermometer
TM2YE	Yellow thermometer

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