

METER ENVIRONMENT

SAMPLING AND MONITORING



ABOUT HOSKIN

For over seventy years, Hoskin Scientific has been a supplier of testing and monitoring instrumentation to the Canadian market. With offices in Vancouver, Edmonton, Oakville and Montréal our customers are able to receive local sales and technical support in our three major departments.

Our Environmental Department provides solutions for monitoring and sampling biological and chemical parameters in the environment. Our team of environmental sales representatives and diverse product range guarantee that you will find the right products for your application. Specific areas include: water quality, water quantity, soil moisture, plant science, weather stations, indoor air quality, aquatic sampling, and oceanography.

Our Materials Testing Department offers testing equipment for soil, asphalt, petroleum, concrete and cement. Our qualified sales associates focus on providing a sophisticated range of testing equipment complying with the various test methods, ensuring that accurate and consistent test results are always obtained.

Our Instrumentation Department focuses on a wide range of products including optical camera systems, transducers and transmitters, data acquisitions and loggers, signal conditioners and indicators, automation sensors and measurement systems. We have technical sales associates that are trained in various areas and willing to help you with your instrumentation requirements.

RENTALS

We offer high quality, proven equipment that will provide the user with valuable data as well as numerous ways of retrieving, filtering and viewing that data. We carry a wide range of instrumentation, including: water quality, portable gas monitors, soil sampling instruments and more.

Rental Equipment:

- Single and multi-parameter instruments that can be setup for spot checks or extended deployment/data logging
- Water sampling instruments
- Water velocity and stream profiling instruments
- Soil sampling instruments
- Soil vapour sampling instruments
- Portable gas monitoring instruments

Customer satisfaction is our goal and we make an effort to ensure that all our customers are satisfied with their rental. All rental instruments are cleaned and calibrated before being sent to the user (please note that we also require equipment to be returned clean). If a rental instrument requires recalibration, please return the instrument to us and we will recalibrate at no charge. Any instrument not functioning properly can be exchanged at no cost.

Hoskin Scientific offers technical support over the phone and can also provide hands on demonstrations.

We are constantly expanding and looking for new equipment to add to the rental inventory and welcome all suggestions.

Check our website www.hoskin.ca for current offerings.

Daily, weekly and monthly rental rates available – please call for a quote.

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The ATMOS 41 linked to our ZL6 Data Logger for real-time data with Zentra Cloud

Research is Changing the World

THE EFFECT OF CLIMATE CHANGE ON TREE LINES

Dr. Richard Gill, ecologist at BYU, and his team use METER all-in-one weather stations, soil moisture, water potential, and NDVI sensors to measure environmental parameters in tree islands to learn what makes these areas advantageous for survival. ZENTRA Cloud gives the team the ability to recognize and troubleshoot data or technical problems in near real-time without having to make regular treks to high elevations in remote areas.







REDEFINING HOW WATER RETENTION IS MEASURED

Dr. Marco Bittelli, an associate professor at the University of Bologna, knows that data is only as good as its accuracy. Pressure plates have been in use to measure water retention since the 40's, but as technology advances, decades-long standards became the least precise option. Dr. Bittelli chose instead to utilize LABROS instruments for water retention measurements in the lab and soil water content and water potential measurements in situ.







ACHIEVING AMAZING TURF WITH LESS WORK

BYU turf scientist, Dr. Bryan Hopkins, envisioned a failproof system of soil moisture sensors to ensure turf never died and to learn to grow healthier turf. His team installed METER soil water content and water potential sensors. Combining measurements showed when grass was reaching stress conditions and how quickly the turf hit permanent wilting point. Ancillary measurements of temperature and electrical conductivity allowed for modeling surface and root zone temperature and fertilizer concentration dynamics.



NEW RELEASE

ATMOS 41W

THE TRULY WIRELESS ALL-IN-ONE WEATHER STATION

Most all-in-one remote weather stations claim to be "wireless" but require a cable to telemetry in a separate bulky enclosure.

Add a large solar panel and a giant battery, and their "all-in-one" weather stations don't feel so "wireless." At METER, we think getting your data should be uncomplicated and straightforward — with no strings attached.

That's why we made the ATMOS 41W.



NEW RELEASE

MEET THE WORLD'S SIMPLEST WIRELESS WEATHER STATION

The ATMOS 41W all-in-one remote weather station is one of the world's few truly wireless weather stations and the most affordable research-grade station in its class. All the telemetry is enclosed within an integrated cell module, making it robust, reliable, and simple to use. But that's not even the best part. There is nothing on the market that is easier to install. Put it in a backpack, take it to your site, secure it to a post pointing north, and you're done. It's that easy to start broadcasting real-time data directly to the cloud.

NOT PLUG AND PLAY. JUST PLAY.

We engineered the ATMOS 41W to work right out of the box without the hassle of managing a cell provider or connection, and there's no programming involved. It's a true wireless IoT instrument, sending data directly to the cloud. What if there's a data transmission interruption? No problem. The integrated logger

stores your data, so you've got 24-hour backup. Your continuous data stream is transmitted to ZENTRA Cloud every 15 minutes for easy access to high-quality measurements. Once in the cloud, you can see, share, and manage your data from anywhere worldwide on any device.

LOW POWER, LOW COST, LOW MAINTENANCE

The ATMOS 41W remote weather station is specifically designed for remote areas with harsh weather conditions. It is tough, durable, requires very little maintenance, and is entirely solar-powered. No configurations are necessary, and an innovative tilt sensor signals out-of-level condition, unnecessary trips to your site. It's perfect for microenvironment monitoring, spatiallydistributed environmental measurements, crop weather monitoring, fire danger applications, weather networks, and more.





Scan the QR code or visit go.meter.group/41W →



COMING SOON

TEROS

SOIL MOISTURE PROFILE PROBE

You need accurate soil moisture measurements from easily installed sensors without extensive excavation. Most profile probes require you to choose between the ease of installation and removal, sensor accuracy, measurement volume, and durability. At METER, we weren't willing to create a soil moisture profile probe unless it could meet all of these requirements in one probe.

Introducing the TEROS 54.



COMING SOON

THERE'S THE HARD WAY, AND THEN THERE'S THE RIGHT WAY

We designed the TEROS 54 profile probe to make every step of your measurement process easier-without sacrificing accuracy or durability. Soil water content and temperature sensors are positioned at 15, 30, 45, and 60 cm (6, 12, 18, and 24 in) depths, providing root zone measurements without requiring soil pits or cumbersome sensor retrieval at lower depths. You get all of the conveniences of profile measurements combined with the researchgrade accuracy you've come to expect from METER.

GET IN. GET OUT. GET DATA.

Avoid the cost, hassle, and time of large drilling equipment and pilot tubes. TEROS 54 installation only requires a simple 2 cm (0.8 in) borehole for the robust quad-fin profile sensor to then be hammered into the soil. This creates better sensor/soil contact for more accurate readings. Removing the TEROS 54 is made

simple with the dedicated extraction tool, making this sensor ideal for annual crops that require sensors to be installed and removed multiple times throughout the year.

DO MORE WITH LESS

Using multiple individual sensors in a large sensor network can create a cord management nightmare, requiring a plethora of wires and using up all the ports on your data logger. The TEROS 54 alleviates this problem, connecting all the sensors to the ZL6 data logger via one wire while maintaining your ability to monitor individual sensors in ZENTRA Cloud. Best of all, the TEROS 54 is plug-and-play-no programming or wiring necessary.





Get notified when the TEROS 54 is released. Sign up at go.meter.group/TEROS-54 →



ZENTRA° CLOUD

Increased data is more of a burden than help 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 place and automatically graphs it in near-real time.



Scan the QR code or go.meter.group/ZENTRA \rightarrow

TIE YOUR WHOLE SYSTEM TOGETHER WITH THE ZL6 AND ZENTRA CLOUD



Choose from our system of research-grade sensors, software, and lab instrumentation, and enter the world of research made simple.

- WEATHER MONITORING | ATMOS 41, ATMOS 22, ATMOS 14

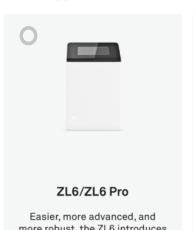
 SOIL SCIENCE | TEROS 32, TEROS 12, TEROS 21

 HYDROLOGY | HYPROP, SATURO, KSAT

 LABORATORY INSTRUMENTS | HYPROP 2, PARIO, KSAT, WP
- LABORATORY INSTRUMENTS | HYPROP 2, PARIO, KSAT, WP4C, VARIOS
- THERMAL PROPERTIES | TEMPOS, VARIOS
- PLANT SCIENCE | SC-1, ACCUPAR LP-80, NDVI/PRI

Products

Data loggers / telemetry



more robust, the ZL6 introduces cloud-based data delivery, Bluetooth® configuration, firmware-over-the-air updates, and integrated metadata.

go.meter.group/zl6



ZL6 Basic

If you need an ultra-robust, entry-level data logger that is easy to set up and practically maintenance free, you'll love the ZL6 Basic.

go.meter.group/basic



ZSC BLUETOOTH

During sensor installations, the ZSC lets you monitor a sensor reading as it is installed. Get real-time, wireless readings via Bluetooth on your smartphone with the push of a single button.

go.meter.group/ZSC

Weather



weather station for atmospheric measurements that doesn't limit you with other sensors.

ATMOS 41W Wireless Remote Weather Station

At METER, we think getting your data shouldn't be complicated or costly. And we think wireless should actually be wireless. That's why we made the ATMOS 41W.

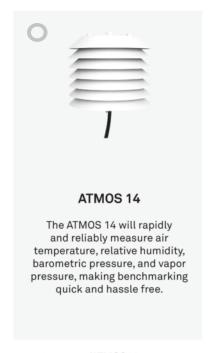
go.meter.group/41W



Affordability. You get all three with the ATMOS 22 ultrasonic wind anemometer.

go.meter.group/ATMOS-41

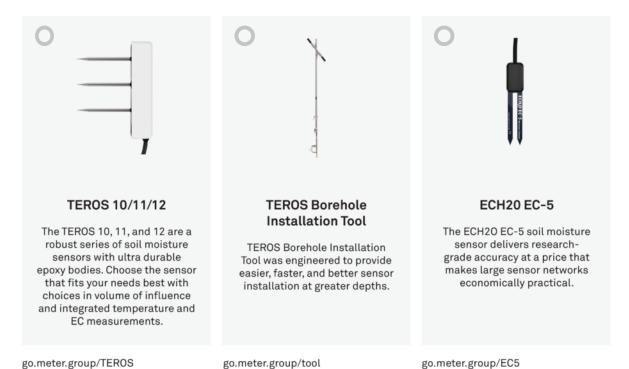
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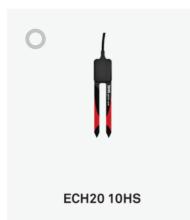


EASY PLUG-AND-PLAY SENSORS

go.meter.group/ATMOS14

Soil water content / soil temperature





The 10HS soil moisture sensor is better at characterizing spatial variability as it averages soil moisture over a greater volume.

go.meter.group/10hs



MAS-1

The MAS-1 is a current-based soil moisture sensor with ultralong cable lengths.



TEROS 06

The ultra-robust TEROS 06 is a research-grade temperature profile probe that delivers accurate soil temperature data for better models and predictions.

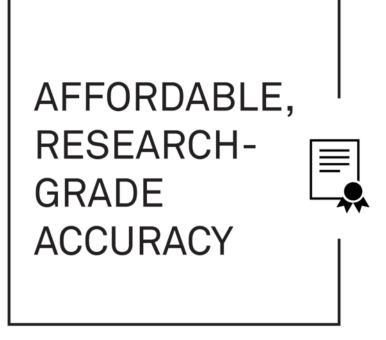
go.meter.group/mas1

go.meter.group/TEROS06

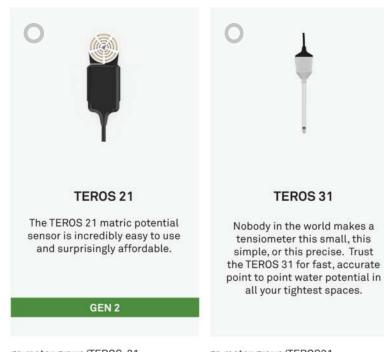


soil or other materials.

go.meter.group/RT1



Soil water potential / soil suction





go.meter.group/TEROS-21

go.meter.group/SATURO

go.meter.group/TEROS31

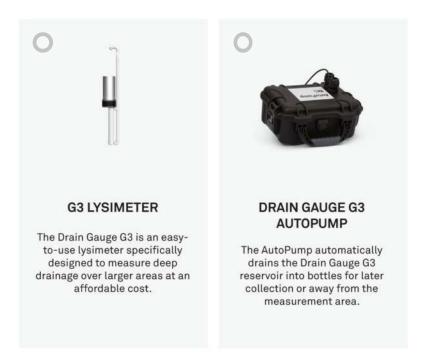
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go.meter.group/HYDROS

Hydrology



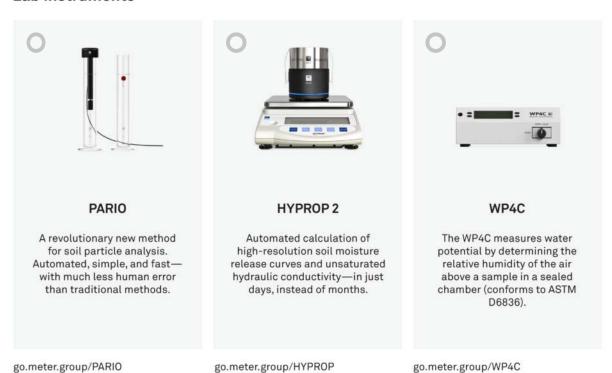
go.meter.group/MINIDISK



go.meter.group/G3

go.meter.group/G3pump

Lab instruments





KSAT

The KSAT is the only easy-touse automated setup for taking saturated hydraulic conductivity measurements in the lab. Best of all, it's completely integrated.

go.meter.group/KSAT



VAPOR SORPTION ANALYZER

For understanding complex soil issues like clay behavior, specific surface area, and more the VAPOR SORPTION ANALYZER is your simplest, most accurate option.

go.meter.group/VSA



VARIOS

VARIOS automatically generates complete, high-resolution dry down curves with less effort and less cost, so you can focus on what you love.

go.meter.group/VARIOS

Thermal properties





TEMPOS

More accurate than any thermal properties analyzer in its class, with an incredible one-minute read time.

0



VARIOS

VARIOS automatically generates complete, high-resolution dry down curves with less effort and less cost, so you can focus on what you love.

go.meter.group/TEMPOS

go.meter.group/VARIOS

Plant and canopy



The PHYTOS 31 leaf wetness sensor is not only a more accurate instrument, it's also the easiest to set up, making it a simple and straightforward solution.

go.meter.group/PHYTOS31



ACCUPAR LP-80

The LP-80 is a highly accurate way to determine canopy growth and canopy light interception (PAR and LAI), along with calculating fractional interception and crop coefficient.

go.meter.group/LP80



SC-1 LEAF POROMETER

Quick measurements. Easy-touse engineering. Low cost in the short and the long run. The SC-1's breakthrough steadystate technology makes it the best for measuring stomatal conductance.

go.meter.group/SC1



NDVI / PRI SENSOR

Apogee NDVI and PRI sensors combine an ultra-rugged form with sophisticated cloud data delivery for an unbeatable priceto-performance ratio.

go.meter.group/NDVI



PAR SENSOR

The SQ-521 PAR Sensor provides accurate and costeffective measurement of photosynthetically active radiation (PAR) from all light sources used to grow plants.

The IRT infrared thermometer monitors surface temperature by measuring the thermal

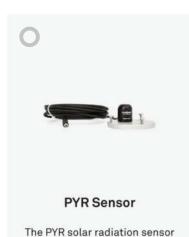
go.meter.group/IRT

IRT

energy radiated from any

surface.

go.meter.group/PAR



is designed for continuous outdoor use and is completely waterproof and submersible.



NET RADIATION SENSOR

If you need research-grade net radiation accuracy at an affordable price, then you'll love the easy-to-use Apogee Net Radiometer.



ULTRAVIOLET (UV) SENSOR

The low-cost Apogee Ultraviolet (UV) Sensor is a scientific-grade sensor that provides the accuracy you need for less.

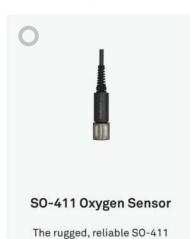
Access remote data in real-time, wherever you are.

go.meter.group/PYR

go.meter.group/radiation

go.meter.group/UV

Supporting sensors



Oxygen Sensor is perfect for

the lab or field. And the best

part? Easy remote data access through ZENTRA Cloud.

go.meter.group/oxygen



ECRN-100 Rain Gauge

High-resolution rain gauge for measuring precipitation and for use in scientific research.



go.meter.group/ECRN100

go.meter.group/ECRN50





the electrical conductivity of

water in a pipe or tank.



go.meter.group/ECT

go.meter.group/ES2

go.meter.group/PS1



FM-25 Flow Meter

The FM-25 combines the accuracy of positive displacement meters with the reliability and economy of nutating disc technology.



D1 DENDROMETER

The D1 Dendrometer is a simple tool to manually measure changes in the circumference of tree stems over time.



VS-Pro

The VS-pro series of vacuum systems are capable of applying a constant or tensioncontrolled vacuum for long-term monitoring projects. Keyboard display allows for status checks and configuration without hooking it up to your PC.

go.meter.group/FM25

go.meter.group/D1

go.meter.group/VSPRO



Vacuporter Portable Electric Vacuum

This portable vacuum has a rugged case and uses a powerful pump and rechargeable battery, which make it easy to collect pore water samples at remote locations.

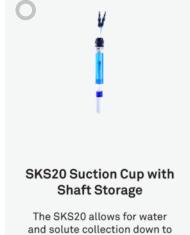
go.meter.group/vacuporter



SPE20 Suction Cup with Shaft Storage

The SPE20 allows for water and solute collection down to depths of 8 meters that could not normally be collected from other pore water samplers.

go.meter.group/SPE20



and solute collection down to depths of 8 meters that could not normally be collected from other pore water samplers.

go.meter.group/SKS20

INTERESTED IN LEARNING MORE ABOUT OUR PRODUCTS?

Visit our website at metergroup.com to learn more at go.meter.group/products \rightarrow





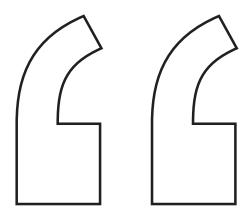
To date, TAHMO has installed over 500 weather stations in Cameroon, Chad, Democratic Republic of Congo, Ghana, Kenya, Mali, Nigeria, Senegal, South Africa, and Uganda.

Together We Impact the World

Environmental scientists around the world are stretching the bounds of innovation on a daily basis and we are proud to know that METER instrumentation is enabling and empowering them to be forces for discovery and change.

- Predicting the risk of landslides to save lives, property, and infrastructure.
- Understanding the impact of climate change on ecology as a whole.
- Determining forest fire risk and determing the impacts of previous fires to soil and flood risks.
- · Discovering ways to quanitfy the impact of land management choices on soil health.
- Reimagining geotechnology by adding sensors under roadbeds, bridges, building, levees to protect infrastructure from erosion and water damage.
- Monitoring weather locally in underserved communities across the world to harness the predictive power and the advantages of a meteorological record database.

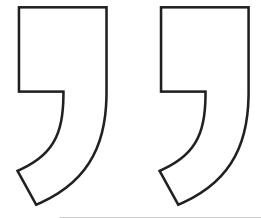
These endeavors impact hundreds of thousands of people worldwide every day. The food that we eat, the air that we breathe, the roads that we drive upon — that is the impact of environmental scientists empowered by METER instrumentation.



When we were deciding on equipment we asked ourselves: What kind of technology should we use? It had to provide high data integrity. It had to be easy to deploy and maintain. And it had to be cost effective. There's not a lot of people in that sector.

METER systems are low profile, they're affordable, and the reliability is there.

- Kevin Hyde, Montana Mesonet Manager



Hoskin Scientific Limited has been supplying testing and monitoring instruments since 1946. Although our range is broad, we focus on three major markets including:

Geotechnical & Materials Testing Environmental Monitoring Test & Measurement Instrumentation



Hoskin Scientific operates out of four offices within Canada:

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hoskin.ca

Supplying Testing & Monitoring Instruments Since 1946