



## FlowSens/FlowFlat

Mobile discharge measurement in rivers, channels, sewer flow, fresh-, waste- and saline water

- Portable measuring instrument with a magnetic inductive flow sensor for mobile flow measurement on a  $\varnothing$  20mm wing rod
- Point measuring method (detection of point velocities in the measuring verticals)
- Battery-powered handheld terminal with a large LCD and operated by keypad
- FlowFlat sensor for use from 5 cm water level (optional)

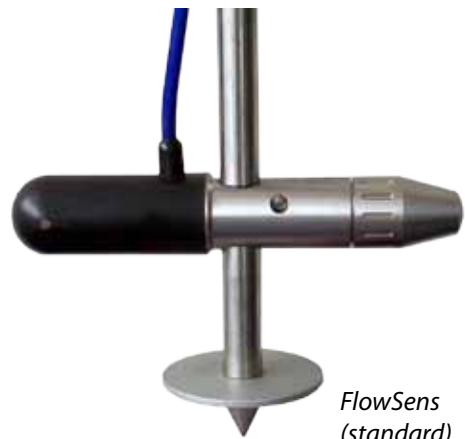




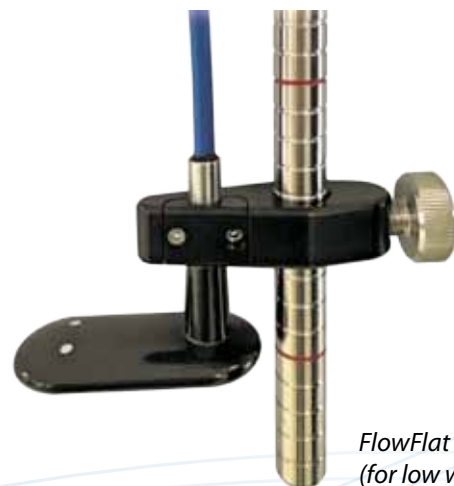
## Description

We have applied years of experience in electromagnetic technology to the mobile magnetic-inductive flow meters FlowSens and FlowFlat. These small solid-state sensors have been designed specifically for use in open channels, where fouling by weed or sewage can be a problem. Our knowledge has ensured that the sensors are high precision instruments, which can be relied upon to give accurate readings. Both have an accuracy of  $\pm 0.5\%$  of reading, a wide measurement range of  $\pm 5$  m/sec and can be used in only 5 cm (FlowFlat), or 15cm (FlowSens) of water. The instruments are unaffected by changes in conductivity and can be used in a range of fluids, including fresh and waste water, salt water or foodstuffs.

The digital control unit, supplied with the instruments, gives readings of velocity (realtime and average), standard deviation and allows full sampling and averaging setup and logging of data. For field use the rugged case protects the probe and surface unit, and the tough canvas bag means that the wading set is easily carried. The electromagnetic flowmeter is based on Faraday's law of induction, that a conductor (water or any other conducting fluid) moving in a magnetic field (produced by a coil in the sensor) produces a voltage (measured by a pair of electrodes). The sensors measure flow above the sensor head in 5 cm or more fluid, along a single axis. The flow rate is indicated on the control unit, which can also log the data up to a maximum of 1000 records. The control unit is also used to set-up many other parameters such as the sampling and averaging periods. The logged data can be easily exported to a PC, using RS232 communications.



*FlowSens  
(standard)*



*FlowFlat  
(for low water measurements)*



## Technical Data Control Display Unit

<b>Display of:</b>	Real time flow, average flow, standard deviation of flow in average, count down of time in average period, average mode and period, data record number and series, date, time and low battery.
<b>Average modes:</b>	moving, fixed or free running (multiple fixed)
<b>Average period:</b>	user selectable, 1-999s
<b>Memory:</b>	up to 1000 readings
<b>Display resolution:</b>	0.001m/s
<b>Display update:</b>	1 Hz
<b>Unit:</b>	m/s or ft/s
<b>Backlight:</b>	switchable on/off
<b>Calibration Setting:</b>	enables user to input zero and gain for particular unit after calibration
<b>Hydrodynamical calibration:</b>	enables user to input non-linearity of sensor after calibration
<b>Acoustic signal:</b>	switchable on/off
<b>Dimensions:</b>	244 mm x 163 mm x 94 mm
<b>Weight:</b>	2 kg
<b>Housing:</b>	Die cast ABS IP 67 with carry strap
<b>Operation Temperature:</b>	-5° to 50°C
<b>Storage Temperature:</b>	-10° to 70°C
<b>Interface:</b>	RS 232, Realtime- and logged data output: average flow, standard deviation, date, time. Real time data is output at the end of every averaging period.
<b>Power Supply:</b>	8 C cells (Alkaline), 25 h measuring time without, or 17 h with backlight.

# Technical Data FlowSens

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<b>Accuracy:</b>	±0.5% reading plus zero drift
<b>Measuring range:</b>	-5 to +5 m/s (calibrated for positive flow only)
<b>Zero Drift:</b>	<0,005 m/s
<b>Min. Depth:</b>	15 cm
<b>Sensing Volume:</b>	approx. 12cm around sensor
<b>Material:</b>	stainless steel and PU
<b>Cable:</b>	PU 5m (standard) max. 100m
<b>Operation Temperature:</b>	-5°... +40°C
<b>Storage Temperature:</b>	-10°...+70°C

# Technical Data FlowFlat

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<b>Accuracy:</b>	±0.5% reading plus zero drift
<b>Measuring range:</b>	-5 to +5 m/s (calibrated for positive flow only)
<b>Zero Drift:</b>	<0,005 m/s
<b>Min. Depth:</b>	5 cm
<b>Sensing Volume:</b>	Cylinder (10mm high) Ø20mm
<b>Material:</b>	PU
<b>Cable:</b>	PU 5m (standard) max. 100m
<b>Operation Temperature:</b>	-5°... +40°C
<b>Storage Temperature:</b>	-10°...+70°C

*The right is reserved to change or amend the foregoing technical specification without prior notice.*

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