Fluvia

Electromagnetic water velocity meter

- Electromagnetic sensor unaffected by temperature variations, density changes, sediment and water clarity
- IP67 environmental rating
- Recording of up to 12,000 data points
- Multi-lingual – English, French, German, Dutch, Danish and other languages on customer request
- GPS, Bluetooth and GSM (cellular network) support

Summary

The FLUVIA electromagnetic water velocity meter is a portable device that measures the velocity of water to determine its flow.

The user interface for the FLUVIA has been designed to be as simple as possible enabling users to quickly and effectively take accurate velocity measurements. The unit's IP67 rating and sturdy build means that the FLUVIA can be used in harsh environments, with the added feature of the waterproof encoder allowing easy navigation even with gloves on.

The FLUVIA can be tailored to the user's ideal setup, meaning the units, date and time, language and data logging methods are easily changeable. An optional extra of GPS is also available which would auto set the time as well as provide accurate location information for each data point.

Its hydrodynamic shape and small size probe permits measurements close to fluid surface and channel bed or pipeline wall, and with no moving parts, it does not retain debris, guaranteeing accuracy and reliability.

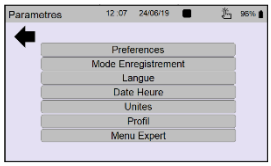
Another feature of the FLUVIA is the ability to profile rivers. If depth data is entered by the user, the unit is capable of generating a computed river flow profile, allowing more detailed analysis of the river. The FLUVIA allows users to not only transfer data to a computer but also to analyse on the fly. The unit is capable of storing collected data, which can then be reviewed on-site. Areas include:

- **Rivers and streams**
- **Irrigation canals**
- **Water channels**
- **Sanitation pipes**
- **Open channel**

Features

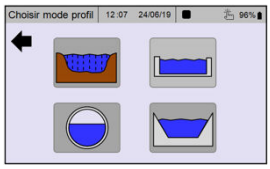
Settings

Quick and easy to configure the device's various functions through a menu, allowing the user to set unit measurements time filters and recording preferences.



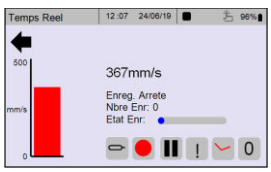
Flow profile calculation

Flow calculation from dimensions, water height and velocity points, calculated according to ISO748:2007



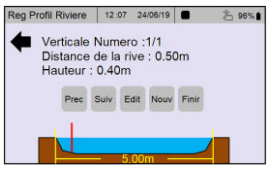
Measurement and registration

Real-time velocity readings with timestamps attached. Recording can be enabled and disabled. Adjustable zero offset.



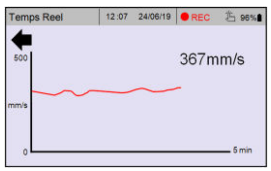
River profile

Assists the operator in taking up to 30 vertical sections containing up to 6 different readings which can be exported.



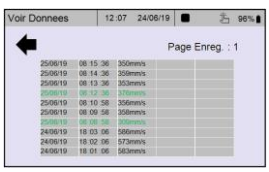
Visual representation

Features graphical representation of velocity readings over an adjustable time window.



Reading data

Displays saved velocity readings with the ability to transfer them to a PC via RS-232 or SDI 12.



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Technical features

Electronic box FLUVIA	
Construction	Polycarbonate case, IP67
Display	Colour, LCD, touchscreen, 5''
Encoder	Waterproof, 22mm dia. knob
Range	0 – 3m/s, 0 – 6m/s (option) flow reversal indication
Recording	Manual or automatic, 12,000 data points 32 river profiles, 30 vertical sections max. Files in .csv or .xml format
Profiles function	ISO748:2007 flow calculation **Circular, rectangular and trapezoidal:** Option to take 1 point, 3 points or 0.9x Vmax at the centre of the channel. It is possible to accumulate several speed measurements per point. Final calculation of average velocity and flow profile. **River:** Verticals at locations of the operator's choosing, specifying position, bank width and depth. At each vertical the user may take a number of point readings (1, 2, 3, 5 or 6). The user has the option of accumulating several speed readings per point. Final calculation of average velocity and flow profile. It is possible to record each vertical and export it.
Battery power	Lithium-ion rechargeable battery
Battery life	Standard : 20hrs continuous usage (30 hours with reduced backlight)
PC Interface	RS-232 or SDI 12
Dimensions	191 x 126 x 60mm
Weight	1.0kg with batteries
Temperature	-20 to +60ºC
Options	GPS, Bluetooth, GSM

Transport case	
Function	FLUVIA's sturdy and waterproof storage case, with probe slot, charger, general wading rod accessories.
Dimensions	464 x 366 x 176mm
Weight	5kg with FLUVIA and its probe, without wading rod
Material	PPC

Speed sensor RV4	
Method	Electromagnetic (Faraday's Law)
Construction	Hydrodynamic shape, cast in yellow epoxy resin. Stainless steel electrodes
Cycle measures	0.5 seconds
Range	0 – 3m/s, 0 – 6m/s (option)
Resolution	0,001m/s
Accuracy	1% max reading + zero stability
Zero Stability	Typically ± 0,01m/s, max ± 0,03m/s
Calibration	From 0 to 3m/s. Control on 14 points From 0 to 6m/s as an option Calibrated for life if maintained correctly
Minimum depth	30 mm water with general wading rod
Dimensions	140 x 30 x 15mm
Weight	0.1kg without cable
Cable	Polyurethane sheath 3m standard (extra length optional)
Temperature	-5 to 70 ºC. Storage -20 to 70 ºC

Wading rod General use	
Description	The wading rod is comprised of 50cm modular cylindrical sections, a disc at the base, a handle and an adjustable attachment point for the probe. This wading rod is best suited for use in sanitation environments because its variable length, owing to its modularity, allows access to difficult-to-reach locations. Available in lengths of 1.5m or 3m, it can be extended in increments of 50cm using additional sections
Height	1.5m or 3m
Weight	3kg in 1.5m
Material	Stainless
Accessory	Canvas carrying bag

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