

Water & Wastewater Product Guide

Automated Water Sampling and Open Channel Flow Measurement

*Sewer Systems · Stormwater · Runoff · Municipal & Industrial Wastewater · Rivers & Streams ·
Remote Communication & Data Management Software*



Automated Water Sampling

6712 Portables and Accessories

6712 Sequential/ Composite

Intelligent sampling with integrated flow and parameter measurement capabilities.

- Rugged ABS plastic exterior with insulated center section and base for preserving samples
- Accurate, repeatable sample volumes
- High-performance peristaltic pump
- Optional Teledyne Isco 700 series modules and AQ700 multi-parameter sonde



6712C
Compact

6712
Full-size

6712 Full-size
with Jumbo Base



Accessories

Teledyne Isco 700 Series modules add versatility. Monitor flow or pH with the field interchangeable modules that are environmentally sealed. Data is logged by your 6712 series sampler and can be retrieved for analysis.



AQ700 Series Sondes

The AQ700 Sondes comprise up to six different sensors in a single sonde, for a total of ten possible measured parameters. Depending on your monitoring requirements, the AQ700 can operate with several Teledyne Isco instruments. All AQ700 data stored by the sampler or logger is ready for retrieval, reporting, and graphing using Teledyne Isco Flowlink® software.



Portable Samplers

3700 Sequential/ Composite 3710 Composite

Durable, economical portables for general purpose and priority pollutant applications.

- Accurate, repeatable sample volumes
- Basic programming mode for simple setup
- Extended programming mode with additional features
 - Non-uniform time intervals
 - Multiple samples per bottle
 - Multiple bottles per sample



3700 Full-size



GLS Composite Sampler

Especially designed for general purpose and priority pollutant applications where a full-size sampler is too large.

- Small and lightweight
- Simplified programming for quick, easy setup
- Two keystroke program recall and one-button program start



Automated Water Sampling

Portable Refrigerated Samplers

Glacier® Composite

Refrigeration in a portable composite sampler.
12 VDC or 110/220 VAC power.

- Microprocessor controlled refrigeration system
- Two-keystroke program recall
- Download sample temperature in a simple, summarized report
- Optional mobility cart with battery carrier and pneumatic tires



Avalanche® Sequential/Composite

Multi-bottle sampling combined with portable refrigeration.
12 VDC or 110/120 VAC power.

- Intelligent sampling with SDI-12 interface and 700 Module input for parameter monitoring and triggering
- High performance peristaltic pump
- Data and sample compartment temperature logging for convenient retrieval
- Optional mobility cart with battery carrier and pneumatic tires



Stationary Refrigerated Samplers

6712FR Sequential/Composite

Intelligent sampling, advanced controls and communication, with a rugged fiberglass exterior.

- SDI-12 interface and 512 KB memory for versatile parameter monitoring and logging
- Accurate, repeatable samples
- High performance peristaltic pump
- Accepts Isco 700 Special Function Modules



5800 Sequential/Composite

Innovative ideas and materials combined with extreme weather and corrosion resistance.

- For indoor or outdoor use at wastewater treatment plants
- Sample temperature logging
- Slide-out bottle rack
- Superior cooling performance



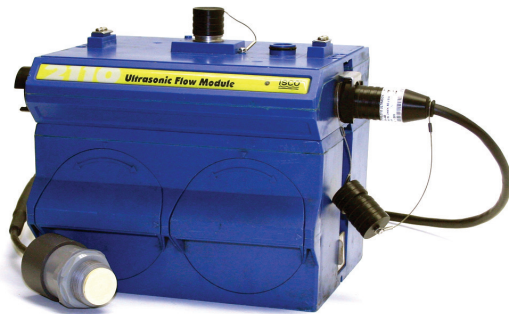
Open Channel Flow Measurement

2100 Series Modular Flow Systems

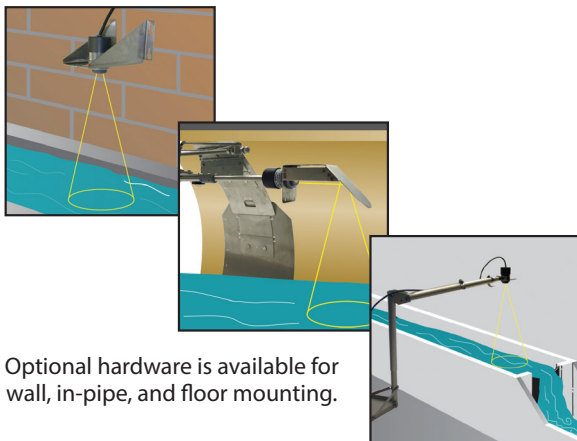
2110 Ultrasonic Flow Module

Accurate, non-contact liquid level measurement with built-in flow conversion software.

- Microprocessor-based digital sensor
- Self-tuned power control
- Unique sensor design minimizes “deadband”
- Vertical sensor face avoids condensation problems
- Variable rate data storage



Shown with 2191 Battery Module



Optional hardware is available for wall, in-pipe, and floor mounting.

2150 Area Velocity Flow Module

Advanced area velocity technology in modular form.

- Microprocessor-based low profile sensor
- Span calibration not required
- No temperature drift
- Automatic gain control
- No “draw down” effect
- Variable rate data storage



Shown with 2191 Battery Module

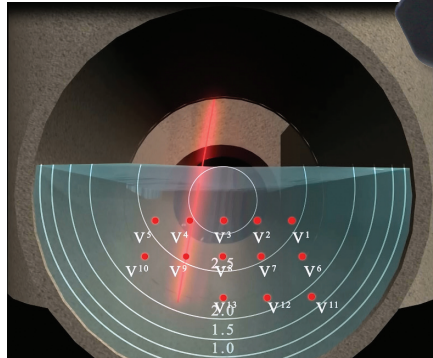
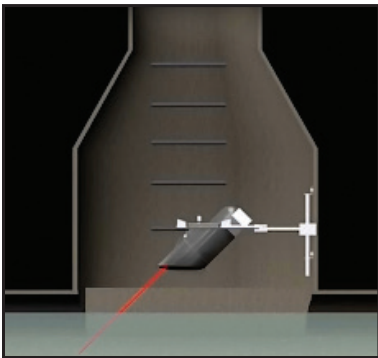
2100 Series modules may be stacked to customize a system for any site.



2160 LaserFlow Module

Remotely measure flow in open channels with non-contact Laser Doppler Velocity technology and non-contact Ultrasonic Level technology.

- Non-contact velocity and level measurement.
- Single or multipoint velocity measurement below the liquid's surface.
- No dead band from measurement point.
- The non-contact sensor avoids the need of unsafe and time consuming confined space entry for the preventive maintenance.



Intrinsically Safe Area Velocity Flow Systems

2151 Area Velocity Flow Module

CSA approved for Class I, Div. 1, Groups C&D environments.



2150 EX Area Velocity Flow Module

Baseefa and CSA approved for use in potentially explosive atmospheres.



Open Channel Flow Measurement

2100 Series Communication Options



2101 Field Wizard

A weatherproof module for on-site data retrieval.

Rugged NEMA 4X, 6P (IP 68) enclosure. Stores more than 2 weeks' data from up to 20 modules!



2102 Wireless Module

- Gather 2100 Series data while inside your vehicle
- Drive-up convenience and safety

2103 Land-line Modem Module

- Dial-up flow data from your desktop
- Dial-out alarms

2103Ci Cellular Modem Module

- Field instrument connectivity via internet
- Gather data with cell phone speed and convenience
- CDMA, 1xRTT

2103Gi GSM Cellular Modem Module

- Field instrument connectivity via internet
- Remote downloading from Isco 2100 Modules
- GSM, GPRS

2105 Interface Module

An advanced interface and communication device.



The 2105 integrates multiple field instruments and provides a common platform for logging and remote communication. Teledyne Isco 2100 Series flow modules, Isco's pulse Doppler flow meters, and rain gauges are directly compatible. It can also interface with non-Isco instruments that have SDI-12 or Modbus output. Additional inputs (4-20 mA, etc.) are possible using readily available aftermarket converters.

The 2105 will monitor recorded data and take intelligent action, such as sampler enabling and multiple alarm generation based on user-defined conditions. Features include a built-in cell phone modem and remote or online data access.

2108 Analog Output

- 4-20 mA signals for monitoring and control
- Easy interface with SCADA/DCS and other secondary systems



Modbus Protocol

- Digital RS-232 output

Internet

- Real-time data from the field

Flowlink Software

- See Flowlink section



"The Future of Flow!"

Signature Flow Meter

Highly flexible monitoring platform, adapting right along with your current need and any future changes in your monitoring requirements.

- Cost effective and easy installation with simple programming and interchangeable sensors
- Integration with multiple input, output and communications options
- Provides a common data recording, reporting and communication platform for multiple parameters
- Easy data retrieval options

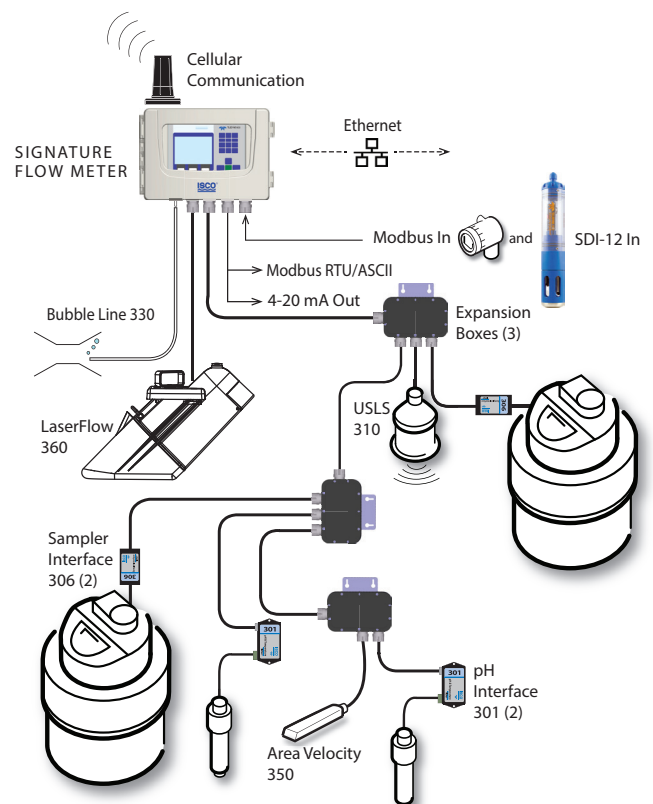


The Teledyne Isco Environmental Network —TIENet®— is key to the Signature flow meter's flexibility. The Signature supports multiple TIENet devices to monitor one or more channels with multiple, redundant, or alternate technologies, without hardware or firmware changes. This network's intelligent design minimizes cabling and conduit costs through the use of TIENet expansion boxes, common connectors, and efficient cable configurations. In addition to TIENet devices, the Signature also accepts SDI-12 and Modbus ASCII/RTU inputs.



Simplified Plant Integration

Acting as a system hub, the Signature records and transmits data, generates reports, and takes intelligent action in response to multiple simultaneous inputs, communicating with SCADA systems using RS-485 Modbus ASCII or RTU, or optional 4-20 mA Analog. With a diverse array of possible inputs and an industry-standard output, the Signature is a one-stop access point for process monitoring and control.

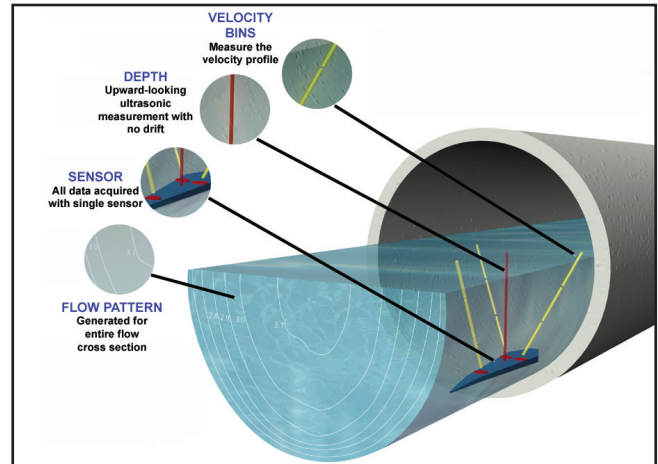


Velocity Profiling Flow Meters

accQpulse™ Velocity Profiler

The accQpulse Velocity Profiler brings unparalleled precision and accuracy to flow rate measurement in many sizes of pipes and open channels. Its unique ability to measure velocity at multiple points makes it suitable for most applications including sites with non-uniform, rapidly changing, near zero, zero, or reverse flow conditions. These applications include: waste water collection systems, billing, combined sewer systems and outfalls, wastewater treatment facilities, irrigation canals, industrial discharges, and stormwater conveyance and outfalls.

With sensor options for both shallow and deep water, the accQpulse Velocity Profiler is the only flexible pulse-doppler flow meter available. The shallow water sensor is used to measure flow in depths up to 48 inches (1.2 m). The deep water sensor is used to measure flow in depths up to 16 feet (4.9 m).



Three piezoelectric ceramic devices in the sensor emit short acoustic pulses along narrow beams into the flow stream. Each beam points in a different direction to measure velocity. A fourth ceramic device is mounted in the center of the sensor and aimed vertically to measure the depth.

The acoustic signals are echoed back after contacting bubbles or particles. By measuring the difference in frequency between the emitted and returned signals (known as Doppler shift), the velocity in the flow stream can be accurately determined. By “range gating” the returned signals, velocity is measured in multiple, distinct cells called “velocity bins”.

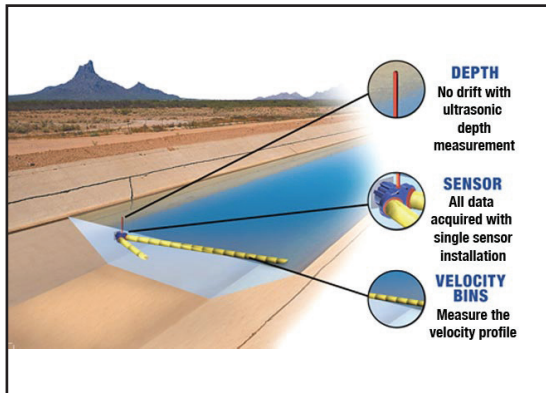
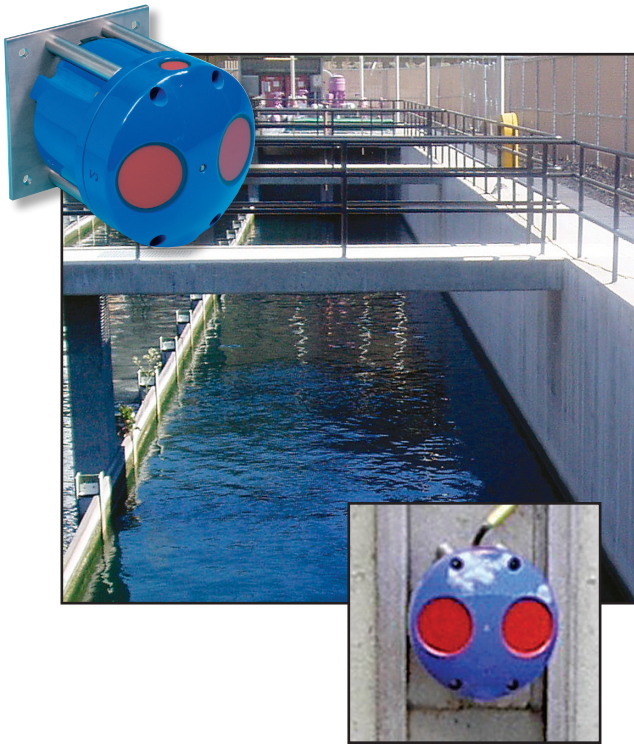
As a result, the accQpulse™ provides detailed velocity data in relation to sensor location at multiple points in three different directions within the flow channel. This is used to calculate a true, highly accurate flow.

The velocity profiling information reduces the need for in-situ calibration and ensures accurate flow rate measurement over a host of different measurement environments and hydraulic conditions.

Horizontal ADFM® Flow Meter (H-ADFM)

Velocity profiling measurement for channel widths of 10 feet (3.0 meters) or more.

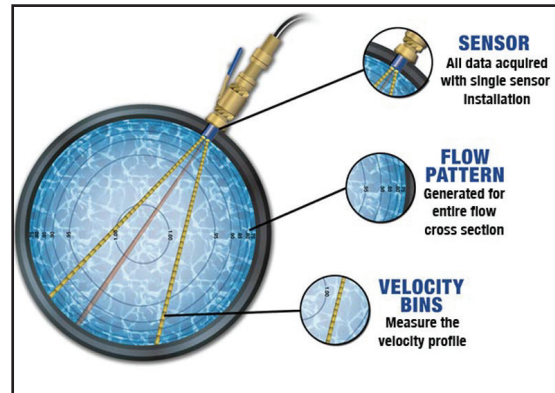
- Accurate in low velocities and complex flows
- Horizontally-looking redundant velocity sensors
- Upward-looking depth sensor



ADFM® Hot Tap Insertion Flow Meter

For velocity profiling in full pipes 18 inches (0.4 m) to 9 feet (2.7 m) diameter. Can be installed while a pipe is still fully pressurized and in service – avoiding operation interruptions.

- Accurate measurement in difficult sites
- Industry-standard two-inch (50 mm) tap



Flowlink® Software



Flowlink and Flowlink LE

Analyze data, conduct advanced studies, and generate sophisticated reports.

Set up and retrieve data from these Isco instruments:

- 2100 Series Flow Modules
- Signature Flow Meter
- 4200 Series Flow Meters
- ADFM Pro20 & accQmin Flow Loggers
- 6712 Samplers and Avalanche, with 700 Series Modules and/or AQ700 Multi-parameter Sondes
- 676 Rain Gauge Logger



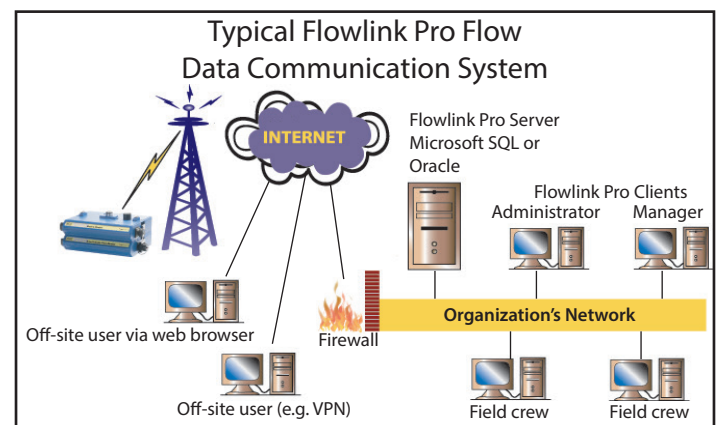
Flowlink Pro

A server/client package for municipalities and service providers.

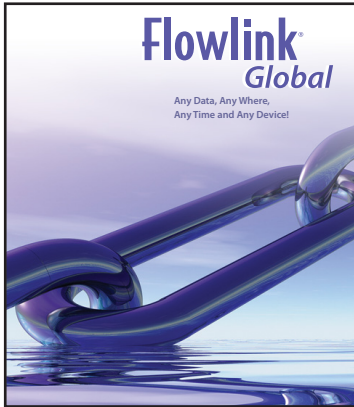
Facilitates management of multi-site wastewater and flow monitoring networks.

Try Before you Buy.....

Evaluate Flowlink 5.1 software at no cost to you. Contact your Teledyne Isco representative for a 45-day demonstration license, part number 68-2540-202. Leasing options are available for long-term evaluations.



Open Channel Flow Meter



Flowlink Global

Flowlink Global is a web based application to monitor and service sites in your Flowlink Pro database. Flowlink Global provides an easy to access portal to sort, assemble, organize, review, report and export site and device data, GIS mapping, and a dashboard for quick view of site conditions and alarms - all the features that field crews need on the go.



3010 Flow Transmitter

Dependable flow measurement and data transmission. Proven accurate under the toughest conditions.

- Built-in level-to-flow-rate conversions
- Backlit LCD
- Sampler interface
- Analog, digital, and relay outputs



Support Products

Rain Gauges

The Teledyne Isco 674 Rain Gauge connects directly to 6712 Series Samplers and 4200 Flow Meters to log rainfall along with sampler and flow data.

Our 676 Logging System records rainfall at sites where no sampler or flow meter is deployed.

- Tipping bucket mechanism with jeweled pivot for maximum accuracy



581 Rapid Transfer Device (RTD)

A handy plug-in alternative to using notebook computers in the field.

Retrieve data from these Isco instruments:

- 6712 Samplers and Avalanche
- 4200 Flow Meters



Power Products

Rugged, reliable batteries and chargers for environmental monitoring applications.



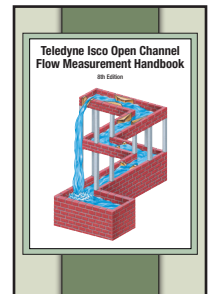
Open Channel Flow Measurement Handbook

An essential and extensive resource for professionals who deal with open channel flow.

More than 500 pages of comprehensive information, including standard discharge tables for a wide variety of primary devices.

For a free online version visit

<http://info.teledyneisco.com/openchannelhb>



Street Level Tools

Minimize or eliminate manhole entry.

Versatile accessories that allow a single worker to quickly and safely insert and remove a variety of sensors in manholes as deep as 5 meters.





Worldwide Sales and Service

Friendly, knowledgeable help is available from Teledyne Isco world wide. Phone, Fax, or E-mail us today to arrange for a consultation or demonstration.

Special Applications

We can provide creative solutions for almost any need, from consultation to unique hardware adaptations.



Leasing

Contact Teledyne Isco leasing for competitive rates and fast delivery when instruments are needed for short-term projects.

For more information on these and other Teledyne Isco Water and Wastewater Products, visit our website at www.teledyneisco.com



4700 Superior Street, Lincoln, NE 68504 USA • Tel: (402) 464-0231 • USA & Canada: (800) 228-4373
Fax: (402) 465-3022 • Email: iscoinfo@teledyne.com • <http://teledyneisco.com>

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