

SENSA Water Velocity Meters

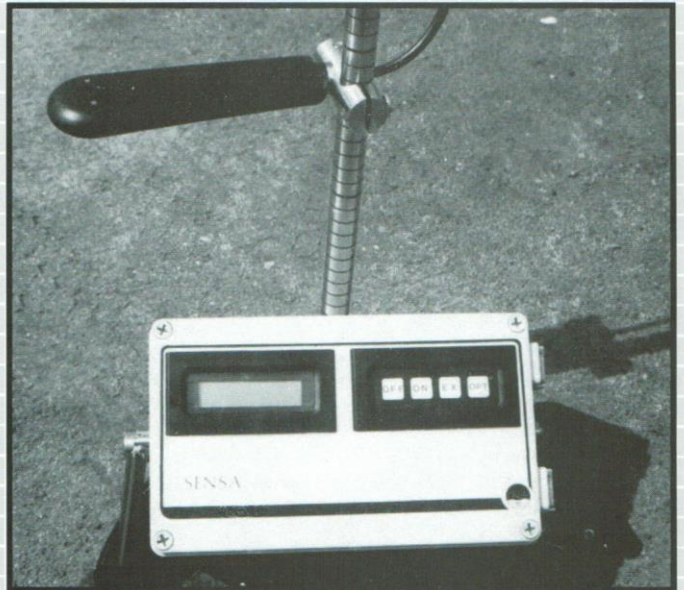
Our SENSE-series Water Flow/Velocity Meters are based on the Faraday principle of electro-magnetic induction, offering exceptionally persistent high performance characteristics including digital display, have no moving parts, and are made for maintenance-free and 'calibrated for life' use.

Principally, there are four SENSE series offering a choice of about 14 individual model combinations — from a simple manually operated unit, to a fully automated, self-contained, multi-parameter data gathering and logging station, with telemetry and satellite link-up possibilities. Each instrument is designed accordingly for a specific monitoring task for short or longer periods of time, covering applications in open channels, closed conduits and sewers, or for measurement of offshore sea-currents.

Compared to other similar equipment, and especially conventional rotating element and ultrasonic type fluid velocity meters, the advantages offered by SENSE designs, as experienced from their world-wide use since the early eighties, are numerous. For example:

- Wide choice of velocity ranges, from -8 m/sec to $+8$ m/sec, via genuine zero.
- Inherently bi-directional, with automatic reverse-flow indication.
- Exceptionally renowned for high sensitivity (1 mm/sec) and suitability for very shallow (from 2cm deep) and sluggish flows (5mm/sec or less).
- Stable, software controlled 'zero', with user operated 'fine-tuning-in' facility.
- Equally accurate in clean or dirty water, and unaffected by variations in fluid temperature, density and suspended sediment concentration.
- Very robust, small appropriately sized probe, permitting operation close to fluid surface and channel-bed, or pipeline wall, with low vulnerability to fouling by weeds in rivers, or to ragging-up in sewers.
- Unaffected by nearby power lines, motors and similar appliances.
- No specific limits regarding cable lengths, thus making full cable way operation possible.
- Applicable for flow-velocity measurements of any conducting fluid (eg milk, beer, wine, foodstuffs, etc).

A wide selection of accessories suited for various application and deployment requirements are available on request, with the relevant items listed in corresponding price lists.



In addition to portable SENSE-series Water Flow/Velocity Meters, AQUA DATA Ltd also manufacture and supply very comprehensive, fully automated and long-term deployable stationary type river-flow and sea-current gauging installations patented and known as the SENSANET systems.

(NOTE: The Company reserves the right to amend given specifications at any time without prior notice.)

AQUA DATA

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SENSA - RC2

SURFACE UNIT

Polycarbonate case, with shoulder straps, LCD display and operating key-pad in a choice of four languages (English, French, German or Spanish), and fittings for velocity probe, RS-232 output and in-situ battery charging connections. User selectable Manual or Auto modes, offering continuous or averaged readings over eight different time intervals as standard.

Velocity Range	Calibrated from 0.000 m/sec to 4.000 m/sec, with automatic indication of flow reversal.	
Resolution	VELOCITY RANGE	RESOLUTION
	0.000-0.200 m/s	0.001 m/s
	0.200-0.400 m/s	0.002 m/s
	0.400-2.000 m/s	0.01 m/s
	2.000-4.000 m/s	0.02 m/s post-
Averaging Intervals	2, 5, 10, 15, 20, 30, 40 and 60 seconds as standard (other intervals available optionally)	
Accuracy		
Zero Offset	+ 0.5% + 5 mm/sec (or better)	
Power Supply	Inherently very stable zero, with User activated 'check-up' and 'fine-tuning-in' facility as standard.	
Dimensions and Weight	10 x C-size 1.5V alkaline batteries, with up to 36 hours of 'non-stop' operating life supplied as standard.	
Environmental	H 105 mm x D 140 mm x W 225 mm. Weight 2.02 Kg (or 4'4lb) with batteries.	
Options Available	Sealed to IP 67	
	Operating Temperatures	-5°C to +40°C
	Storage Temperatures	-20°C to +50°C
	Rechargeable Batteries Battery Charging Unit	

VELOCITY PROBE — RV2

Hydrodynamically shaped and moulded in bright coloured epoxy resin, with titanium electrodes and 3 m long built-in polyurethane sheathed cable and plug to Surface Unit, as standard. Resistant to most impurities found in measured fluids.

Sampling Rate and Calibration	All probes are calibrated for life, with a sampling rate of every 1/2 second (following initial 'settling' time).	
Dimensions and Weight	Length 185mm x width (max) 50mm X Height (max) 20mm. Weight (without cable and plug) 0.22kg (or 1/2 lb).	
Environmental	Fluid temperature	-5°C to +70°C
	Storage temperature	-20°C to +70°C
Options Available	Longer built-in cable with probe. Extension cables from probe to the surface unit.	

ACCESSORIES FOR SENSA - RC2

- Standard Wading Rod Kit
- Attachments for use in sewers and conduits
- Hard-top type Carrying Case
- Field type Carrying Case (soft), with shoulder straps
- Extra Rods
- Purpose made implements by request and agreement

SENSA - RC3

SURFACE UNIT

Polycarbonate case with shoulder straps, LCD display and operating key-pad in a choice of four languages (English, French, German or Spanish), plus fittings for velocity probe, RS-232 output and battery charging connections, including built-in Internal Memory of 128 K and correspondingly tailored software offering Manual or fully Automated User Selectable Measurement and Data Logging Strategies, with telemetry link up possibilities (optional).

Velocity Range	From -8 m/s to +8 m/s, with automatically indicated flow-reversal (calibrated for positive flow direction only).
Resolution	1 mm/sec over specified velocity range.
Zero Offset	Inherently very stable zero, software controlled and adjustable.
Accuracy	a) Better than + 0.5% + 0.005 mm/s (for 0.000 m/s to 4.000 m/s range). b) Better than + 1% ± 0.005 mm/s (for 4.000 m/s to 8.000 m/s range).
Averaging Intervals	As standard 2, 5, 10, 15, 20, 30, 50, 60, 100 and 120 seconds, selectable in combination with Manual, Auto and Delayed Action Operation Modes (other time intervals available optionally).
Data Logger	Built-in, with 128 K non-volatile memory and easy to use software menu layout, offering Manual, Auto (attended or unattended) and Delayed Activation choice of User selectable operating modes. (Detailed Operating Facilities Listing available on request.)

Data Retrieval	Via built-in RS-232 output offering real-time and post- measurement data transmission and unloading to external computer, either in-situ or via telemetry or satellite link-up facilities (optional).
Additional Inputs	As standard, built-in facility for two extra analogue inputs (sockets fitted optionally).
Power Supply	10 x D-size 1.5V alkaline batteries providing over 600 hours of 'non-stop' operating life, are supplied as standard,
Dimensions and Weight	Length 270 mm x depth 130 mm x width 180 mm. Weight, with batteries, about 3.30 Kg.
Environmental	Sealed to IP 67
	Operating Temperatures -10°C to +50°C
	Storage Temperatures -20°C to +60°C
Options Available	Rechargeable Batteries Battery Charging Unit

VELOCITY PROBE - RV3

Hydrodynamically shaped and moulded in bright coloured epoxy resin, resistant to most impurities found in measured fluids, with titanium electrodes and 6m long built-in polyurethane sheathed cable and plug to surface unit.

Calibration and Sampling Rate	All probes are calibrated for life, with 1/2 second sampling frequency (following initial 'settling' period).
Interchangeability	All SENSA-RV3 probes are interchangeable within SENSA-RC3 and SENSA-RMX series.
Dimensions and Weight	Length 185 mm x width (max) 50 mm x height (max) 20 mm. Weight (without cable and plug) 0.22 Kg.
Environmental	Fluid Temperatures -5°C to +70°C
	Storage Temperatures -20°C to +70°C
Options Available	Longer built-in cable with the Probe(s). Extension cables from probe to the surface unit.

ACCESSORIES for SENSA - RC3 AND SENSA — RMX SERIES

Similar choice to SENSA - RC2 SERIES.

PLEASE, ASK ALSO FOR OTHER MODELS

SENSA-RMX	Similar to SENSA-RC3, but for deploying up to 6 velocity probes operated from a single Surface Unit (with depth sensor available as an option).
SENSA-D	Especially configured for applications in conduits and sewers, under manning-free, longer term mode. Similar in specification to RC3 and RMX models, but with bi-directionally fully calibrated probe and depth sensor as standard.
SENSA-S	Cable suspended version for applications from boats, bridges, conventional cable-way installations, etc. Similar in performance and characteristics to SENSA-RC3, RMX and D versions, with depth sensor and hydrodynamically self-aligning velocity probe as standard. Inclusion of velocity direction sensor, and selection of sinker weights available as an option.
SENSANET	A fully automated, microprocessor controlled system for long term, real-time stream flow gauging, consisting of a number of submerged gauging 'strings' (flexible or rigid), anchored to the river or sea bed along a chosen cross-section, and connected to a 'shore' station, with telemetry and/or satellite link up facilities, including additionally available analogue input channels for water quality monitoring.

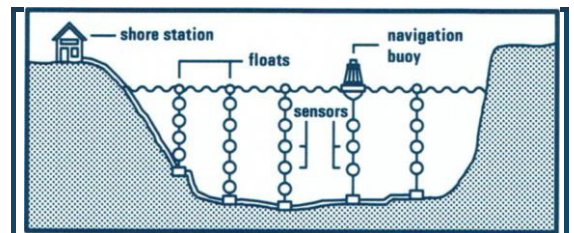
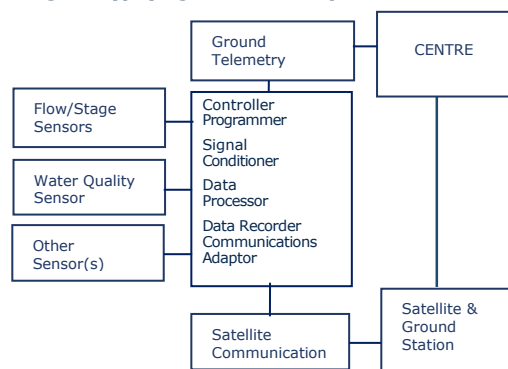


Diagram typifying SENSANET capabilities



FOR FURTHER DETAILS AND PRICES, PLEASE ENQUIRE AT OUR ADDRESS OVERLEAF.