Measuring soil moisture
with Eijkelkamp Smart Sensoring
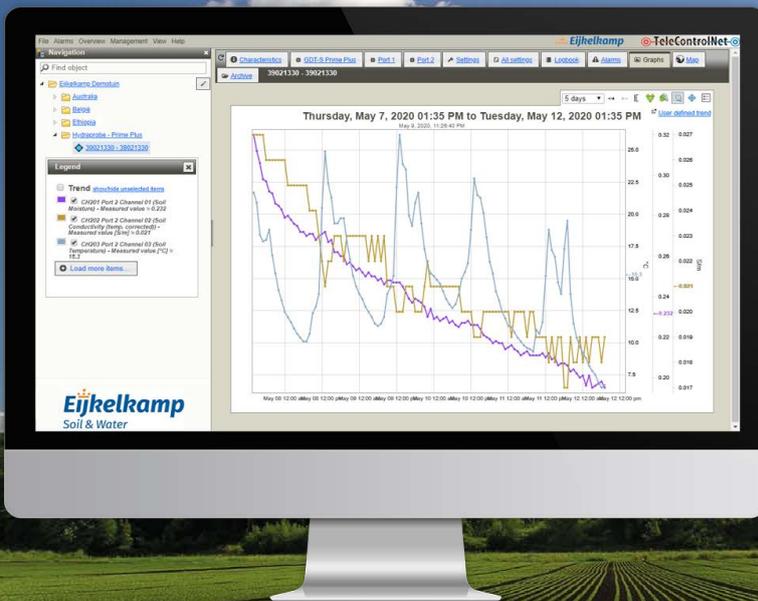
HydraProbes

Measuring the big three in soil science

Moisture

Salinity (bulk EC)

Temperature

- Are you looking for a rugged soil moisture and salinity sensor for long term monitoring?
  - Continuous accuracy without calibration.
  - Accurate across different locations, soil types, moisture range and seasons
  - Up to 10 years warranty and fully potted components
  - Compatible with any SDI-12 capable data logger

- Do you want to measure
  - Soil moisture and temperature only? Choose HydraProbe Standard (art. no.: 142801)
  - Soil moisture, salinity and temperature? Go for HydraProbe Pro (art. no.: 142811)

HydraProbe Pro

How do you want to read out the data?

1. Handheld read-out unit for HydraProbes

The read-out unit SDI-12 gives immediate readings of current measurement conditions from HydraProbe soil moisture sensors. It also allows testing of individual sensors to troubleshoot when the sensors are part of a larger system. It features a large display window in a robust weather resistant casing.
The handheld read-out unit reads data from SDI-12 soil moisture sensors (HydraProbes) and displays the volumetric moisture content as a percentage.

Why should you buy?

- Battery operated
- Push button command
- Instant display
- Compact
- Self-calibrated
- Reads SDI-12 soil moisture sensing devices like the HydraProbe
- Requires a 9V battery

Handheld read-out unit

Ordering

142830   Read-out unit SDI-12 for reading SDI-12 soil moisture sensors, 9 V battery powered, direct display.

Technical specifications

Item	Specification
Output	8-digit alphanumeric character LCD display
Operating temperature	0°C to +65°C (32°F to 150°F)
Storage temperature	-20°C to 70°C (-4°F to 160°F)
Power	Battery-operated (9 V alkaline)
Dimensions	12.1 cm x 7 cm x 2.5 cm (4.75" x 2.75" x 1")
Weight	181 g (0.4 lb)

2. Retrieve data wirelessly to your smartphone

The Bluetooth datalogger for HydraProbes is both a datalogger and a wireless access point to retrieve data through your smartphone. It can be left in the field connected to your sensors, allowing you to access the data when convenient.

The free GP Reader app (available for Android devices only) is used to check current conditions, download data and set up the sensor sampling interval (from one minute to 12 hours). With the app open on your smartphone, simply push the button on the Bluetooth datalogger for HydraProbes to wake it up and automatically establish a wireless connection. Tap the *Download* button in the app to download all logged data. You can also check the current battery level of the datalogger.

The Bluetooth datalogger for HydraProbes connects to up to 10 SDI-12 HydraProbe soil moisture sensors (with the 4-Port SDI-12 expansion Bar). Data is stored in non-volatile memory and is retained even if the battery fails. The memory can hold up to 32,520 measurements.

Bluetooth datalogger

GP Reader app

Why should you buy?

- ■ Retrieve sensor data wirelessly to your smartphone with a quick visit to the site.
- ■ Stay connected up to 60 m (200 ft) away.
- ■ Operates with AA alkaline household batteries.
- ■ Batteries will last up to 6 months with typical use.
- ■ Water-resistant, IP57-rated enclosure.
- ■ Data is retained even with no battery.
- ■ Connects up to 10 SDI-12 sensors
  (via multiple 4-Port SDI-12 expansion Bars).
- ■ Free GP Reader app available for Android devices (iOS coming soon).

4-port expansion bar

Ordering

142835   Bluetooth datalogger for HydraProbes, connects up to 10 SDI-12 sensors (via multiple 4-Port SDI-12 expansion bars), free GP reader app available for Android devices, 3.6 V Ccell battery, 4-port adaptor and cable.

Technical specifications

Item	Specification
Output	CSV text file via USB cable (included)
Sensor interface	SDI-12 / RS-485
Sensor port connector	1x Switchcraft EN3P4F (4 female pins)
Wireless protocol	Bluetooth 4.0 LE
Maximum number of sensors	10 (via multiple 4-Port SDI-12 Expansion Bars)
Storage	4 Mb. Depending on the frequency of measurement, this is equivalent to: Max. 90,909 HydraProbe Standard measurements Max. 71,429 HydraProbe Pro measurements
Measurement interval	Configureable by user, 1 minute to 12 hours
Operating temperature range	-20°C to 65°C (-4°F to 150°F)
Storage temperature range	-20°C to 70°C (-4°F to 160°F)
Power	3.0 V lithium coin cell powers the memory (included) 2 x AA alkaline batteries OR 3.6 V 1x C-cell Li-ion battery powers the sensors (included)
Battery life	Up to 6 months, depending on measurement interval
Environmental sealing	Enclosure: IP65 Push button: IP67 Sensor connectors: IP66/IP68
Dimensions	11.4 cm x 8.0 cm x 6.0 cm (4.49" x 3.15" x 2.36")
Weight	216 g (7.62 oz)
Warranty	1-year limited parts and labour

3. Access your data via telemetry

Connect your HydraProbes to the Global Data Transmitter (GDT) modem range of Royal Eijkelkamp and transmit sensor data to anywhere in the world. Our GDT modem range is designed for extended use in the field and to send water level, temperature, conductivity, rainfall, soil moisture and various water quality data in a secure way.

Eijkelkamp DataViewer

Data availability is crucial for the management of, for example, your ground water, surface water or soil moisture measurement network. Furthermore, data must today be accessible everywhere, from every device. For that reason, Royal Eijkelkamp has introduced a user-friendly and platform-independent web portal that can be accessed both at the office and in the field.
This means that you have your overviews and reports at hand quickly and efficiently, both at the measurement location and on larger scale and regional levels, at the office and in the field.
In this way, data are available not only to gain an insight into the current situation, but also for the management and maintenance of your measurement network.
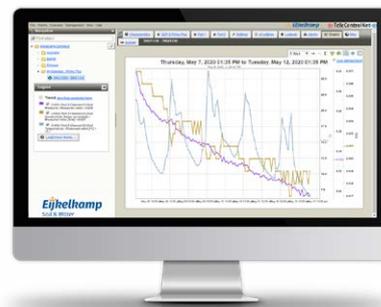
Security first

The DataViewer can only be accessed in encrypted form and, if the client requires, access can be equipped with 2-factor authentication (Digipass). This means that your data is secure at all levels, both incoming from the modems and outgoing to the users at a main station or in the field.
There are good reasons why we manage countless domains for water authorities, municipal authorities, research institutes and industries all over the world.

GDT Prime Plus and GDT Multiple

The GDT Prime Plus (113403ES) is capable of sending data for up to 2 sensors (one for SDI-12), the GDT Multiple SDI-12 (113203SA) for up to 6 sensors (4 for SDI-12).

- Easy plug-and-play installation
- No software needed
- Guaranteed data availability
- Real-time alarms
- Global connectivity (GPRS, UMTS & LTE)
- Easy link to your own web environment (API)
- Robust design with IP68 waterproof rating
- Powered with standard alkaline batteries
- Lithium battery for intensive use (optional)
- Internal barometric and temperature sensor
- External antenna for optimal reception

GDT Prime Plus

GDT Multiple

Installation of HydraProbes

For installation of your HydraProbes up to 2 m depth a special auger set is available (art. no.: 142840). The set includes a bottom part combi Ø 6 cm bayonet with top part and extension, a special bottom part to flatten the auger hole, HDPE pipe up to 2 m depth, PVC pressure/impact attachment, hammer with plastic head Ø 40 mm and a carrying bag.