

Tramex Concrete Moisture Encounter CMEX5

Concrete Moisture Meter for Measuring Moisture Content And Relative Humidity
In Concrete Floors And Slabs, Wood & Building Materials



The Tramex Concrete Moisture Encounter X5, the updated CMEX2 concrete moisture meter, is a non-destructive digital concrete moisture meter for measuring quantitative moisture content in concrete floors and slabs. The Concrete Moisture Encounter X5, CMEX5, also has a Relative Humidity Meter function as it features a built-in Hygrometer that measures Ambient Relative Humidity, Temperature, Dew Point, and Humidity Ratio (or Mixing Ratio) of the environment. A bayonet plug-in port allows for optional wood pin probes or Tramex Hygro-i2 Relative Humidity Sensors for measuring relative humidity in concrete as per ASTM F2170.

The CMEX5 moisture meter for concrete determines instant and precise quantitative measurement of moisture content using Gravimetric testing as a baseline. This concrete moisture meter tests the concrete to a depth of approximately 20mm into the slab. The CMEX5 also provides quantitative Carbide Method equivalent readings for Concrete and Anhydrite/Gypsum substrates and screeds. In addition, the CMEX5 has two reference scales for comparative readings making this moisture meter suitable to perform a concrete moisture test as per ASTM F2659.

This top quality concrete moisture meter with its Hygrometer and optional external pin and RH probe functionalities, is the ultimate tool for testing of concrete and flooring for professionals in the concrete coatings, wood flooring or water damage restoration industry to help prevent moisture problems on concrete floors.

Features

- 4 modes of measurement: Non-destructive moisture measurement, ambient hygrometer, and optional external in-situ hygrometer and wood pin probe.
- 5 Non-Destructive test (NDT) Scales: Concrete %MC, CM Concrete (Carbide Method equivalent for concrete), CM Anhydrite/Gypsum (Carbide Method equivalent), Gypsum Reference 0-12 and a Reference scale.
- Instant and precise readings to a depth of approximately 20mm into the concrete slab, for reproducible and reliable results.
- The built-in Hygrometer probe provides Ambient Relative Humidity (%RH) readings, temperature, dew-point temperature and Humidity Ratio.
- Pin-probe mode for 5% to 30% Moisture Content measurement in Wood; 7 -100 comparative (WME), using Pin-type probe attachments. (optional)
- Attaches to a reusable relative humidity Hygro-i2 ® probe for in situ and hood testing of concrete per BS 8201, 8203, 5325 and ASTM F2170 (optional).
- Airspace conditions of Relative Humidity, Temperature, Dew-point and Humidity Ratio (using optional RH probes)
- Moisture readings and scale are displayed on a large, clear easy-to-read clear digital display: 58mm x 35mm.
- Front lit display allows the CMEX5 concrete moisture meter's display to be easily read in poor light conditions.
- Bluetooth connection to accompanying IOS & Android App allowing for continual development and integration of apps and reporting.
- Hold Function which enables the user to "freeze" the reading, useful when taking readings where the meter face may not be visible.
- Spring-loaded contact pins compensate for uneven concrete and boost signal penetration.
- Rugged ergonomically designed enclosure.

Technical Specifications

CMEX5	Tramex CMEX5 Concrete Moisture Encounter
Size:	180mm x 85mm x 40mm
Weight:	357g
Construction:	ABS Body
Power:	2 x AALR6 Alkaline (included)
Display:	Digital
Depth of penetration in concrete:	Approx. 20mm

Measuring range

Moisture content for Concrete:	0 → 6.9 %
Comparative for Gypsum floor screed:	0 → 12
CM Equiv Anhydrite/Concrete:	0 → 2.7 / 0 → 4.3
Reference scale:	0 → 100
Relative Humidity:	0 → 99%
(with optional Hygro-i2 ® probe):	0% → 99%RH ± 2% @ 25°C
Moisture content for wood (with optional wood pin probes):	5 → 30 %

Packing List

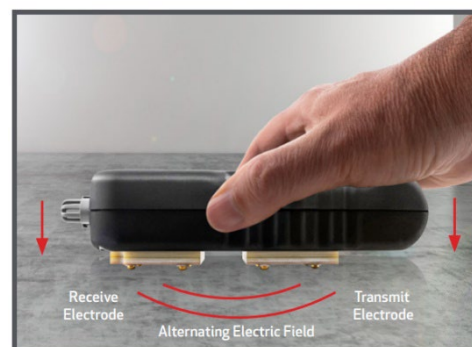
Tramex CMEX5 Concrete Moisture Encounter
Pouch
Batteries
Instruction Manual



How it works:

In non-destructive testing (NDT) mode, the instrument operates on the principle that the electrical impedance of a material varies with its moisture content.

The instrument is pressed onto the material surface with the pins fully compressed to measure/ detect the moisture content. The electrical impedance is measured by creating a low frequency alternating electric field between the electrodes, to a depth of approximately 20mm, as illustrated below.



This field penetrates the material under test. The very small alternating current flowing through the field is inversely proportional to the impedance of the material. The instrument detects this current, determines its amplitude and thus derives the moisture value.

In Hygrometer mode, the Concrete Moisture Encounter X5 has a built-in hygrometer that measures the ambient relative humidity (RH), temperature (T), dew point (DP) and humidity ratio (HR G/lb) of the environment. These measurements are permanently shown at the bottom of the screen regardless of the mode or scale being used.



In Equilibrium/Ambient Relative Humidity mode, the Concrete Moisture Encounter X5 determines the capacitance of the RH probe sensor which varies with the relative humidity of the testing environment.

The Concrete Moisture Encounter X5 displays this capacitance as a percentage relative humidity. It also measures temperature and displays dew point and humidity ratio.



In PIN Meter mode the Concrete Moisture Encounter X5 is a resistance-type pin-meter that works on the principle of DC resistance. When the electrode pins are pressed or driven into the wood, the electrical resistance between the electrodes is measured. If the wood is dry, the resistance is high. If moisture is present in the wood the electrical resistance between the pins changes. The higher the moisture content the greater the reduction in resistance.



The level of resistance is accurately measured by the instrument, which translates it into a moisture value. This is a percentage of dry weight moisture content for wood. International wood standards such as pre-programmed wood species can be selected. PIN meter mode can also be used for Drywall and WME (Wood Moisture Equivalent) readings for many other materials. PIN meter mode should not be used for concrete or other cementitious materials.

Video



YouTube Video - Concrete Moisture Meter - CMEX5 - Tramex Meters (Click on the image to the left to view the video)

The Tramex Concrete Moisture Meter - CMEX5, is our flagship non-destructive digital multi moisture meter for concrete floors and slabs, providing instant and precise quantitative measurement of moisture content using Gravimetric testing as a baseline. This moisture meter transforms into the ideal all-in-one instrument for the flooring professional.