

**From Field
to Infrastructure**

**Equipment, Sensors & Services
for surface water measurement**

Flow velocity

HSR-10

RG-30+

Discharge

RQ-30+

RQ-30 ADMS

RP-30+

TQ-S/F

Water level

SOMLEVEL

USH-9

PTM

Precipitation

NIWA

MR3

HDi

Data loggers

MRL

HDL

PD-5/Mini

Conductivity & Evaporation

CTP-2/5

VDM-100



Company Overview

SOMMER Messtechnik is a measurement technology specialist with more than **40 years of experience** in environmental monitoring and sensor systems. The company develops, produces and markets sensors, instruments and complete measurement solutions for data acquisition, transmission and evaluation in fields such as **hydrology, meteorology, water management, sewage and geotechnics**.

Founded in **1987 by Wolfram Sommer**, the business began with early projects in hydrography and meteorology and grew into an independent company in 1997. In 2013, the company adopted the name to **SOMMER Messtechnik** and expanded its reach globally while remaining family-managed.

Over the decades, SOMMER has introduced a series of **innovative technologies**, including radar sensors for non-contact level and discharge measurement, advanced data loggers, and systems for remote monitoring in harsh environments. Milestones include early

avalanche and landslide monitoring systems, Doppler radar technology for flow measurement, tracer systems for discharge measurement, and the SQ series for wastewater flow.

The company's mission emphasizes **understanding the environment to measure it reliably**. SOMMER aims to deliver solutions that are robust, accurate and practical for real-world monitoring challenges. Team experience, a quality-focused approach and a spirit of innovation guide product development and customer support.

SOMMER's solutions are used worldwide in applications such as **river and channel monitoring, sewage networks, weather stations, flood early warning, snow measurement and environmental research**. The company continues to be a trusted partner for customers needing dependable measurement technology and data systems across disciplines.



HSR-10

Mobile handheld
radar sensor



YouTube



Technology	Radar
Purpose	Velocity
Mobility	Portable

The HSR-10 is a portable, handheld non-contact radar developed for fast and flexible surface velocity measurements in open rivers and channels. Designed for modern fieldwork requirements, it enables measurements without installation effort, cabling, or direct access to the water.

The compact and lightweight device can be operated easily by one person and is ready for immediate use at changing locations. Powered by a rechargeable battery, the HSR-10 works autonomously and supports mobile operation independent of fixed infrastructure. Measured data are transmitted wirelessly via Wi-Fi, allowing convenient access and evaluation directly on site. The contact-free measuring method increases safety, especially in high flows, turbulent waters, or difficult-to-reach areas. With its robust housing and integrated self-check functions, the HSR-10 supports reliable measurements under real-world environmental conditions and is well suited for temporary surveys, inspections, and spontaneous field campaigns where speed, safety, and autonomy are essential.

- Safe, wireless monitoring without any sensor contact with water



Dimensions without case	263 × 123 × 271 mm (with battery)
Total weight without case	1.2 kg plus 0.6 kg battery
Protection	IP65
Power supply	9...18 VDC
Battery capacity	2.0 Ah or 3.0 Ah
Operation temperature	–40...60 °C
Measurement range	0.08...16 m/s (practical), accuracy ± 0.01 m/s, ± 1% FS
Distance to water surface	0.5...100 m
Miscellaneous	24 GHz radar (K-Band), Wi-Fi 2.4 GHz (up to 50 m), 1 mm/s resolution, Android App

Measuring principle

The HSR-10 measures surface flow velocity using the Doppler frequency shift principle. A radar signal with a constant frequency is transmitted towards the water surface. The moving water reflects the signal with a frequency shift proportional to the flow velocity. By analysing this frequency shift, the sensor determines the surface velocity.

HSR-Commander

The HSR-Commander is a free Android application that allows seamless communication with the HSR-10 Handheld Surface Radar. It connects to the HSR-10 via Wi-Fi, enabling real-time display of measured surface flow velocity directly on a compatible Android smartphone or tablet. The app provides an intuitive user experience on mobile devices, making field work fast and efficient without the need for laptops or external data loggers.

- ❑ Wireless connection via Wi-Fi (no cables)
- ❑ Real-time display of flow velocity
- ❑ Simple and convenient interface

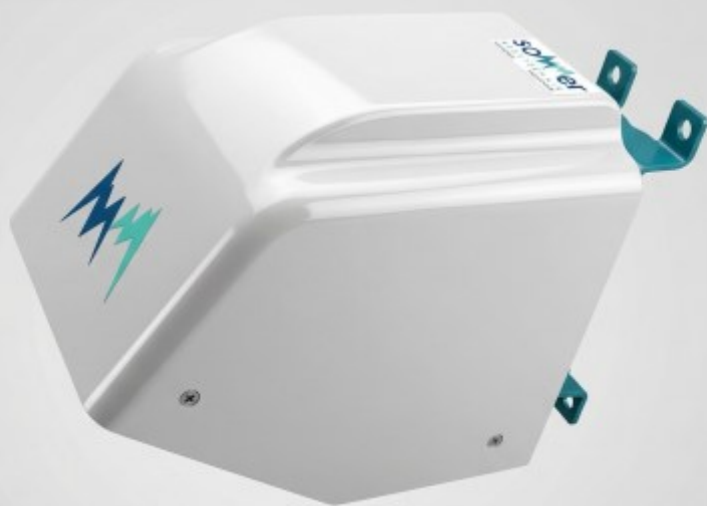
Fields of application

- ❑ Rivers, streams, open channels, pipes
- ❑ Turbulent and fast-flowing waters
- ❑ Difficult-to-access measurement sites
- ❑ Mobile flow surveys
- ❑ Temporary and spot measurements

Advantages

- ❑ Portable contact-free velocity measurement
- ❑ Suitable for high velocities and turbulent flows
- ❑ Safe operation at difficult-to-access sites
- ❑ No regular sensor maintenance
- ❑ Wireless data transmission via Wi-Fi
- ❑ Integrated self-check and data quality output
- ❑ Advanced Noise Reduction (ANR)
- ❑ Hands-free convenience and stable positioning with tripod mount option





RG-30+



Technology	Radar
Purpose	Velocity
Mobility	Stationary

The RG-30+ is a contact-free radar sensor for continuous measurement of surface flow velocity in open rivers, streams, and channels.

Installed above the water, it measures reliably without being exposed to soiling, driftwood, debris, or flood-related mechanical stress, which helps ensure maintenance-free long-term operation.

Its compact, robust design, low power demand, and standard communication interfaces make it easy to integrate into permanent monitoring systems.

Advantages

- ❑ Contact-free measurement prevents soiling and damage and eliminates routine sensor maintenance
- ❑ Simple installation on extension arms, cable ways, bridge railings, or other structures above the channel reduces structural effort in the water
- ❑ Reliable operation during high flow, flooding, turbidity, debris, and driftwood improves availability in demanding environments
- ❑ Low power consumption supports use in remote and energy-limited monitoring stations
- ❑ Integrated self-check, status and error output, advanced spectrum diagnostics, AI-supported velocity output, and Sommer ANR noise reduction support dependable data quality
- ❑ Direction recognition and a 3-point velocity calibration certificate add confidence for professional hydrological applications

Fields of application

- ❑ Open rivers, streams and small watercourses
- ❑ Open channels and canals
- ❑ Flood-prone monitoring sites
- ❑ Debris and driftwood conditions
- ❑ Long-term hydrological monitoring

Dimensions	241 x 154 x 246 mm
Total weight	2.7 kg
Protection	IP 67, IP 68 on request
Power supply	9...30 VDC; reverse voltage protection
Power consumption	Standby approx. 1 mA; active measurement approx. 140 mA at 12 VDC (default 30 s)
Operation temperature	-40...85 °C
Measurement range	Velocity: 0.08...16 m/s practical range, 0.01...20 m/s technical range
Distance to water surface	0.05...130 m
Miscellaneous	RS-485 ASCII or Modbus RTU, SDI-12, and optional 4...20 mA analog output

RQ-Family

The RQ-Family is the world-leading radar-based solution for non-contact discharge measurement. Built on over 20 years of continuous innovation, it sets the industry standard for accuracy, reliability, and ease of use in contact-free discharge monitoring.

RQ-30+	The standard standalone unit — radar surface velocity sensor, water level sensor, hydraulic model and automatic discharge calculation in one device. Available for installation heights up to 130 m
RQ-ADMS	Autonomous Discharge Measurement System — a complete all-in-one unit including velocity sensor, level sensor, data logger, data transmission, solar charger and battery. Ideal for continuous monitoring, single campaigns and emergency flood deployment
RQ-30L	Lightweight version with radar velocity sensor; connects to any existing water level sensor — the perfect upgrade for sites with level measurement already in place
RQ-30d MultiSensor	Up to eight RQ-30 units combined into one logical discharge measurement system — each monitoring a river section. Designed for sites with extreme discharge variations and inhomogeneous flow conditions

Key Advantages

- ❑ No calibration needed — the only system on the market that delivers valid measurement results from the very moment of installation
- ❑ Automated rating curve — greatly simplifies rating curve generation at the measurement site, saving significant time and cost
- ❑ Any flow condition — handles low water levels, low velocities, and high turbulence during floods with equal precision
- ❑ Alarm & trigger output — automatically sends a trigger when any flow variable exceeds or falls below a defined threshold
- ❑ EIC Algorithm — the innovative Environmental Influence Compensation Algorithm eliminates wind interference and ensures reliable data even at the most demanding sites

Measuring Principle

At the heart of every RQ system is a highly sophisticated hydraulic model that self-adjusts in real time to measured water level fluctuations and dynamically computes the relationship between surface velocity and mean flow velocity. The result: the most accurate and reliable radar-based discharge data available — with no calibration measurements required.





Technology	Radar
Purpose	Discharge
Mobility	Stationary

The RQ-30+ is a contact-free discharge measurement sensor that combines radar-based water level and surface velocity measurement and calculates discharge in real time using an advanced hydraulic model.

Installed above the water on bridges, extension arms or other superstructures, the sensor enables reliable measurement without structural work in the water. Its non-contact design supports low-maintenance, fail-safe operation, even in demanding conditions such as debris, driftwood, high water and flooding.

Advantages

- ❑ Contact-free radar measurement helps prevent soiling and damage and requires no sensor maintenance
- ❑ Automatic discharge calculation is performed inside the RQ-30+ using a hydraulic model with multiple dynamic k-factors
- ❑ AI-based machine learning compensates environmental influences and supports early error detection
- ❑ Low power consumption allows efficient operation

Fields of application

- ❑ Continuous discharge measurement in rivers, streams or open canals
- ❑ Used with known cross-section profile
- ❑ Sites exposed to debris or driftwood where non-contact measurement is an advantage
- ❑ Locations requiring reliable monitoring during high water or flooding

Dimensions	295 x 160 x 210.5 mm
Total weight	5.4 kg
Protection	IP67, IP68 on request
Power supply	9 to 30 VDC
Power consumption	At 12 VDC: standby approx. 1 mA, active measurement approx. 140 mA
Operation temperature	-40 to +85 °C
Measurement range	Water level: 0 to 15- 30 m; Velocity: 0.08 to 16 m/s practical range
Distance to water surface	0.50 to 130 m
Miscellaneous	Integrated protection against indirect lightning; reverse voltage and overvoltage protection; internal self-check; Sommer advanced noise reduction system



RQ-30 ADMS



Technology	All-in-one system
Purpose	Discharge
Mobility	Stationary

The RQ-30 ADMS is an all-in-one, autonomous discharge measurement system — compact, self-sufficient and ready to deploy right out of the box. It combines the proven non-contact flow velocity and water level sensors of the RQ-30 with an integrated data logger, solar charge controller, and rechargeable batteries — everything needed for reliable, continuous monitoring or rapid emergency deployment. Notifications by e-mail and SMS are included as standard, and an optional time-lapse camera enables visual surveillance of the monitoring site.

Advantages

- ❑ Fully autonomous, solar-powered all-in-one system — no external infrastructure needed
- ❑ Maintenance-free non-contact measurement, unaffected by debris, driftwood or turbidity
- ❑ Portable and easy to mount on bridge railings or tripods
- ❑ Integrated 2-way data communication for remote access anytime, from anywhere
- ❑ Suitable for all flow conditions, including floods and high flow velocities

Fields of application

- ❑ Continuous stationary discharge monitoring at rivers, streams and open channels
- ❑ Temporary measurement campaigns at remote or difficult-to-access sites
- ❑ Emergency flood deployment for rapid on-site installation

Dimensions	430 x 202 x 419 mm
Total weight	22.9 kg
Protection	IP 66
Power supply	Rechargeable battery 24 Ah / 12 V
Power consumption	Active operation: 150 mA; Standby: 3 mA (total system)
Operating temperature	–40 ... 85 °C
Measurement range	Water level: 0–15 m (standard) / 0–35 m (extended); Velocity: 0.08–16 m/s
Miscellaneous	Overvoltage protection, reverse power protection, lightning protection; optional time-lapse camera; up to 500,000 stored values; 2-way GSM data communication



RP-30+

Mobile discharge measurement system



Technology	Radar
Purpose	Discharge
Mobility	Portable

The RP-30 is a mobile radar profiler for contact-free discharge measurement in rivers, streams and open channels. It determines the surface velocity profile section by section and, together with known cross-section and water level data, enables accurate discharge calculation, making it especially valuable during high water and flood conditions.

Advantages

- ❑ Portable mobile measuring system
- ❑ Simple mounting on cable cranes, bridge railings or tripods
- ❑ Suitable for flood conditions and high flow velocities
- ❑ No threat from debris or driftwood
- ❑ Remote data transmission and real-time viewing via Bluetooth

Fields of application

- ❑ Rivers, streams, open channels
- ❑ Single measurement campaigns
- ❑ Project evaluation and validation of continuous measurements
- ❑ Flooding and natural hazard management

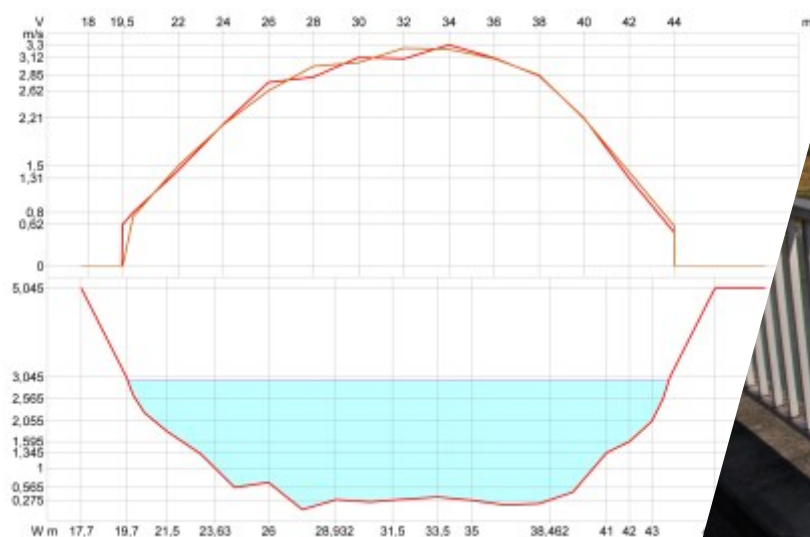
Dimensions	445 x 154 x 226 mm
Total weight	6.6 kg, excluding traveler for handrails
Protection	IP 67
Power supply	12 V / 4.5 Ah battery, up to 40 hours of operation
Power consumption	Standby 10 mA; active operation 110 mA
Operation temperature	-35 to +60 °C
Measurement range	0.1 to 16 m/s depending on flow conditions
Distance to water surface	0.50 to 130 m
Miscellaneous	Sensor stored in flight case; data transmission via Bluetooth





Measuring principle

The RP-30 measures the surface velocity distribution across the river in individual sections using non-contact radar technology. For discharge calculation, the system combines these sectional velocity measurements with the known cross-section shape and the instantaneous water level, while RP-Commander calculates the wetted area of each section and derives mean velocity from the measured surface velocity using a hydraulic model.



TQ-S/F

Mobile discharge measurement system



Technology	Tracer dilution
Purpose	Discharge
Mobility	Portable

The TQ-Tracer is a mobile discharge measurement system available in two versions: TQ-S (salt tracer) and TQ-F (fluorescence tracer). Both systems use the well-established tracer dilution method to measure discharge in turbulent rivers, creeks, and waters where cross-section profile data are unavailable or unknown. The TQ-S uses common salt (NaCl) detected by conductivity probes, while the TQ-F uses a fluorescent substance detected by optical fluorescence probes — requiring only a tiny amount of tracer material even for very high discharge volumes.

Advantages

- ❑ Simple, fully mobile discharge measurement — one person can complete a measurement
- ❑ Reliable results independent of cross-section profile knowledge
- ❑ Real-time visualisation of measurement curves and instant discharge values
- ❑ Wireless Bluetooth data transmission (up to 100 m); simultaneous measurement with up to 4 probes for immediate plausibility check
- ❑ Environmentally friendly and harmless to water



	TQ-S	TQ-F
Resolution	up to 10 m ³ /s	All discharge quantities
Tracer material	Salt	Fluorescein/Rhodamine
Protection	IP66	
Operation temperature	TQ-Amp: -20...+60 °C; Probes: 0...+50 °C	
Operating time with 4x2500 mAh batteries	Approx. 40 h	Approx. 25 h
Miscellaneous	Bluetooth class 1 (up to 100 m), internal memory 8 MB, TQ-Commander software	



Fields of application

- ❑ Fast-flowing, turbulent mountain streams, small brooks, and tributaries with complex cross-sections
- ❑ Shallow rivers where most conventional instruments fail to deliver reliable results
- ❑ Fish passes and other structures with limited access
- ❑ Hydrometry, engineering offices, and civil engineering project evaluations
- ❑ Discharge control measurements and hydro-power plant monitoring
- ❑ Waters where cross-section profile data are unavailable or difficult to obtain

Measuring principle

The measurement is based on the tracer dilution method with instantaneous feed. A known quantity of tracer material is rapidly added to the water. The tracer travels downstream, mixes thoroughly with the water current, and forms an elongated cloud. At a defined point further downstream, the probes continuously record the tracer concentration. From the resulting concentration–time curve, the system automatically calculates the discharge — no cross-section profile or water level information is required.

High turbulence, varying cross-sections, and rocks along the mixing path all actively support the process and improve measurement accuracy.



Water Level

Water level is one of the most critical parameters in hydrology, water resource management, and flood early warning. Sommer Messtechnik offers three proven technologies — **radar, ultrasonic, and pressure** — each optimally matched to specific site conditions and application requirements.

Compact Radar Level Sensor – SOMLEVEL

It is the ideal radar sensor for all standard applications: rivers, channels, pumping stations, industrial liquid handling, rain overflow basins, and lakes. Its compact design ensures reliable performance regardless of temperature, humidity, flood conditions, or turbid water.

Ultrasonic Water Level Sensor – USH-9

The USH-9 is a maintenance-free, non-contact ultrasonic sensor for continuous water level monitoring — especially suited for extreme weather conditions. An integrated temperature compensation automatically corrects the ultrasonic signal speed, delivering a measurement accuracy of 0.1% of full scale (FS).

Pressure Probe – PTM

The PTM is submerged in water and measures level, depth, or pressure using an integrated controller and a piezo pressure cell. Its stainless steel or titanium housing and rugged cable make it ideal for challenging environments: sloped banks, narrow pipes and boreholes (from 1" Ø), dams, irrigation systems, and brackish or salt water.

SOMLEVEL

Contact-free water level
measurement



Technology	Radar
Purpose	Level
Mobility	Stationary

The SOMLEVEL-8 /15/30 radar level sensors provide highly accurate, contact-free water level measurement without direct contact to the medium. These compact and maintenance-free devices use radar technology to determine the surface water level from a distance, making them reliable tools for fixed installations in rivers, channels, canals, basins or tanks. The sensors are designed for integration into existing measurement systems and support industrial and environmental monitoring applications.

Measuring principle

SOMLEVEL sensors emit a high-frequency microwave impulse (80 GHz) towards the water surface. The water reflects the pulse back to the sensor, and the run-time of the reflected signal corresponds to the distance between sensor and surface. This distance is converted into the current level measurement.

Advantages

- ❑ Contact-free, maintenance-free operation
- ❑ Compact design for easy installation
- ❑ High accuracy across multiple ranges
- ❑ Independent of environmental influences such as wind or temperature
- ❑ Easy integration with existing systems and data loggers
- ❑ Flexible interfaces:
4...20 mA, SDI-12, RS-485 Modbus

USH-9

Contact-free water level measurement



Technology	Ultrasonic sensor
Purpose	Level
Mobility	Stationary

The USH-9 is a maintenance-free ultrasonic sensor for the precise, continuous, and non-contact measurement of water levels. It sends out several consecutive impulses and detects the signal reflected at the water surface — from the transit time, the USH-9 directly calculates the water level. With its robust, sealed ceramic membrane and integrated electronics, the sensor delivers reliable data even in the most demanding environments and extreme weather conditions.

Fields of Application

- ❑ Continuous water level monitoring in rivers, streams, lakes and channels
- ❑ Hydrological warning services and flood monitoring
- ❑ Water resource management and environmental research
- ❑ Energy sector applications such as hydropower plant monitoring
- ❑ Road weather monitoring systems for precipitation and surface condition detection
- ❑ Remote monitoring stations in alpine or difficult-to-access locations.

Advantages

- ❑ Continuous, non-contact measurement — no interference with the water surface
- ❑ Maintenance-free sealed ceramic membrane, resistant to ice, precipitation and extreme conditions
- ❑ Integrated temperature compensation for high measurement accuracy of 0.1% FS
- ❑ Intelligent spectrum analysis filters out interfering reflections caused by rainfall or snow
- ❑ Energy-saving sleep mode with ultra-low standby consumption — ideal for solar-powered stations

Dimensions	Ø 180 × 320 mm
Total weight	1.2 kg
Protection	IP66 (housing & cable connectors), IP68 (ultrasonic head)
Power supply	9–28 VDC
Power consumption	Sleep mode: 0.4 mA Active measurement: ≈ 40 mA (max. 300 mA for 0.05 s)
Measurement range	0–10 m; near blanking distance 0.7 m; resolution 1 mm; accuracy max. 1 cm / typically 0.1% FS
Miscellaneous	RS-485 (ASCII & Modbus RTU), SDI-12, and 2× analog 4–20 mA (14-bit) interfaces



Technology	Probe
Purpose	Level & temperature
Mobility	Stationary

The PTM measures water level using the hydrostatic pressure principle. A temperature-compensated piezo membrane sensor detects the pressure created by the water column above the probe and converts it into a level value. Water temperature is measured simultaneously. Measurement data are transmitted digitally via the SDI-12 interface to a connected data logger or monitoring system.

The PTM determines water level using the hydrostatic pressure principle. A temperature-compensated piezo membrane sensor measures the pressure generated by the water column above the probe and converts it into a level value.

Dimensions	Ø 24 × 160 mm
Total weight	~200 g
Housing	Stainless steel, 1.4404 (DIN EN)
Power supply	8 ... 30 VDC
Power consumption	Active < 6 mA; standby < 0.5 mA (12 V)
Operation	-10 ... +80 °C
Interfaces	SDI-12, analog output 4...20 mA
Measurement range	0 ... 10 m / 0 ... 1 bar, different range — on request

Advantages

- ❑ High measurement accuracy at 0.05% FS
- ❑ Long-term stability and low energy demand for extended operation
- ❑ Digital SDI-12 interface simplifies data integration
- ❑ Compact and robust stainless steel housing
- ❑ Simultaneous level and temperature measurement

Fields of application

- ❑ Hydrology monitoring
- ❑ Meteorological stations
- ❑ Hydropower facilities
- ❑ Sewage and wastewater systems
- ❑ Industrial and mining applications



NIWA-214/415



The NIWA is innovative, high-quality weighing precipitation gauge designed for year-round measurement of liquid, solid, and mixed precipitation. With integrated heating, a robust all-metal construction and no moving parts, they deliver long-term stable and repeatable results — even in the harshest environments.



	NIWA-215	NIWA-415
Dimensions	Ø 385 × 650 mm	Ø 385 × 610 mm
Accuracy of amount	0.025mm	0.0125mm
Threshold intensity	0.05mm/min	0.025mm/min
Total weight	9.5 kg	
Protection	IP65	
Power supply	5 ... 30 VDC, I max. 4 mA @ 12 V	
Operation temp.	-40 ... +70 °C	
Measurement range	1500 mm	750 mm
Miscellaneous	RS-485 & SDI-12 output	

Advantages

- ❑ Exceptional accuracy of $\pm 0.1\%$ with a resolution of 0.001 mm, thanks to an advanced high-resolution load cell
- ❑ Ultra-low power consumption of less than 45 mW, making it ideal for solar-powered and remote installations
- ❑ No moving parts — simple mechanical design ensures long-term reliability and minimal maintenance
- ❑ Intelligent heating control based on temperature settings and rain events keeps energy use low even in winter

MR3

The MR3 is a compact tipping bucket rain gauge designed for the precise, continuous recording of rain quantity and intensity. With a large catchment area of 500 cm², the MR3 meets WMO standards and delivers reliable precipitation data in a robust, field-ready housing. For year-round operation in cold climates and alpine regions, the heated version MR3H is available.



	MR3	MR3H
Dimensions	347 × 278 mm	
Total weight	4.25 kg	4.5 kg
Protection	IP65	
Power supply	-	42 ... 46 V AC
Operation temp.	+2 ... +60 °C	-20 ... +60 °C
Measurement range	0 ... 500 mm/h, resolution 0.1 mm	
Miscellaneous	pulse-switching contact output	

Advantages

- ❑ 500 cm² catchment area with 0.1 mm resolution
- ❑ Available in a heated version for all-year operation in cold and alpine environments
- ❑ Simple pulse output for easy integration with any data logger
- ❑ Compact and robust design with IP 65 protection

HDI



The HDI is an extremely robust, fully sealed, and maintenance-free acoustic hail sensor built for reliable long-term deployment in the harshest environments. It features a 200 mm diameter omnidirectional stainless-steel sensing disc that houses all electronics, with no mobile parts — ensuring outstanding durability and minimal upkeep. For even greater convenience, Sommer also offers the Hail Watcher — a ready-to-deploy Plug & Play monitoring station that combines the HDI sensor with a data logger, modem, solar panel, and battery, enabling immediate installation straight out of the box.

Advantages

- ❑ Maintenance-free design resistant to extreme winds, temperatures, rime, UV/ozone, abrasion, vibration, lightning, humidity, insects, and even temporary submersion
- ❑ Very low power consumption
- ❑ Plug-and-Play setup with full configurability via included USB dongle — no specialist knowledge required
- ❑ Compatible with virtually any external analog or digital central unit

Fields of Application

- ❑ Hail damage monitoring in agricultural fields and greenhouses
- ❑ Protection assessment for building infrastructure — facades, roofs, and solar panels
- ❑ Research and meteorological stations requiring precise lithometeor detection
- ❑ Natural hazard early warning and insurance risk monitoring
- ❑ Integration into autonomous, solar-powered remote monitoring stations via Hail Watcher



Dimensions	260 × 450 × 200 mm (including mounting arm)
Protection	IP 67
Power supply	Via external central unit; cable extension up to ~200 m
Power consumption	2.1 mA continuous (10% duty cycle) / 21 mA continuous operation
Operation temperature	–40 °C to +80 °C (–50 °C to +100 °C extended)
Measurement range	Hailstone size 0.5–7.5 cm; up to 25 hits/second; 15 size classes
Miscellaneous	RS-232, SDI-12, pulse and voltage output

MRL-8 / MRL-IE

Weatherproof data
loggers with integrated
data transmission



Technology	Datalogger
Purpose	Depends on the sensor
Mobility	Stationary

The MRL-8 is a weatherproof, battery-operated data logger with integrated 4G modem for collecting, processing, storing and transmitting environmental monitoring data. Combined with the MRL-IE input extension module, the system delivers a complete, scalable data acquisition solution for the most demanding field conditions.

Advantages

- ❑ Compact and robust data logger for long-term operation
- ❑ Waterproof housing for outdoor installations
- ❑ Integrated mobile modem for remote data transmission
- ❑ Low power consumption for autonomous operation
- ❑ Wide range of sensor inputs and interfaces
- ❑ Integrated solar charging support

MRL-8	
Dimensions	180 × 150 × 61/91/101 mm
Total weight	1.61 kg
Protection	IP67
Power supply	9...28 VDC; solar panel supply up to 40 W / 12 V
Power consumption	Active < 23 mA @ 12 V; standby < 0.6 mA @ 12 V
Operation temperature	−30 ... +60 °C
Interfaces	4x Analog, 2x Counter, Wind speed, Wind direction, 3x Switch output, RS-485, RS-232, USB, Bluetooth
Miscellaneous	8 MB internal memory, 2-5G modem, satellite radio

Fields of Application

- ❑ Hydrological and meteorological monitoring stations
- ❑ Surface water and groundwater level monitoring
- ❑ Water resource management — reservoirs, dams, irrigation systems
- ❑ Flood early warning and natural hazard management
- ❑ Industrial and agricultural environmental monitoring

HDL-10

Portable measurement solution

The HDL-10 is a mobile data logger designed for temporary measurements and small measurement campaigns. It features rechargeable batteries and a USB-C interface for both data read-out and charging. The device focuses on simplicity and user-friendliness: SOMMER HDL-10 probes can be connected via plug-and-play and are automatically recognized through the device menu. Measurement data are recorded at a one-second interval and can be transferred to a PC via USB-C. When all connectors are connected, the handheld unit is IP68 protected.



Advantages

- ❑ Mobile data logger for temporary and field measurements
- ❑ Plug-and-play connection of HDL-10 probes
- ❑ One-second measurement and storage interval
- ❑ USB-C interface for data read-out and charging
- ❑ Numerical values and time series displayed on the device

Probes

- ❑ Pressure measurement with air hose inside
- ❑ Conductivity measurement
- ❑ Fluorescein or Rhodamine measurement
- ❑ PH*
- ❑ Turbidity*
- ❑ Velocity* (Ultrasonic based with PV)
- ❑ Temperature (PT1000)*
- ❑ Air Temp and Humidity and Air Pressure*

*Currently in development.

Fields of application

- ❑ Temporary field measurements and short-term monitoring
- ❑ Mobile discharge measurements without permanent stations
- ❑ Hydrology and surface water monitoring
- ❑ Groundwater and wastewater measurements
- ❑ Harbors, river authorities and hydropower plants



PD-5/MINI



The PD-5 and PD-Mini are compact, submersible data loggers designed for reliable, long-term monitoring of groundwater wells — even under extreme conditions such as intense heat, cold, or high humidity. Both devices record water level and temperature using a high-grade stainless steel housing rated IP 68, and fit into standard level pipes from 1" to 6". Where the PD-Mini focuses on simple, cost-efficient standalone monitoring with wireless data download, the PD-5 goes further — measuring up to four parameters simultaneously and automatically transmitting data via GPRS, complete with optional alarm management.



Advantages

- ❑ Compact, watertight stainless steel housing — flood-proof and built for long-term field deployment
- ❑ Automatic barometric pressure and temperature compensation as standard — no cartridges needed
- ❑ Exceptional battery life
- ❑ Flexible data retrieval

Fields of Application

Both devices determine water level by hydrostatic pressure measurement via a submersible pressure probe. Barometric pressure fluctuations are automatically compensated as standard, with no drying cartridges required — the probe cable features a UV-resistant polyurethane mantle with Kevlar core and an inside air hose for pressure equalisation.

Fields of Application

- ❑ Continuous groundwater level monitoring in level pipes and wells (1" to 6")
- ❑ Hydrography and water resources management
- ❑ Measurements in open water, springs, water reservoirs and tanks
- ❑ Remote or hard-to-access sites requiring autonomous, long-term data recording

	PD-Mini	PD-5
Measured parameters	Water level (water column, up to 100 m, selectable)	Water level, temperature, conductivity, pH-value, turbidity (optional)
Memory	Up to 200,000 measurements	2 MB flash, up to 190,000 measurements
Interface	Output: USB wireless (433 MHz)	Output: RS-232 or USB; Input: 2× RS-485 Modbus or 1× analog 4–20 mA
Data transmission	—	GSM / GPRS
Power supply	integrated lithium cell	alkaline or lithium batteries size C
Measurement interval	Freely adjustable, 1 second to 99 days	
Installation – level pipe	From 1" to 6"	From 2" to 6"
Housing material	High-grade stainless steel V4a	High-grade stainless steel 1.4301 / high-grade plastic end cap (RF shielding)
Protection rating	IP 68, flood-proof up to 1 m water column	

CTP-2/5

Conductivity is the first and most revealing indicator of water quality — it reflects changes in the water almost instantly. The CTP-2/5 is a precision probe for continuous conductivity and temperature measurement, equally at home in demanding environmental fieldwork and industrial processes. Its elegant stainless steel design is not just robust and beautiful — it guarantees long-lasting, reliable operation in any type of water, from clear mountain streams to turbid industrial wastewater.

Dimensions	Ø 27 × 250 mm
Power supply	10 ... 14 VDC
Power consumption	max. 100 mA
Operation temperature	-40 ... +80 °C
Interfaces	2× analog output 4...20 mA
Measurement range	0 ... 5.000 µS



Advantages

- ❑ Continuous, simultaneous measurement of both conductivity and temperature with a single probe
- ❑ Wide measurement range with 1.5% linear accuracy across the full range
- ❑ Four-electrode design reduces the influence of dirt, sediments and long cables on results
- ❑ Built-in temperature compensation — no post-processing needed
- ❑ Galvanic separation ensures clean signal transmission, shielded from power supply interference and external noise

VDM-100

The VDM-100 is dedicated evaporation sensor, designed to accurately determine the evaporation rate. The sensor outputs a current signal proportional to the water level position of the float, making it directly compatible with virtually any standard data acquisition system. Housed in a weather-proof enclosure, it delivers dependable, long-term performance under outdoor conditions.

Dimensions with cap	Ø 85 × 625 mm
Total weight	~2 kg
Power supply	12 V ±5%
Operation temperature	0 ... +50 °C
Interfaces	analog output 4...20 mA
Measurement range	100 mm ±0.05 mm

Advantages

- ❑ High resolution of 0.1 mm
- ❑ High-precision inductive measurement — reliable and drift-free
- ❑ Continuous, uninterrupted water level monitoring
- ❑ Easy to mount and operate

Competence in Measurements

Sommer Messtechnik is your trusted partner — not only for cutting-edge hydrological and meteorological measurement systems, but also for a full range of expert services tailored to your project needs.

Our Services

We offer flexible, customer-specific support:

- ❑ **Custom & single measurements** — on-site, professionally executed
- ❑ **Equipment rental** — test before you invest
- ❑ **System demonstrations** — see performance first-hand
- ❑ **Workshops & training courses** — build expertise within your team

Full Service Scope

Every engagement includes:

- ❑ Site assessment and planning
- ❑ Continuous or temporary measurement campaigns
- ❑ Data evaluation and comprehensive measurement report

Costs are individually tailored to the type, scope, and location of the measurement project.

Available Systems

Depending on site conditions, we deploy the right instrument for the job:

- ❑ HSR-10 — handheld radar sensor
- ❑ TQ-Tracer — tracer dilution method
- ❑ RQ-30+ — stationary discharge measurement
- ❑ RP-30 — mobile discharge measurement
- ❑ ADCP — boat-based measurement
- ❑ FlowTracker — alternative to current meters



Workshops & Training

What are the best methods for discharge measurement? What are the pros, cons, and limits of each system? How do you correctly apply the tracer dilution method? These and many more hydrographic topics are covered in our regular training courses and workshops.

Upcoming dates and details at [sommer.at](https://www.sommer.at)

www.sommer.at



Sommer Messtechnik

Straßenhäuser 27,
6842 Koblach, Austria
+43 5523-55989
office@sommer.at