



METER

www.labcell.com

MAKING HIGH-QUALITY ENVIRONMENTAL DATA ACCESSIBLE

Build your solution with our product system



ZENTRA CLOUD

Increased data is more of a burden than benefit if it drains your limited resources to obtain, store, and process it. ZENTRA Cloud works with the ZL6 data logger to start your analysis by automating processes and common calculations. It aggregates all your data in one easy to access place and automatically graphs it in near-real time.

Scan the QR code or visit meter.ly/zentra to learn more →



DATA LOGGERS

The ZL6 data loggers simplify environmental data collection with near-real-time access and fewer site visits. Connect up to six sensors to a single low-power logger. Integrated solar panels and rechargeable batteries power remote data transmission to ZENTRA Cloud. The ZL6 Pro offers enhanced convenience with more frequent uploads, a three-year ZENTRA Cloud subscription, and automatic backups.



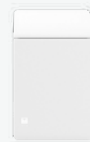
ZL6
Advanced
Cloud Data Logger

labcell/zl6



ZL6 Pro
Effortless
Data Logger

labcell/zl6-pro



ZL6 Basic
Simple Data Logger

labcell/zl6-basic



ZSC
Sensor Interface

labcell/zsc

FEEDING THE WORLD REQUIRES SMARTER IRRIGATION

As water resource management grows more complex, the cost of water increases, and humanity's food consumption soars to an all-time high, optimizing crop yields through efficient irrigation is becoming crucial.



HARNESSING TECHNOLOGY FOR PRECISION IRRIGATION

Researchers from Brigham Young University and Missouri A&T are working with a commercial grower to maximize potato yields using advanced satellite, drone, and IoT technology like ZENTRA Cloud. Their use of variable rate irrigation ensures efficient water distribution across different soil types and yield zones, benefiting both agricultural production and community water management.

REAL-TIME DATA FOR SMARTER DECISIONS

With ZL6 loggers and ZENTRA Cloud, scientists and growers can monitor soil moisture and water potential in near real-time, detecting issues like broken sprinklers before they escalate. By integrating soil mapping, satellite imagery, and remote-sensing drones, they refine irrigation strategies to prevent water stress and overwatering. These innovations help growers achieve higher yields while conserving valuable water resources.

[READ THE FULL STORY HERE →](#)



SOLYX 14

The toughest, longest-lasting soil moisture sensor, built with new CDX technology for accurate measurements in a wide range of soil salinity and temperatures.

- Measures dielectric permittivity, soil moisture, temp, bulk EC, and pore water EC with Complex Dielectric through intersections (CDX)
- Achieve accurate water content measurements—even in high salinity soils
- Built tough for long-term deployment in harsh conditions

Visit www.labcell.com/environmental/soil-moisture-sensors/solyx-14-soil-moisture,-temperature-ec-using-cdx-technology to learn more →



ATMOS 51

The ATMOS 51 VBR Actual ET Sensor takes your data beyond reference evapotranspiration values, using a variance Bowen ratio (VBR) technique to simplify water and energy balance measurements in the field. Now, you can use actual ET data to accurately measure your plants' water uptake throughout the day.

- Directly measures actual evapotranspiration (ET) using VBR technology for precise, real-time crop water balance insights
- Integrates effortlessly with ZENTRA Cloud and existing ATMOS systems for plug-and-play irrigation monitoring
- Improves irrigation decisions and growth predictions by combining accurate ET data with canopy and irradiance measurements

[labcell/atmos 51](#)



SOIL MOISTURE

Plant growth, microbial activity, nutrient availability and transport, soil erosion, soil compaction, soil respiration, water infiltration and drainage are all dependent on soil moisture. Accurately measure the amount of water and its availability with our water content and water potential sensors.



TEROS 10
Simple Soil Water
Content Sensor

[labcell/teros 10](https://labcell.com/teros-10)



TEROS 12
Soil Moisture Sensor
+ Temperature & EC

[labcell/teros 12](https://labcell.com/teros-12)



SOLYX 14
WC + EC with CDX
technology

[labcell/solyx 14](https://labcell.com/solyx-14)



TEROS 54
Soil Moisture Profile
Probe

[labcell/teros 54](https://labcell.com/teros-54)



TEROS 21
Soil Water Potential
Sensor

[labcell/teros 21](https://labcell.com/teros-21)



TEROS 22
Soil Water Potential
Sensor

meter.ly/teros22



TEROS 31
Lab Tensiometer

[labcell/teros 31](https://labcell.com/teros-31)



TEROS 32
Advanced Field
Tensiometer

[labcell/teros 32](https://labcell.com/teros-32)



TEROS Borehole Installation Tool

Accurate soil moisture measurement requires precise installation. If installation isn't done right, no matter how good your sensor is, you run the risk of getting bad data.

The new design allows for the installation of most TEROs sensors, including the TEROs 10, 11, and 12 soil moisture sensors and the TEROs 21 matric potential sensor. The TEROs Borehole Installation Tool includes adaptors designed to hold each sensor securely as it is pushed into the soil and released seamlessly once placed. Also included is an adaptor designed to create the pilot hole required to insert the TEROs 21 at the optimal angle. Use it for incredibly fast, consistent installation into undisturbed soil at almost any depth you choose down to 5 meters.

Visit www.labcell.com/environmental/soil-moisture-sensors/teros-borehole-installation-tool to learn more →



MICROCLIMATE

Measuring the microclimate with a weather station provides comprehensive data on local atmospheric conditions that directly affect soil processes. Weather stations collect detailed information on temperature, humidity, rainfall, wind speed, and solar radiation, all of which influence soil moisture levels, evaporation rates, and soil temperature.



ATMOS 41 Gen 2
All-In-One Weather
Station

[labcell/atmos41](#)



ATMOS 41W
Wireless All-In-One
Weather Station

[labcell/atmos41w](#)



THERMAL PROPERTIES

A soil or other material's thermal resistivity and other thermal properties can impact the longevity of in-ground structures, and understanding thermal properties can shed additional light on a material's porosity, moisture content, and saturation. Measure these critical values with the ASTM D5334- and IEEE 442-compliant TEMPOS.



TEMPOS
Thermal Properties
Analyzer

[labcell/tempos](#)



VARIOS
Automated Thermal
Dryout Curves

[labcell/VARIOS](#)



FIELD SOIL HYDRAULIC PROPERTIES

Measure the movement and distribution of water in the soil to inform water management, predict soil behavior under a variety of moisture conditions, measure groundwater recharge, or optimize agricultural practices for efficient water usage. Our field instruments are designed to meet standards demanded by engineers and scientists worldwide. The SATURO complies with ASTM D8550 and sets the standard for simple, accurate, and time-efficient data collection.



SATURO
Field Saturated
Hydraulic Conductivity

[labcell/saturo](#)



Borehole SATURO
Field Saturated
Hydraulic Conductivity

[labcell/saturo-borehole](#)



TEROS 12
Soil Moisture Sensor
+ Temperature & EC

[labcell/teros12](#)



SOLYX 14
WC + EC with CDX
technology

[labcell/solyx14](#)



MINI DISK
Infiltrometer
Unsaturated Hydraulic
Conductivity

[labcell/minidisk](#)



TEROS 21
Soil Water Potential
Sensor

[labcell/teros21](#)



TEROS 32
Advanced Field
Tensiometer

[labcell/teros32](#)



LAB SOIL CHARACTERIZATION

LABROS is an innovative collection of soil science laboratory instruments, each designed to work individually or as part of a larger, automated system. Conduct automated particle size analysis and measure soil moisture release curves, saturated and unsaturated hydraulic conductivity, and thermal conductivity from a single sample. Soil water characteristic curves created with the HYPROP and WP4C comply with ASTM D6836, making these instruments a powerful addition to geotechnical studies.



PARIO
Automated Soil
Particle Size Analysis

[labcell/pario](#)



HYPROP 3
Soil Moisture Release
Curves

[labcell/hyprop](#)



WP4C
Soil Water Potential
Lab Instrument

[labcell/wp4c](#)



KSAT
Saturated Hydraulic
Conductivity in the
Lab

[labcell/ksat](#)



VARIOS
Automated Thermal
Dryout Curves

[labcell/VARIOS](#)



PLANT STRESS

Use cost-effective solutions from METER to directly measure indicators and causes of plant stress rather than relying on intuition or qualitative assessments of your crops and canopy.



ATMOS 41 Gen 2
All-In-One Weather
Station

[labcell/atmos41](https://labcell.com/atmos41)



SC-1 Leaf Porometer
Stomatal Conductance

[labcell/sc-1](https://labcell.com/sc-1)



IRT
Infrared Thermometer

meter.ly/irt



ATMOS 14
Temperature and
Humidity Sensor

[labcell/atmos14](https://labcell.com/atmos14)



TEROS 21
Soil Water Potential
Sensor

[labcell/teros21](https://labcell.com/teros21)



TEROS 22
Soil Water Potential
Sensor

[labcell/teros22](https://labcell.com/teros22)

CANOPY PRODUCTIVITY

Measure the photosynthetic activity of your plants using simple, labor-saving instruments, and better understand the health and lifecycle of your canopy.



ACCUPAR LP-80
Canopy Interception
& Leaf Area Index

[labcell/lp-80](#)



NDVI Sensor

[labcell/ndvi](#)



SC-1 Leaf Porometer
Stomatal Conductance

[labcell/sc-1](#)

DEEP DRAINAGE AND LEACHING

METER instruments are designed for collecting accurate hydrologic data without unnecessary complexity or overspending to get the coverage you need. Trusted by researchers worldwide, our solutions deliver research-grade accuracy in easy-to-use systems, so you can monitor infiltration, runoff, or water potential without all the headaches.



HYDROS 21
Conductivity,
Temperature, Depth
Sensor

[labcell/hydros21](#)



TEROS 12
Soil Moisture Sensor
+ Temperature & EC

[labcell/teros21](#)

FIELD INSTRUMENTS

Conduct environmental measurements in the field using research-grade sensors and tools that measure with the accuracy, longevity, and simplicity your work demands.

TELEMETRY

ZL6 data loggers

ZL6 pro data logger

ZL6 basic data logger

ZSC Sensor Interface

SOIL (FIELD)

TEROS 10 | Soil Water Content Sensor

TEROS 11 | Soil Moisture & Temperature Sensor

TEROS 12 | Soil Moisture Sensor + Temperature and EC

TEROS 54 | Soil Moisture Profile Probe

SOLYX 14 | Complex Dielectric through intersections (CDX) Sensor

TEROS 21 | Soil Water Potential Sensor

TEROS 22 | Soil Water Potential Sensor

TEROS 32 | Field Tensiometer

EC-5 | Soil Moisture Sensor

MAS-1 | Soil Moisture Sensor

SATURO | Field Saturated Hydraulic Conductivity

Borehole SATURO | Saturated Hydraulic Conductivity

Mini Disk Infiltrometer | Unsaturated Hydraulic Conductivity

SO-431| Oxygen sensor RT-1 | Soil Temperature

Sensor TEROS 06 | Soil Temperature Profile

Probe

PLANT

PHYTOS 31 | Leaf Wetness Sensor

ACCUPAR LP-80 | Canopy Interception & Leaf Area Index

SC-1 Leaf Porometer | Stomatal Conductance

IRT | Infrared Thermometer

PAR Sensor

D1 Dendrometer

NDVI Sensor

ATMOSPHERE

ATMOS 41 | All-In-One Weather Station

ATMOS 41W | Wireless All-In-One Weather Station

ATMOS 22 | Ultrasonic Anemometer

ATMOS 14 | Temperature and Humidity Sensor

Net Radiation sensor

Ultraviolet (UV sensor)

ECRN-100 Rain Gauge

ECRN-50 Rain Gauge

ECT | Air Temperature Sensor

PYR Sensor

WATER

HYDROS 21 | Conductivity, Temperature, Depth Sensor

HYDROS 11 | Electrical Conductivity and Temperature Sensor

PS-1 | Irrigation Pressure Switch

PS-2 | Irrigation Pressure Transducer

LAB INSTRUMENTS

Precise environmental laboratory measurement instruments that make it possible to fully characterize soil with a single sample. Featuring automated measurements once sample is prepped.

SOIL (LAB)

[HYPROP 2 | Soil Moisture Release Curves](#)

[WP4C | Soil Water Potential Lab Instrument](#)

[KSAT | Saturated Hydraulic Conductivity in the Lab](#)

[PARIO | Automated Soil Particle Size Analysis](#)

[TEROS 31 | Lab Tensiometer](#)

THERMAL PROPERTIES

[TEMPOS | Thermal Properties Analyzer](#)

[VARIOS | Automated Thermal Dryout Curves](#)

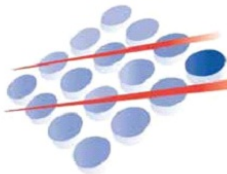
PRODUCTS

METER instruments are trusted everywhere for reliable, research-grade measurements within the soil-plant-atmosphere continuum. For decades, our in-house research and development teams have designed precision instruments dedicated to simple, accurate data collection.



METER

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