



The following technical datasheet is provided by Protimeter.

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Surveymaster™

Protimeter Dual-Function Moisture Meter

The Surveymaster™ can help building professionals—such as contractors, surveyors, home builders and architects—assess building moisture levels during new build and refurbishing activities. Excessive moisture in buildings can lead to decay and deterioration of components and decorative finishes. Professionals involved with the identification, management and remedy of moisture need tools that help them to:

- Identify the extent of the moisture penetration
- Diagnose the cause of the problem
- Monitor change in the moisture level

Protimeter moisture meters and hygrometers satisfy these requirements comprehensively. The Surveymaster™ is the preferred industry choice for surveying and investigating moisture in buildings.



Two Operational Modes

This reliable moisture meter has two modes of operation—search and measure. These functions can help the user to distinguish sub-surface from surface moisture, essential information when trying to establish the extent and cause of a dampness problem.



Search Mode—Non-Invasive

The search mode is used to assess the moisture level beneath the surface of solid walls and floors independently of surface conditions. The nominal depth of the measurement is 3/4 inch (19 mm); this depends on the density and other characteristics of the material being measured. When held against the surface, as shown below, the instrument transmits a signal into the material. The relative moisture level is shown on the digital display and its moisture condition is shown on the accompanying scale of color-coded lights. This measurement presentation helps the user to:

- Look for moisture behind wall and floor coverings, such as tile and vinyl.
- Assess, in relative terms, if the material is in a dry, borderline or damp condition.
- Map the extent of the problem numerically.
- Non-invasive pinless radio frequency finds moisture at depth where moisture is not always directly visible—up to 3/4 in (25.4 mm) below the surface.
- This mode of measurement is not adversely affected by the presence of surface moisture.

Applications: Shower pans, behind ceramic tile, fine finishes, water stains, tile and vinyl floor coverings, joists, around toilets, drywall, below grade floors and walls, plaster, masonry, concrete and concrete block.

Note: Metal additives in concrete can create false positive readings.



Measure Mode—Pin-Type

This mode is used to measure the moisture level at the surface and at incremental depth, when used with the auxiliary probes. Measure mode readings are precise and specific to the immediate area of contact of the electrodes. The actual moisture content of wood is shown on the digital display with the corresponding moisture condition shown on the accompanying scale of color-coded lights. Wood Moisture Equivalent (WME) values are shown for other non-conductive, porous building materials.

- Pin-type probes measure moisture in wood and other building materials (use provided wood species calibration chart for more precise readings)
- Deep wall probes establish the presence of moisture in wall cavity insulation, sub and surface structures

Options

- Exterior Insulation and Finished Systems (EIFS) probe finds moisture in exterior insulation finishing systems
- Hammer electrode for wood floor applications

Applications: Wood and wood floors, subfloors, drywall, concrete and concrete block, stucco, plaster, masonry and EIFS.



Reference mode (Patent Pending)

In both Pin and Search mode, GE's patent pending Reference Mode can be used. Reference mode can be useful when trying to establish what materials are above or below a point of reference or dry standard.

Measure the dry standard or baseline material until the meter's reading is stable then press for seconds. This will store the reading until the mode changes of the meter turns off. Now all readings taken after will be displayed as normal, but below you will see a second reading that shows you if the material is measured above or below the original reading.



Surveymaster™ Specifications

Rapid, non-invasive and pin moisture evaluation in building materials. Detects moisture directly in materials such as concrete and below wall and floor coverings such as tile, wood and vinyl

Range

70 to 999 relative (non-invasive)

Dry (green) —70-169

At risk (yellow) —170 - 199

Wet (red) —200-999

7.9% to 99% WME (pin measurement)

Dry (green)-7-16.9

At Risk (yellow) 17-19.9

Wet (red)) — 20-99.9

Display 1

Digital LCD backlit

Display 2

60 LEDs green (dry), yellow (at risk) and red (wet)

Depth of moisture

Non-invasive up to 3/4 in (19 mm)

Pin up to 1/2 in (12.7 mm)



Case

Pouch with belt loop

Power

9 V (supplied)

Warranty

2 years on mechanical or manufacturing defects. Does not include wearing part or accessories.

Options

Hammer electrode

BLD5055

EIFS Probe

BLD5070

Part Number

BLD5365

Technical Specifications

Standard Supply

Instrument, 5 in (127 mm) deep wall probes, moisture probe, calcheck, 2 spare pins, pouch and instructions

Weight, Including Batteries

8 oz. (225 gm)

Dimensions

7.5 in x 2.75 in x 1.9 in (190 mm x 70 mm x 49 mm)

Battery

One 9 V 6F22R

Features

User adjustable features:

- Auto shut off 1-6 mins.
- Hold feature
- Backlight on/off.
- Audible on/off.
- Dry, At Risk and Wet Indicator on/off.



www.ge-mcs.com

920-085D

GE's Protimeter Surveymaster one of the world's first and best selling dual function moisture meters.

The new Protimeter Surveymaster™ moisture meter represents the latest design and technology in the moisture meter arena. GE pioneered the dual function instrument to combine pin and non-invasive technology into one meter. This release will be the 3rd generation of the globally successful Protimeter Surveymaster™. In the early 90's we recognized that both measurement techniques in one easy-to-use meter allows professional to make more reliable measurements as well as quicker decisions with regard to moisture problems in buildings.

How to get the best out of the Surveymaster – Search and Measure.

Search (Non Invasive)

When used in Search mode (REL), the Surveymaster™ is a moisture detector. Search mode readings, a relative measurement, assess the moisture condition up to 3/4" (20mm) beneath the surface of materials. (scale, 70-999) This mode of operation is ideal for making rapid surveys of solid walls and floors and to pinpoint areas of concern that may justify a more extensive investigation.

The Search mode may also be used as an alternative to the Measure mode when it is impractical or undesirable to push electrode pins into surfaces. Consider, for example, taking moisture readings behind ceramic tiles in bathroom cubicles or in walls covered by quality wallpapers where pinholes would not be acceptable. Surface moisture (such as condensation on an otherwise dry surface) has little effect on GE Protimeter Search mode readings.

Conductors (other than water) within the material may cause high Search mode readings. For example, metal beading or wires can mislead diagnosis if not accounted for. For consistent & accurate results, the user should be sure that the flat surface on the back of the meter is in full contact with the material to be tested. It is recommended that users place the meter onto different areas to take measurements and do not slide the meter across surfaces to prevent damage.

Color scale – Green -70-160~, Yellow 160-199~ Red 200-999~

It is recommended to use non-invasive Search mode should as a guide to assess the potential of excessive moisture and use the pin Measure mode to confirm the moisture content. Protimeter's non-invasive technology is not adversely affected by surface moisture. See below on how to use this feature to determine if moisture is present on the surface of a material.

Measure (Pin Mode)

Pin type Measure mode readings are more precise than non-invasive search mode readings and these measurements should be the preferred method for any record keeping. These readings are specific to the area of contact between the electrode tips and generally represent the highest moisture found across the depth of the pin.

The pins on the meter are designed to make firm contact with the surface, pushing them deep into the surface is not always necessary and will result in holes that will be in need of repair.



Plug in accessories

The Surveymaster™ standard kit is supplied with a Heavy Duty Moisture Probe and lead for taking measurements at points that cannot be reached easily with the integral electrode pins. To use, connect the Moisture Probe jack plug to the socket on the right side of the instrument and push the Probe pins into the surface at the chosen point of measurement.

The Protimeter Exterior Insulation Finishing System (EIFS) Probe or a pair of Deep Wall Probes can also be used for taking readings at depth in walls.

To use, drill two clearance holes of diameter 6mm (1/4") roughly 40mm (1 1/2") apart to the required depth. Connect the Deep Wall Probes to the instrument and push the two probe rods into the clearance holes. Hold them firmly against the base of the holes and take the reading.

The Protimeter Hammer Electrode can also be used to make measurements deep into hard and softwoods. The hammer needles are insulated and so it is possible to stop at different depths and take readings up to 1.5"

Note: Deep Wall Probes may be used to investigate high readings that may have been obtained in Search mode. Deep Wall Probes may be used to determine the moisture profile through a structure by increasing the depth of the clearance holes incrementally.

How to interperate the readings in Pin Mode

Actual percent moisture content (%mc) values are measured in wood products. Wood Moisture Equivalent (WME) values are measured in materials other than wood. The WME measurement is the theoretical %mc value that would be attained by a piece of wood in moisture equilibrium with the material under investigation at the point of measurement. As the critical %mc levels of wood are known, WME values may be used directly to establish if the material is in a dry, borderline or damp condition as indicated by the color coded LED scale. See datasheet 52 for more information on WME.

Color scale – Green -7.9-15.9~, Yellow 16.0-19.9~ Red 20.0-99.9~

Using both Search and measure to determine if there is surface moisture (often condensation)

Often moisture on the surface of a building material, such as condensation, is easily remediated with simple ventilation. As pin measurement is taken very close to the surface you can use both functions of the meter to make some initial diagnosis. GE's Protimeter superior non-invasive technology gives you an average moisture measurement across its depth of moisture which allows you to assess whether the material does in fact have excessive moisture present or is surface moisture is present.

- Non-invasive readings slightly elevated above normal and pin reading high = surface moisture (potential condensation)
- Non-invasive readings and pin reading high = wall wet across its depth.

Note: Conformation of condensation (surface Dewpoint) can be achieved using a hygrometer and surface temperate sensor. The Protimeter MMS2 will do this calculation for you at the press of a button!

Reference mode (pat pending)

In both Pin and Search mode, GE's patent pending Reference Mode can be used. Reference mode can be useful when trying to establish what materials are above or below a point of reference or dry standard.

Measure the dry standard or baseline material until the meter's reading is stable then press for 2 seconds. This will store the reading until the mode changes of the meter turns off. Now all reading taken after will be displayed as normal, but below you will see a second reading that shows you if the material is measured above or below the original reading.



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