

Hydrological Monitoring

Ground
Water
Surface
Water

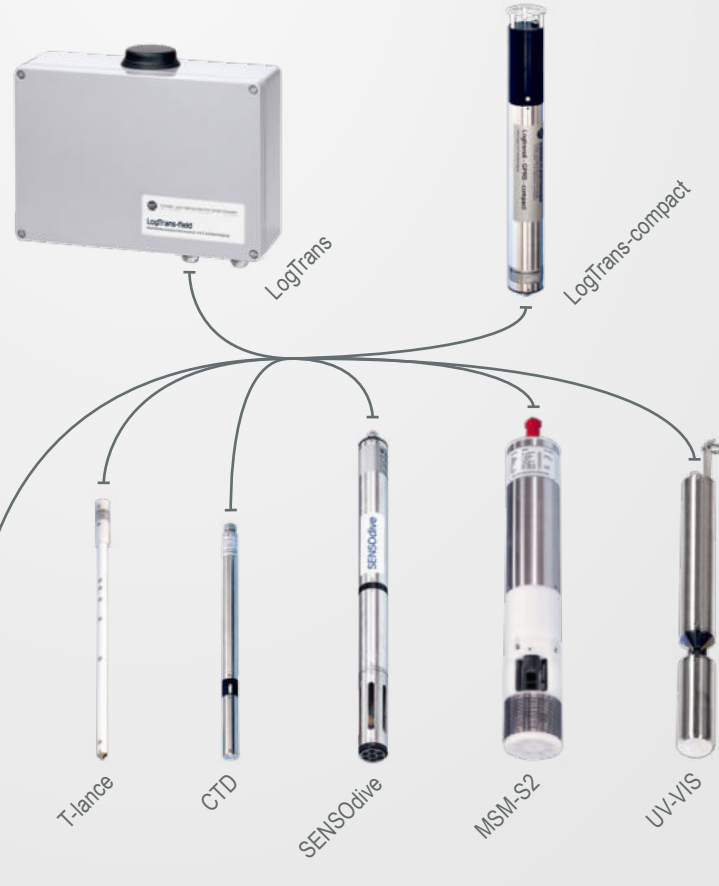
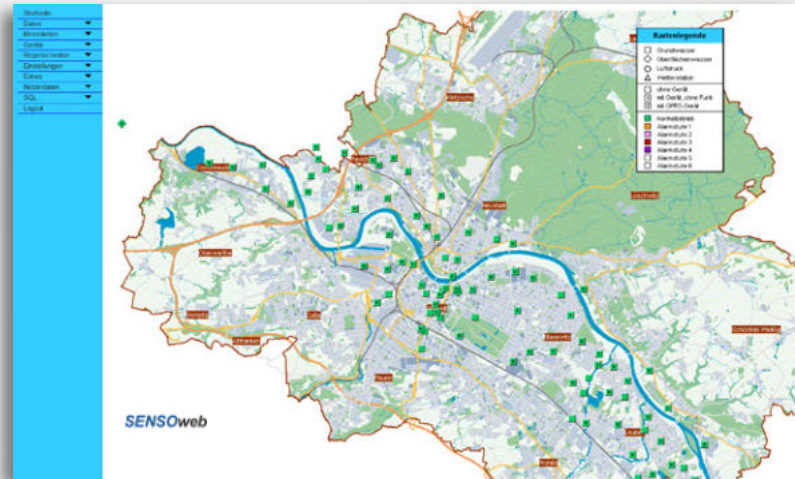


Measuring Devices

Remote Sensing/ Monitoring

SENSOweb[®]

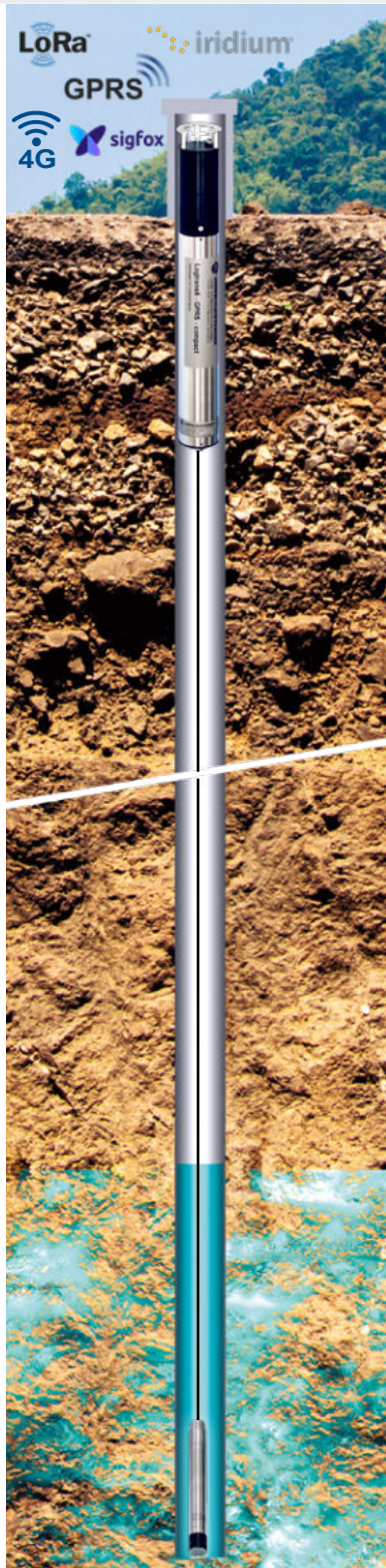
Probes))))))) Wireless Telemetry))))))) Data Management



Applications

GROUNDWATER

Well cap
Data logger
Terrain surface



Groundwater monitoring well

Probe cable

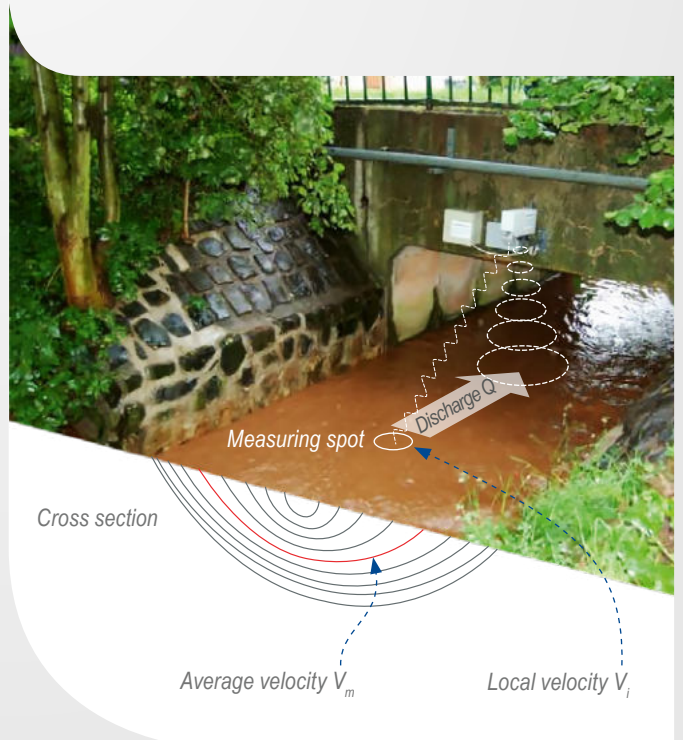
Groundwater

Probe

SURFACE WATER/ PRECIPITATION



DISCHARGE/ FLOW MEASUREMENT



DWLR compact

Water level recorder

The digital water level recorder **DWLR compact** is a measurement system for measuring and storing data for water level and temperature. The **DWLR compact** impresses with precise sensors, a powerful integrated data logger, and a very low power consumption combined with a long battery life.

Water level probe/ temperature sensor	
<i>Water level probe:</i>	
<i>Relative pressure</i>	<i>0...20 m water level</i>
<i>Linearity</i>	<i>0.1 % FS</i>
<i>Temperature sensor</i>	
<i>Measuring range</i>	<i>0 °C ... +40 °C</i>
<i>Resolution</i>	<i>0.1 °C</i>

Data logger	
<i>Memory</i>	<i>4 MB</i>
<i>Number of data sets</i>	<i>256,000</i>
<i>Sampling rate</i>	<i>Data logger 5 seconds - 24 hours, on-line from 30 seconds</i>
<i>Power supply</i>	<i>1 pc of lithium battery, approximately 10 years of operating at one measurement per hour</i>
<i>Interface</i>	<i>RS 485/ USB</i>

Mechanical dimensions/ material/ environmental conditions	
<i>Dimensions</i>	<i>Diameter: probe incl. data logger 22 mm; length: 240 mm</i>
<i>Material</i>	<i>Stainless steel 1,4301, sealing NBR, EPDM</i>
<i>Probe cable</i>	<i>Material PUR, diameter 6 mm Probe cable incl. air pressure capillary</i>
<i>Protection degree</i>	<i>Read out connector: IP 65</i>

DWLR-compact



e-mail support
info@uit-gmbh.de
 phone support
 +49 351 88646-00

WR-4G compact

Water level recorder with innovative telemetry

The **WR-4G compact** water level recorder is a measurement system for measuring and storing water level and temperature data, including remote data transmission technology. The **WR-4G compact** has a complex alarm functionality and is therefore ideal for early warning applications. The system is also available in a flood-proof design.

Water level probe/ temperature sensor	
Relative pressure	0 ... 10 m; 0 ... 20 m; 0 ... 50 m; 0 ... 100 m water level
Absolute pressure	800 ... 2,100 mbar; 800 ... 6,100 mbar; 800 ... 11,100 mbar
Diameter	22 mm
Accuracy	0.05 % FS at 10° ... 40° C; resolution 0.002 % FS + drift
Temperature sensor	Range 0 °C ... +50 °C

Data logger LogTrans 7 --compact	
Dimensions	Diameter 48 mm; length 700 mm
Protection degree	Option 1 – with air pressure membrane: IP 65 Option 2 – without air pressure membrane : IP 68 Option 3 – without capillary, with air pressure sensor: IP 68
Option air pressure sensor	800-1,200 mbar, installed in the data logger
Temperature range	-25 °C ... 70 °C
Power supply	2 - 4 lithium batteries– 13/26Ah or 4 alkaline Baby 1.5 V (Duracell) or 2 x Li-Ion accumulators, 5.2 Ah, Definition with offer
Wireless data transfer	GSM/ GPRS modem, 900 MHz, 1,800 MHz, GSM: 800, 850, 1,900 MHz plus 4G (LTE) or 4B NB-IoT Modem
Optional: external antenna	Mountable with the same protection degree
Data security	Option: TLS – Client-server certificate
Interface	USB – to be parameterized with SENSOlog

GPRS-data transmission – receiver station	
Receiver station	FTP-server or WEB-Server with SENSOweb

WR-4G-compact

GPRS

4G

Bluetooth



e-mail support
info@uit-gmbh.de

phone support
 +49 351 88646-00

WR-sat compact

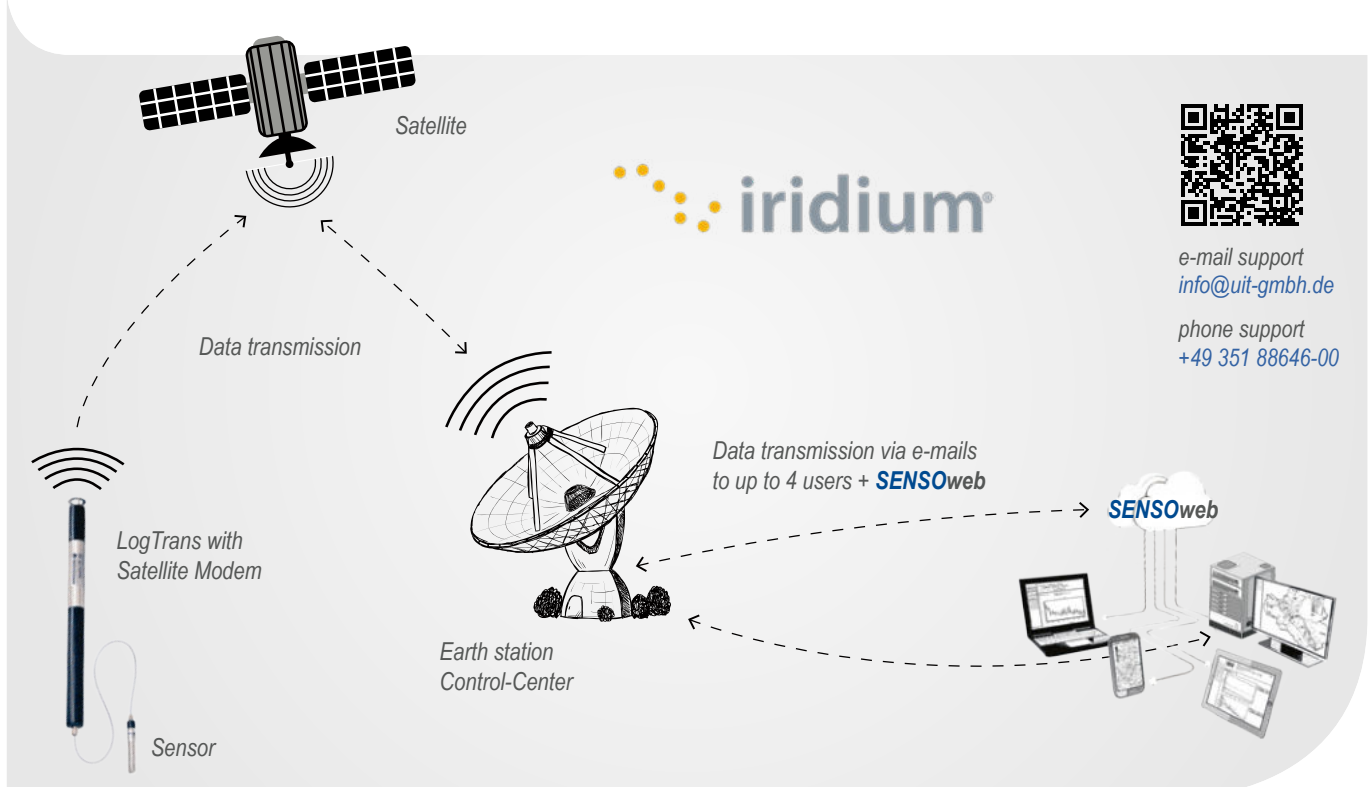
Water level recorder with satellite telemetry

The water level recorder **WR-sat compact** is a measuring system for measuring and storing the water level and temperature and transmits the data using the Iridium satellite system. It thus has the widest possible complete worldwide network coverage. Even in the event of failure of classic land-based data transmission technology (GPRS; 4G, etc.), the water level measurement system with satellite transmission can still function reliably.

Water level probe/ temperature sensor	
Relative pressure	0 ... 10 m; 0 ... 20 m; 0 ... 50 m; 0 ... 100 m water level
Absolute pressure	800 ... 2,100 mbar; 800 ... 6,100 mbar; 800 ... 11,100 mbar
Diameter	22 mm
Accuracy	0.05 % FS at 10 °C ... 40 °C; resolution 0.002 % FS + drift
Temperature sensor	Range 0 °C ... +50 °C

Data logger LogTrans 7 – sat compact	
Dimensions	Diameter 48 mm, length 700 mm
Protection degree	Option 1 – with air pressure membrane: IP 65 Option 2 – without capillary: IP 68 Option 3 – without capillary, with air pressure sensor: IP 68
Option: air pressure sensor	800 - 1,200 mbar, installed in data logger
Temperature range	-25 °C ... 70 °C
Power supply	2 - 4 lithium batteries– 13/26Ah or 4 alkaline Baby 1.5 V (Duracell) or 2 x Li-Ion accumulators, 5.2 Ah, Definition with offer
Wireless data transfer	Integrated Iridium Modem for the Iridium Satellite System with most complete worldwide coverage ; Iridium Modem 1616...1626,5 MHz; no activation via SIM card, but activation by IMEI registration with the provider
External antenna	necessary
Interface	USB – to be parameterized with SENSOlog

SAT - data transmission – receiver station	
Receiver station	Via e-mail or SENSOweb -server - see infographic



WR-IoT compact

Water level recorder with LoRaWAN™

The **WR-IoT compact** water level recorder uses **LoRaWAN™** technology (Long Range Area Network) and can therefore transmit data to the gateway at close range without using a mobile phone provider. From here, the data can be transmitted to the server via Ethernet or 2/3/4 G technology. The **LoRaWAN™** technology is extremely energy efficient; a battery life of up to several years can be achieved. An additional advantage is that the signal easily transmits through buildings and is able to transfer data from under-floor measuring points. This technology is ideal for building up your own networks.

Water level probe/ temperature sensor	
Relative pressure	0 ... 10 m; 0 ... 20 m; 0 ... 50 m; 0 ... 100 m water level
Absolute pressure	800 ... 2,100 mbar; 800 ... 6,100 mbar; 800 ... 11,100 mbar
Diameter	22 mm
Accuracy	0.05% FS at 10...40°C; resolution 0.002 % FS + drift
Temperature sensor	Range 0°C...+50 °C
Data logger LogTrans IoT compact	
Dimension	Diameter 48 mm, length 700 mm
Protection degree	Option 1 – with air pressure membrane: IP 65 Option 2 – without capillary or with air pressure sensor: IP 68
Option: air pressure sensor	800 ... 1,200 mbar, installed in data logger
Temperature range	-25 °C ... 70 °C
Power supply	2 - 4 lithium batteries– 13/26Ah or 4 alkaline Baby 1.5 V (Duracell) or 2 x Li-Ion accumulators, 5.2 Ah, Definition with offer
Wireless data transfer	LoRa® or LoRaWAN®
Option: external antenna	Mountable with the same protection degree
Interface	USB – to be parameterized with SENSOlog optional Bluetooth LE for wireless parameterization of basic parameters
LoRaWAN – receiver station	
Receiver station	Gateway with data transfer via 4G or Ethernet to an FTP- or SENSOweb -server



e-mail support
info@uit-gmbh.de
 phone support
 +49 351 88646-00

OFW-GPRS

Surface water measurement system

The surface water measurement system - **OFW-GPRS** is a stationary measurement system for non-contact water level measurements using radar or ultrasonic sensors, including data loggers and remote data transmission technology - ideal for early warning systems. The system can be combined with the “**K1 camera**” to visualize the current situation on site.

Radar sensor	
Range	0.2 ... 15 m – other ranges on request
Beam angle/ frequency	10° K-band (26 GHz technology) or 8° (80 GHz technology) – see quotation
Accuracy/ resolution	Accuracy +/- 2 mm add +/- 0.03 % FS/10 K/ Res. +/- 2 mm
Dimensions	Ø 75 mm, length 300 mm or Ø 79 mm ; screw G 1½”, length 109 mm (80 GHz)
Camera K1	
Technical data	640 x 480 Pixel, angel 60°, interface RS 232
Dimensions	Diameter: 75 mm, length: 120 mm, IP 67
Data logger LogTrans-field	
Inputs	6 analogue inputs/ 16 Bit resolution, 2 counter inputs
Interfaces	MODBUS, RS 485; RS 232 for the connection of camera K1
Interfaces	USB 2.0 for parameterization – optional Bluetooth LE
Memory	512 MB for data und 512 MB for images
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G I optional satellite
Alarm notification	Two channels with up to 6 alarm notifications
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65
Alternative data loggers	See pages 17 ... 18



SENsoflow[®]

Discharge Measurement System

The robust non-contact flow measurement system **SENsoflow** measures the flow velocity and water level, and can calculate the discharge directly in the device. The discharge sensor is compatible with the **LogTrans-field** data logger. The system can also be combined with the “**K1 camera**” to visualize the current situation on site.

SENsoflow	
Flow rate measurement	Measuring principle: Doppler-frequency shift Range: 0.2 ... 15 m/s; resolution up to 1 mm/s Measuring frequency: 24 GHz, angle of reflected beam: 10°
Water level	0.2 ... 15 m, resolution 2 mm,; 26 GHz technology
Discharge	By calculation directly in device
Basic requirement	Roughness of water surface 3 mm
Dimensions	220 mm x 190 mm x 130 mm

Camera K1	
Technical data	640 x 480 Pixel, angel 60°, interface RS 232
Dimensions	Diameter: 75 mm, length: 120 mm, IP 67

Data logger LogTrans-field	
Inputs	6 analogue inputs/ 16 Bit resolution, 2 counter inputs
Interfaces	MODBUS, RS 485; RS 232 for the connection of camera K1
Interfaces	USB 2.0 for parameterization – optional Bluetooth LE
Memory	512 MB for data and 512 MB for images
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G I optional satellite
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65



e-mail support
info@uit-gmbh.de

phone support
[+49 351 88646-00](tel:+493518864600)

SENsoflow

SENSOpipes[®]

Flow measurement in pipes

The **SENSOpipes** measurement system allows the determination of the volume flow in fully filled pipes. For this purpose, the flow velocity in the pipe is measured and the volume flow is calculated. The **SENSOpipes** measurement system is compatible with the **LogTrans-field** data logger.

SENSOpipes	
Measuring principle	Magnetic-inductive, in pipe installation – one installation point for velocity measurement and calculation of flow rate
Measuring range	0.02 ... 2.5 m/s alternatively 0.1 ... 10 m/s
Accuracy	± 1% of measured velocity or ± 0.03 m/s under reference conditions – the respectively larger value applies
Electrical conductivity	Minimum conductivity of water: 10 µS/cm
Pipe diameter	Suitable for pipe diameters larger than 200 mm
Mounting adaptor	Required mounting adaptor to be mounted on pipe
Data logger LogTrans-field	
Inputs	6 analogue inputs/ 16 Bit resolution, 2 counter inputs
Interfaces	MODBUS, RS 485; RS 232 for connection of camera K1
Interfaces	USB 2.0 for parameterization – optional Bluetooth LE
Memory	512 MB for data und 512 MB for images
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G optional satellite
Alarm notification	Two channels with up to 6 alarm notifications
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65
Alternative data loggers	See pages 17 ... 18



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info@uit-gmbh.de
 phone support
 +49 351 88646-00

Measuring weir

Discharge measurements in spring captures

This measurement system, with a high-precision water level probe, allows the determination of the discharge in spring captures. For this purpose, the water level in the weir is measured with high accuracy and the discharge is calculated. The measurement system is compatible with the [LogTrans-field](#) data logger.

Measuring weir / water level probe	
Measuring principle	Measuring weir with known discharge (effluent)-water level relationship
Water level probe	Capacitive relative pressure sensor
Diameter	Large area sensor with a 38 mm diameter
Range	0 - 30 cmWs ; 0 - 1 mWs or 0 - 3 mWs
Accuracy	Typically 0.1 % FS
Resolution	0.1 mm; 0.3 mm; 1 mm according to the measuring range

Data logger LogTrans-field	
Inputs	6 analogue inputs/ 16 Bit resolution, 2 counter inputs
Interfaces	MODBUS, RS 485; RS 232 for the connection of camera K1
Interface	USB 2.0 for parameterization – optional Bluetooth LE
Memory	512 MB for data and 512 MB for images
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G I optional satellite
Alarm notification	Two channels with up to 6 alarm notifications
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65
Alternative data loggers	See pages 17 ... 18



Measuring weir

e-mail support
info@uit-gmbh.de

phone support
+49 351 88646-00



Precipitation measurements with remote data transmission technology

The *precipitation measurement system*, with data logger and remote transmission, optimized for energy-saving applications, is a suitable system for continuous precipitation measurements. Due to its alarm capability, it can send an alert in case of critical events (e.g. heavy precipitation).

Precipitation sensor	
Area/ dimensions	Area: 200 cm ² ; diameter: 18 cm; height: 30 cm
Measurement principle/ resolution	Tipping bucket rain gauge, resolution 0.1 mm and potential-free contact
Accuracy	2 % up to 25 mm/h and 3 % more than 25 mm/h
Base (optional)	For the installation of precipitation sensors at a height of 1 m incl. holder for data logger
Heating system (optional)	18 W / operating temperature range: - 20°C ... + 50 °C (heated)

Data logger LogTrans 6-compact	
Input	2 counters
Interfaces	MODBUS, RS 485; RS 232 for connection of camera K1
Interface	USB 2.0 for parameterization – optional Bluetooth
Memory	512 MB for values and 512 MB for pictures
Wireless data transfer	4 band GSM/ GPRS modem optional: 4G optional Satellite
Alarm notification	Two channels with up to 6 alarm notifications
Interface	USB – to be parameterized with SENSOlog
Power supply	4 batteries C-sizes - Alkaline Duracell
Dimensions	Diameter 48 mm, length 700 mm
Alternative data loggers	See pages 17 ... 18

Precipitation measurement systems



e-mail support
info@uit-gmbh.de

phone support
+49 351 88646-00



Meteorological measuring stations with data transmission technology

Meteorological measuring stations can be supplied as individual research stations with high-precision meteorological sensor technology up to networks or early warning systems. The meteorological measuring stations are equipped with the tried and tested data logger *LogTrans-field* and are in principle equipped with remote data transmission technology.

Meteorological sensors	
Precipitation	Tipping bucket rain gauge – other measurement principle on request
Measurement principle/ Dimensions/ Accuracy	Tipping bucket rain gauge with 0,1 mm resolution and magnetic reed switch; 200 cm ² Diameter: 18 cm; high: 30 cm, accuracy 2 % at 25 mm/h and 3 % up to 50 mm/h
Heating	Option - 18 W / : operation temperature - 20 °C... + 50 °C (heated)
Wind velocity	Anemometer; range 0,5...50 m/s; resolution < 0,1 m/s
Wind direction	Wind direction sensor; range 0...360 °C; resolution 0,4 °; accuracy: +/- 2°
Humidity/ air temperature	Humidity: range 0... 100 % r.H.; accuracy (MB 5... 95 % r.H. at 10...40°C) ± 2 % r.H.; plus(<10°C, >40 °C) < 0,1 %/K; response time (T 90) = 5 min Temperature: sensor element (DIN IEC 751) PT 100 1/3 DIN; range -30...+70 °C; accuracy ± 0,2 K; plus (<10 °C, > 40°C) ± 0,004 %/K; response time (T 90) = 5 min
Pyranometer/ Measurand	Hemispherical solar radiation; transmitted range 0...1600 W/m ² ; spectral range 285...3000 nm; second class pyranometer, Interface Modbus RS-485; Calibration uncertainty: < 1,8%
4-component - net radiometer	upward and downward directed pyranometer spectral range: 285...3000 nm; accuracy < 1,8 % upward and downward directed pyrgeometer: spectral range 4500...40.000 nm; accuracy < 7% temperature sensor PT 100
Stand	Stand 2 m with earth pins for ground installation; steel rope

Data logger LogTrans-field	
Inputs	6-18 analogue inputs/ 16 Bit resolution, 2 counter inputs; MODBUS-RTU: Option SDI-12
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G I optional Satellite
Alarm notification	Two channels with up to 6 alarm notifications
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor plus optional solar power supply
Additional technical data's	See pages 17 ... 18



Meteorological measuring stations

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info@uit-gmbh.de

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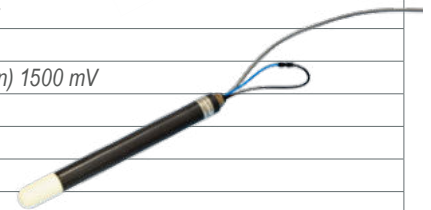
Soil moisture measuring stations with data transmission technology

The *soil moisture measuring station* with data logger and remote transmission, optimised for low power consumption applications, is a suitable system for the continuous recording of soil moisture and capillary suction tension in the soil. The number and type of sensors are project-specific

Soil moisture sensor USMT100	
Range volumetric water content/ temperature	VWC 0...60%; up to 100 % VWC with limited accuracy temperature: -40 ... +80°C
Volumetric water content (VWC)	Accuracy up to $\pm 3\%$ (VWC) in mineral soil/ factory calibration Soil with moderate salinity in range 0...50% VWC Resolution: 0,1 % VWC
Temperatur	Accuracy typical $\pm 0.2^\circ\text{C}$, max. $\pm 0.4^\circ\text{C}$ about full range Resolution 0.01°C
Interface/ power supply	MODBUS-RTU; 5-24 VDC; 40 mA
Probe cable length	10 m
Sensor size	Approximately 18,2 cm x 3 cm x 1,2 cm



Tensiometer Standard	
Diameter/ length	$\varnothing 35$ mm; length ceramic 70 mm; length shaft customer specific, shaft screwed
Range/ Air bubble point/ type of sensor	-1000.+1000 mbar; ca. 800 mbar; relative pressure sensor
Accuracy	0,5 % FS
Analogue Output	500...2500 mV; zero point (0 mbar capillary suction tension) 1500 mV
Power supply	9-14 VDC; 10 mA
Filling	In built in position refillable
Material	PVC, ceramic; epoxy resin; PUR-cable; EPDM
Probe cable	PUR, 10 m with air pressure capillary



Data logger LogTrans-field	
Technical data's	See pages 17 ... 18

Soil moisture measuring stations

e-mail support
info@uit-gmbh.de
 phone support
 +49 351 88646-00



Temperaturmesskette with data transmission technology

The robust *temperature measurement chain* is used to record temperature profiles in water bodies and boreholes. The temperature sensors are interconnected via a RS485 MODBUS and can be connected directly to the data logger *LogTrans-field*.

Temperature chain	
Temperature sensor	Range: -20 ... 50°C, Resolution: 0,04 K, typical accuracy: +/- 0,1 K
Dimensions	Ø T-probe 16 mm, 20 mm (screw fitting); total length: 140 mm
Interface	MODBUS-RTU
Max. number of probes per T-chain	32
Probe cable	Rugged PE – probe shield; diameter: 7,5 mm with swelling threads Integration of the probe cable into the temperature element with double seal
Material with medium contact	Stainless steel, NBR; PUR, PE, EPDM
Power supply	5-15 VDC, typ. 10 mA for every T-probe, When using a LogTrans, the power supply is provided by the power supply of the data logger.

Data logger LogTrans-field	
Inputs	MODBUS-RTU
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G I optional Satellite
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor plus optional solar power supply
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65
Additional technical data's or alternative data loggers	See pages 17 ... 18

Temperature chain in surface water

Module/ probe of temperature chain

Data logger LogTrans

Temperature chain 1...n T-sensors (maximum 32 pieces)

Temperature chain mounted in groundwater monitoring well

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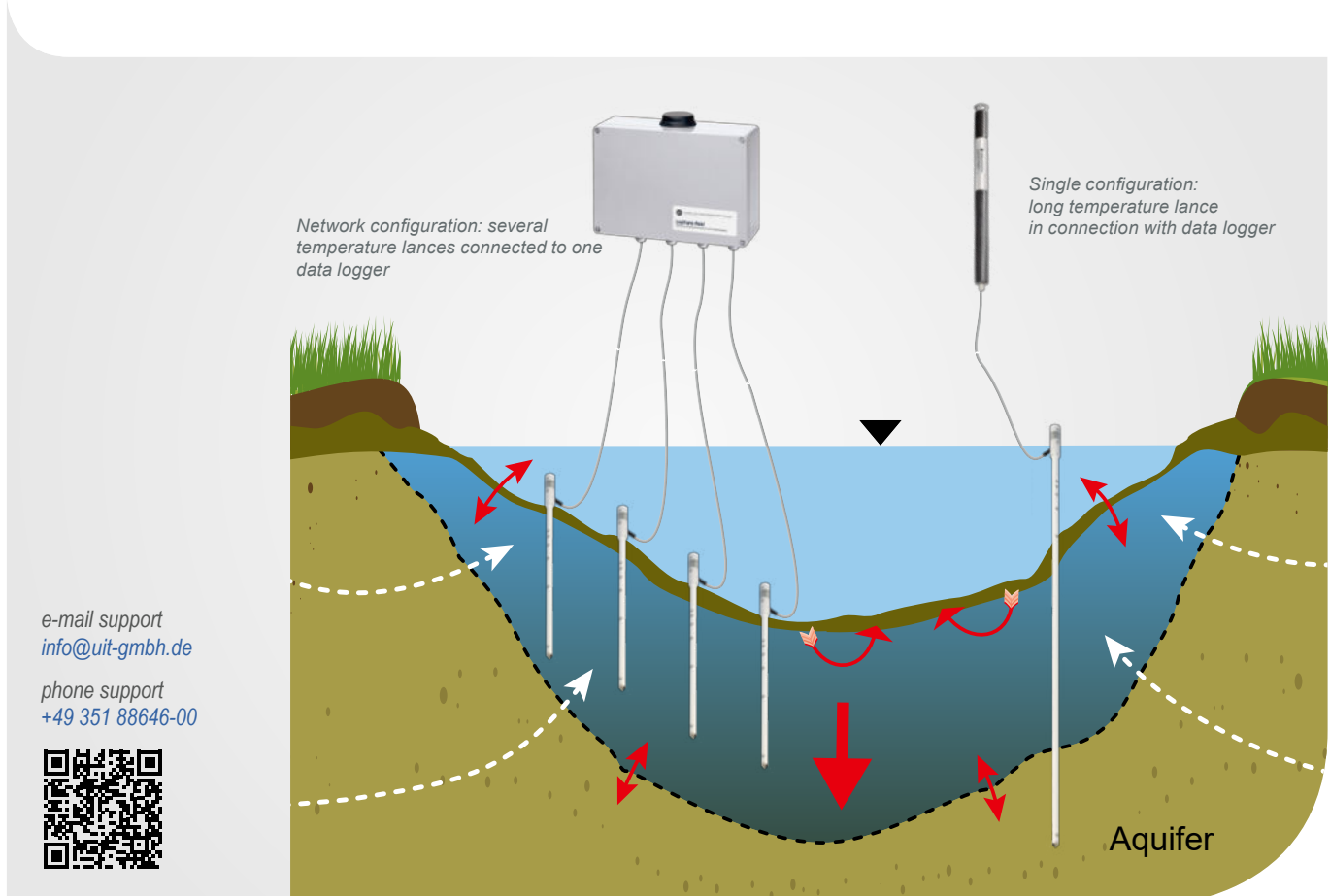
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Temperature lance with remote transmission technology

The *high-precision temperature lance* sets standards in accuracy and compactness. In particular, the temperature lance is used to monitor the interaction of groundwater and surface water. This is also referred to as the hyporheic zone.

Temperature lance	
Dimensions	Diameter 30 mm; length: customer specific (typical 0,8m)
Material with medium contact	POM, stainless steel, EPDM
Lead out of the probe cable	Laterally or vertically at the head of the temperature lance
Probe cable material	PUR, PVC or FEP – see quotation
Number of temperature sensors	Standard 8 pieces – number of temperature sensors can be increased up to 40 pieces
Temperature sensor	Installed in stainless steel parts
Typ 1	Range: -20...+50°C; typ. accuracy +/- 0.1 °C; resolution: 0,04°C
Typ 2	Range: -10...+60°C; typ. accuracy +/- 0.07 °C; resolution: 0,004°C
Typ 3	Range: -50...+150°C; typ. accuracy +/- 0.3 °C in the range -20°C...+110°C; resolution: 0,1°C

Data logger LogTrans-field	
Inputs	MODBUS-RTU
Wireless data transfer	Integrated 4 band GSM/GPRS modem – optional 4G I optional Satellite
Power supply	Accumulator 12 V, 6.5 Ah for data logger and sensor plus optional solar power supply
Case/dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65
Additional technical data's or alternative data loggers	See pages 17 ... 18



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info@uit-gmbh.de

phone support
+49 351 88646-00



Data loggers with remote transmission technology

The *data loggers produced by UIT GmbH Dresden* are ideally suited for setting up measurement systems with low power consumption and remote data transmission technology. All data loggers have highly effective alarm functions and are available with various data transmission technologies.

General technical data of UIT data loggers	
Interfaces	MODBUS, RS 485, Option: SDI 12
Inputs	2 counter, optional analogue inputs
Sample rate	1 s ... 24 h
Memory	512 MB for values and 512 MB for pictures
Interface	USB 2.0 to be parametrized with SENSolog
Alarm notification	Two channels with up to 6 alarm notifications
Power consumption	Sleep mode 0.08 mA, with Bluetooth 4.0; 0.12 mA, Bluetooth-communication 16 mA, measurement and/or USB connection 20 mA + power consumption of probe, wireless data transfer 200 mA
Operating temperature range	-25 °C ... +70 °C



The following data logger variants are available and, in addition to the general technical data mentioned above, have the following product-specific technical data.



Data logger LogTrans 7-compact	
Wireless data transfer	GSM/ GPRS modem, 900 MHz, 1,800 MHz, GSM: 800, 850, 1,900 MHz, option 3G, option LTE or 4G NB-IoT modem
Data security	Option: TLS - client-server certificate
Optional: air pressure sensor	800 ... 1,200 mbar, installed in data logger
Option: Bluetooth	Bluetooth LE for wireless basic parameterization and data display only with 3G-modem or LTE-modem
Power supply	2 - 4 lithium batteries– 13/26Ah or 4 alkaline Baby 1.5 V (Duracell) or Li-Ion accumulators, 5.2 Ah, definition with offer
Dimensions	Diameter 48 mm, length 700 mm
Protection degree	Option 1 – with air pressure membrane: IP 65 Option 2 – without capillary: IP 68 Option 3 – without capillary, with air pressure sensor: IP 68
External antenna	necessary

Data loggers with remote transmission technology



Data logger LogTrans 7-sat-compact

Data logger LogTrans 7-sat-compact	
Wireless data transfer	Integrated Iridium modem for the Iridium satellite system with the widest possible complete worldwide coverage. Iridium Modem 1616...1626,5 MHz; No activation via SIM card, but activation via IMEI registration at the provider.
Optional: air pressure sensor	800 ... 1,200 mbar, installed in data logger
Power supply	2 - 4 lithium batteries– 13/26Ah or 4 alkaline Baby 1.5 V (Duracell) or Li-Ion accumulators, 5.2 Ah, definition with offer
Dimensions	Diameter 48 mm, length 700 mm
Protection degree	Option 1 – with air pressure membrane: IP 65 Option 2 – without capillary: IP 68 Option 3 – without capillary, with air pressure sensor: IP 68
External antenna	necessary



Data logger LogTrans –IoT-compact

Data logger LogTrans –IoT-compact	
Wireless data transfer	LoRa® or LoRaWAN® – 868 MHz
Optional: air pressure sensor	800 ... 1,200 mbar, installed in data logger
Power supply	2 - 4 lithium batteries– 13/26Ah or 4 alkaline Baby 1.5 V (Duracell) or 2 x Li-Ion accumulators, 5.2 Ah, definition with offer
Dimensions	Diameter 48 mm, length 700 mm
Protection degree	Option 1 – with air pressure membrane: IP 65 Option 2 – without capillary: IP 68 Option 3 – without capillary, with air pressure sensor: IP 68
External antenna	Option: mountable with the same protection degree
Gateways	Option: Gateways for LoRa® or LoRaWAN®

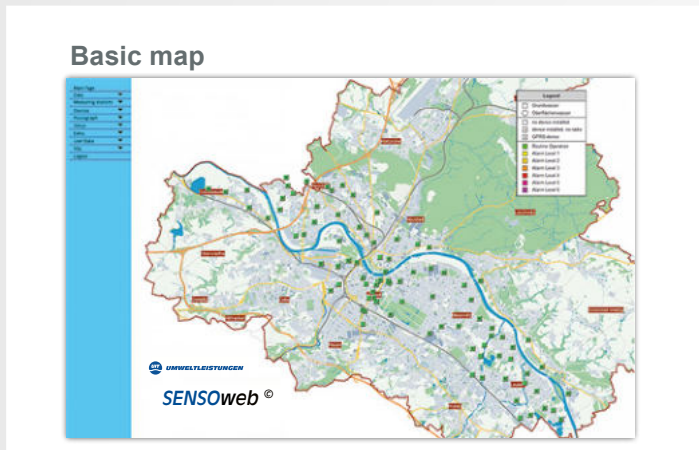
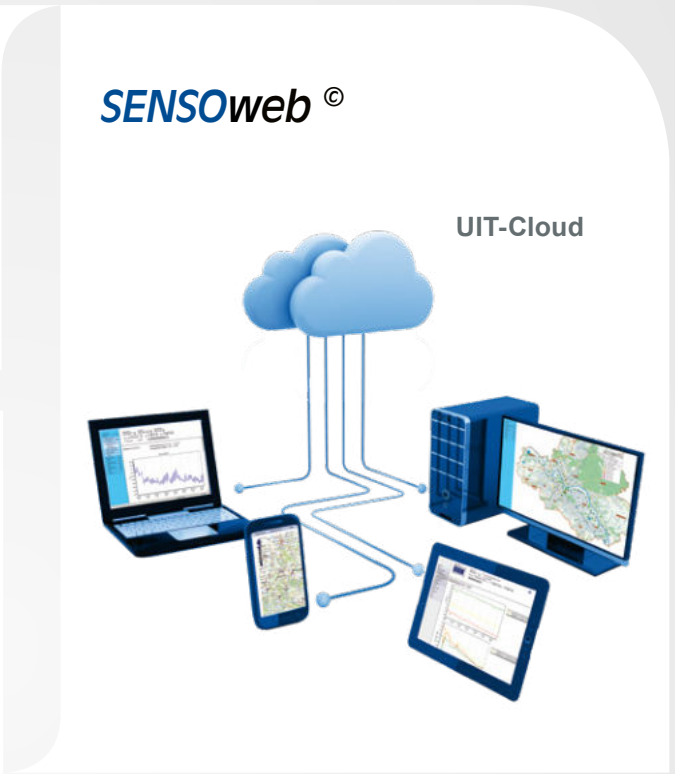


Data logger LogTrans-field

Data logger LogTrans-field	
Option: extension board	3 x 0 ... 5 VDC and 3 x 0 ... 20 mA single ended, multiple boards installable, 16 Bit resolution
Wireless data transfer	Integrated 4 band GSM/ GPRS modem Options 4G LTE/ LoRaWAN/ NB-IoT/ Iridium - Modem
Standard antenna	Roof antenna, 3 dB gain
Power supply:	
Option 1: - accumulator	12 V, 6,5 Ah for data logger and sensor useable
Option 2: - solar	Additional solar charger mounted in the aluminum case
Option 3: - power supply	220 VAC/ 12 VDC, 3 A
Sensor power supply 12 V	Power supply for sensors switched
Option: Bluetooth	Bluetooth LE for wireless basic parameterization and data display only with 4G-modem
Protection degree	IP 65
Case dimensions	Aluminium 330 x 290 x 115 mm, incl. antenna, IP 65

SENSOweb[®] innovative, web-based network centre

Wireless technologies

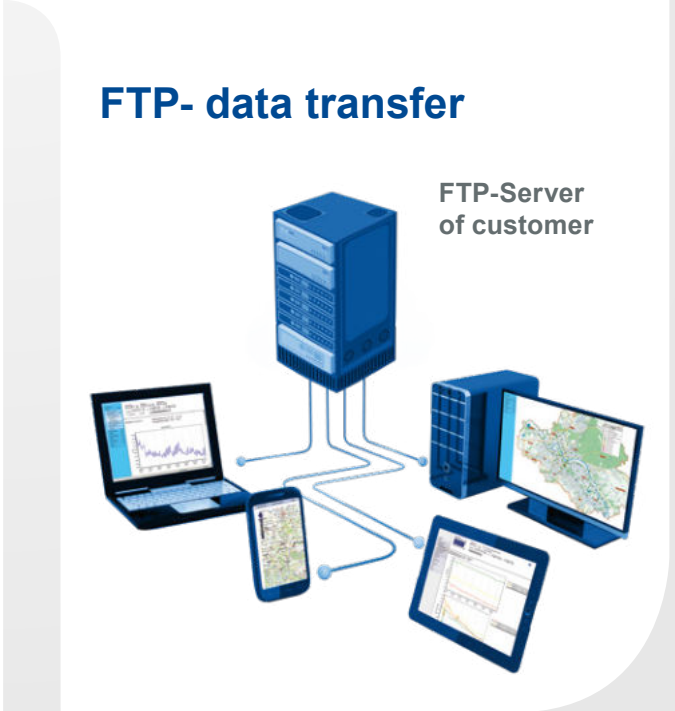


OR

Submaps – alarm parameterization

Alarmstufe	Alarm AKTIV	Temperatur [°C]	S*	Messperiode [Min]	DFD Periode [h]	Mittelwert (Messungen)	SMS Pausen (Messungen)	Alarmenden AKTIV
1	<input type="checkbox"/>	Min: 4,0 Max: 6,0	kein Kanal ausgehört kein Kanal ausgehört	30	24	1	1	<input type="checkbox"/>
2	<input type="checkbox"/>	Min: 5,0 Max: 4,0	kein Kanal ausgehört kein Kanal ausgehört	35	8	1	1	<input type="checkbox"/>
3	<input type="checkbox"/>	Min: 7,0 Max: 8	kein Kanal ausgehört kein Kanal ausgehört	35	8	1	1	<input type="checkbox"/>
4	<input type="checkbox"/>	Min: 5,0 Max: 0,0	kein Kanal ausgehört kein Kanal ausgehört	30	24	1	1	<input type="checkbox"/>
5	<input type="checkbox"/>	Min: 5,0 Max: 0,0	kein Kanal ausgehört kein Kanal ausgehört	30	24	1	1	<input type="checkbox"/>
6	<input type="checkbox"/>	Min: 5,0 Max: 0,0	kein Kanal ausgehört kein Kanal ausgehört	30	24	1	1	<input type="checkbox"/>

Station 5 (143)



Technology pro Environment



● Worldwide activities of UIT

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The company belongs to General Atomics Europe Gruppe and as such is part of the global network of General Atomics.

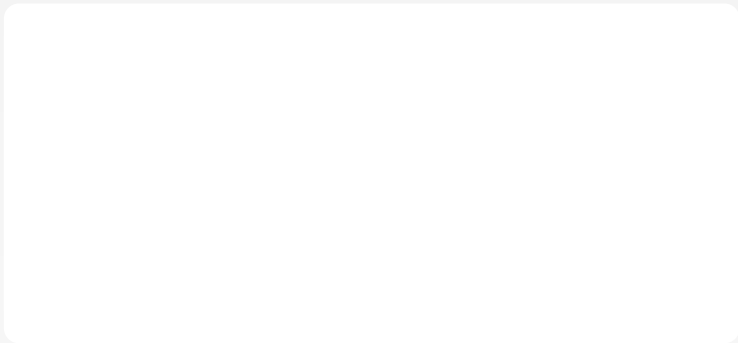


Umwelt- und Ingenieurtechnik GmbH Dresden
Zum Windkanal 21
D-01109 Dresden
Germany

phone: +49 351 88646-00
fax: +49 351 8865774
info@uit-gmbh.de
www.uit-gmbh.de



Hydrological Monitoring



The data sheet also describes optional special equipment.
The concrete scope of delivery is defined in each case with the offer.

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