

Package contents

Waterproof "Orange" case including:

- 1x FLUVIA RC3
- 1x electromagn. Sensa RV4X "Mini" Probe
- 1x handheld, 5" colour LCD touchscreen
- 1x shoulder strap
- 1x charger
- 1x cleaning gel for electromagnetic probe,
- 1x calibration certificate

all of the above plus:

- 1x wading rod top handle
- 1x ground plate
- 1x adjustable attachment point/probe slot for wading rod (body + tail piece with securing screw)
- 1x Allen key

all of the above plus:

- 1x USB download cable

Canvas carrying bag with:

- 3x or 6x 316 stainless-steel 500 mm rods w/ machined scale

Specifications summary

Range: 0 ... 3 m/s

Accuracy: 1% max reading + zero stability

Long-Term Stab.: typ. ± 0.01 max ± 0.03 m/s

Measurement Cycle: 0.5 seconds

Calibration: for life if maintained correctly

Data TX: RS232 (opt. RS232-USB converter), SDI-12

Op. Temp.: -20...+60 °C, avoid frozen water

Rating: IP67

Battery: Lithium-Ion, rechargeable

Battery Life: ~20 hrs, ~30 hrs without backlit

Case: 464 x 366 x 176 mm, 5 kg

Wading Rod: 1 kg per 500 mm section

Compliance

CE, RoHS

Main parts



- 1 Handheld controller unit with neck-strap
- 2 RV4 electromagnetic sensing probe
- 3 Battery charger for handheld unit
- 4 Cleaning gel for electromagnetic probe
- 5 Wading rod handle
- 6 Allen key
- 7 Ground plate

Connector on handheld

Only one cable can be connected to the multi-use connector at a time. CAUTION: pin assignments differ depending on the cable type. Always push or pull the connector by the connector body. Align the connector carefully before insertion.

⚠ Do not connect or disconnect the transducer while the handheld is powered on!

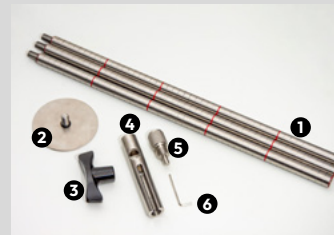
RS232-USB converter cable (optional)

Simply insert the 12-pin connector into the receptacle on the FLUVIA handheld/display unit.



Mounting instructions

- 1 Assemble the wading rod:** Join the required number of rod segments (1) by screwing the threaded ends together by hand until fully seated. Attach the ground plate (2) (if supplied) to the lower end of the rod and mount the handle (3) at the upper end.
- 2 Install the slotted probe holder:** Slide the wading rod through the rear receptacle of the slotted probe holder (4). Position the holder at the required height and secure it by tightening the tail end screw (5).
- 3 Mount the electromagnetic probe:** Insert the probe into the slotted holder so that the machined end piece seats in the holder recess. Ensure the sensing head faces forward and is oriented at 90° to the rod. Tighten the locking set screw to secure the probe using the Allen key (6).
- 4 Route and connect the cable:** Guide the probe cable along the rod to avoid sharp bends. Connect the cable to the control/display unit, aligning the connector carefully. Push and pull the connector by the connector body only – do not rotate.
- 5 Power on the unit:** Ensure the probe is connected. Switch on the control/display unit and verify that measurement values are displayed.



⚠ CAUTION: Risk of equipment damage. Do not connect or disconnect the probe while the control/display unit is powered on. Always connect the probe before switching on the unit.



Safety Instructions (see user manual for details)

- Read this Installation Guide (IG) including all operating instructions prior to installing and connecting the KISTERS FLUVIA.
- For use by qualified personnel only! FLUVIA devices are designed for professional hydrometeorological monitoring.
- Keep the IG on hand for later reference!
- If you encounter problems understanding the information in the IG (or part thereof), please consult the manufacturer or its appointed reseller for further support.
- Electrical, technical and climatic specifications must be respected at all times.
- Changes or retrofits to the KISTERS FLUVIA will void the warranty.
- ⚠ Do not install or deploy the sensor in hazardous areas, particularly those at risk of explosion!
- ⚠ Comply with electrical safety standards.
- ⚠ Follow health, safety and environmental regulations. Most importantly, wear life jackets and never work alone!
- ⚠ Safety takes priority over hydrometric accuracy! Weather or flood conditions may escalate! Avoid measuring when:
 - Flow velocity is too high to maintain stable footing.
 - Water depth exceeds safe wading limits (knee to thigh depth at moderate flow; shallower in fast flows)
 - The bottom is unstable, slippery, invisible or debris is moving downstream (branches, ice, stones).

Quick Start Guide

Basic functions:

- Turning the Fluvia ON – press the central button/dial once.
- Turning the Fluvia OFF – hold down the central button/dial until the Fluvia shuts down.
- Navigating menus using button/dial – rotate to highlight the desired menu button; press down to confirm selection.
- Navigating menus using touch – use the touch screen to select an option.
- Disabling/Enabling Touch – double press the encoder.

Reading and logging flow:

- Reading the flow – navigate to Main Menu → Live Data
- Logging the flow – from Live Data, press either the Manual Log or Record button.
- Reading Logged Data – Navigate to Main Menu
 - → Logged Data → View Data,



To view earlier logs, select Log Page, then use the button to navigate the pages.

Profiling:

Profiling a river or conduit – navigate to Main Menu → Profiling, then select the desired profile. Press Take Profile, then follow the on-screen instructions.

Use "Profiling" to calculate more complex flow analysis of various different flow profiles.

Use "Live Data" to view or record the current flow reading.

The battery indicator shows the battery percentage. It goes red when low, and green when charging.

Use the connector on the right side of the Fluvia to connect the probe or included charger.

Use "Logged Data" to view, download and erase the current flow logs.

Use "Settings" to adjust various parameters like logging intervals, units and preferences.

Press the button/dial once to turn the Fluvia on. When on, hold down the button to turn the unit off.

Use the button/dial or touch screen to select options. Double press the encoder to disable or enable the touch screen.

Quick Guide: Flow measurement in open channels

- Method reference:** The FLUVIA electromagnetic flow meter measures local flow velocity. Discharge is determined using the velocity–area method, which combines measured velocities with corresponding flow areas. This approach is consistent with internationally recognized hydrometric practice (e.g. ISO 748). Referenced standards are not included and must be obtained separately from the respective standards organisations.
- Select a suitable measurement site:** The probe must be fully submerged (min. clearance 3 cm on all sides, ≥10 cm recommended). Choose a cross-section that is:
 - As straight and uniform as possible
 - Free of strong turbulence, eddies, backwater, or recirculation
 - Away from hydraulic structures, confluences, and obstructions

- Ensure: Water conductivity > 20 µS/cm (natural surface waters are typically adequate) AND no strong external magnetic fields are present nearby. Avoid dense vegetation, unstable sediment, and large bed obstacles.
- Subdivide the cross-section:** Stretch a measuring tape across the channel. Divide the width into a sufficient number of verticals (typically 20 – 30). Use closer spacing where depth or velocity changes rapidly. Aim for no single subsection to dominate the total discharge.
- Measure velocity along each vertical:** Align the probe parallel to the flow direction. Stand laterally offset from, or slightly downstream of, the measurement point. Keep the wading rod vertical and steady. Insert the probe slowly to avoid disturbing the flow. Allow sufficient averaging time before recording values. Common methods: Single–point method (0.6D): for shallow or uniform flow. Three–point method (0.2D/0.4D/0.8D): for deeper or variable flow.
- Calculate discharge:** For each vertical: Determine subsection area from width and depth. Multiply area by mean velocity to obtain subsection discharge. Total discharge is the sum of all subsection discharges. Results may be evaluated manually or using suitable hydrological software.

KISTERS download links



Accessories

- Water depth sensor
- RS232-to-USB converter: USB serial download cable.
- GPS location module.
- GPRS/GSM: texting, mobile telemetry.
- Bluetooth® interface: wireless data download.
- Adaptors to KISTERS MAG Top Setting wading rods (MAG/TSR).
- KISTERS relocating device compatible with FLUVIA standard wading rod.