

The background of the entire page is a blue-tinted photograph. It shows a worker in a hard hat and work shirt standing next to a large white bucket with a control box on top. A hose leads from the bucket into a circular opening in the ground. In the foreground, there is a complex metal frame structure, likely part of an automated sampling system, positioned over another opening in the ground.

WATER & WASTEWATER PRODUCT GUIDE

**AUTOMATED WATER SAMPLING AND
OPEN CHANNEL FLOW MEASUREMENT**

AUTOMATED WATER SAMPLING

Refrigerated Samplers

Teledyne ISCO Samplers set the stage for the being first in many categories. Our advances include the first non-contacting liquid detector, first outdoor refrigerated sampler, and first sampler with interchangeable modules for measuring flow and parameters. Through listening to our customers, continuous innovation and improvement, and emphasis on quality and reliability, Teledyne ISCO continues to lead the way with samplers for every application:

- Industrial pretreatment compliance monitoring
- Storm water runoff monitoring
- CSO (combined sewer overflow) monitoring
- Regulatory compliance monitoring
- Water quality research
- Specialized applications such as hazardous locations and monitoring for radio nuclides



Transportable Peristaltic Pump Technology

- 12 VDC or 110/220 VAC power
- In-door/out-door use
- Optional mobility cart

Glacier

- Composite sampling (single bottle)
- Single keystroke program recall

Avalanche

- Composite and sequential sampling (14 bottles)
- Intelligent sampling with rain input, SDI-12 interface, and 700 module input for parameter monitoring and triggering



Permanent Peristaltic Pump Technology

- 110/220 VAC
- In-door/out-door use
- Composite and sequential sampling—wide choice for bottle configurations

5800

- Modular design
- Slide out bottle rack

6712FR

- Fiberglass reinforced plastic with UV-resistant gel coat
- Intelligent Sampling with rain input, SDI-12 interface, and 700 module input for parameter monitoring and triggering



Permanent Vacuum Pump Technology

- 110/220 VAC
- In-door/out-door use
- Volumetric (CVE) and Gravimetric (QLS) sample volume control
- Composite and sequential sampling

Optima

- Composite and sequential sampling with 24 bottles

Platinum

- Composite and sequential sampling—wide choice for bottle configurations

AUTOMATED WATER SAMPLING

Portable Samplers 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



700 Series Plug-in Modules

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.

701 pH and Temperature Module

Accurate pH and temperature monitoring in a single module. Activate your 6712 Sampler at user-selected pH or temperature ranges and save by collecting and analyzing only samples outside normal parameters.

720 Submerged Probe Flow Module

A differential pressure transducer provides accurate measurement where wind, steam, foam, turbulence, or air temperature fluctuations exist—even if the probe gets covered with silt or sand.

730 Bubbler Flow Module

Unaffected by changing stream conditions, the 730 delivers accurate level measurement despite temperature fluctuations and exposure to harsh chemicals.

750 Area Velocity Flow Module

Get accurate measurement where weirs and flumes aren't practical—or where submerged, full-pipe, surcharged, and reverse flow conditions may occur. No need to estimate channel slope or roughness. Sensor uses patented* Doppler technology to directly measure average flow velocity.

780 Analog Input Module

Add intelligent interpretation of any 4–20 mA signal. Characterize analog signals as flow rate or percentage of full scale. Pace or trigger your 6712 Sampler and store data for retrieval and analysis.



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



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



OPEN CHANNEL FLOW MEASUREMENT

2100 Series Modular Flow Systems



Shown with 2191 Battery Module

2110 Ultrasonic Flow Module

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

- Measurement technology: Ultrasonic
- Microprocessor-based digital sensor
- Self-tuned power control
- Unique sensor design minimizes "deadband"
- Vertical sensor face avoids condensation problems
- Variable rate data storage



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



Shown with 2191 Battery Module

2150 Area Velocity Flow Module

Advanced area velocity technology in modular form.

- Measurement technology: Continuous Wave Doppler
- 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

2150 EX Area Velocity Flow Module

Baseefa and CSA approved for use in potentially explosive atmospheres.

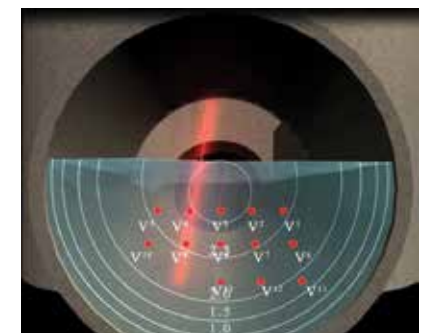
- Measurement technology: Continuous Wave Doppler



LaserFlow® and LaserFlow® EX Non-Contact, Sub-Surface Sensors

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 preventive maintenance
- LaserFlow EX for intrinsically safe applications in Class 1, Division 1, ATEX Zone 0 areas



2160 LaserFlow Module

2100 Series modularity with advanced non-contacting laser Doppler technology

- Rugged, submersible enclosure fulfills IP68 enclosure requirements
- The quick-connect sensor can be easily removed and interchanged in the field without requiring recalibration
- Up to four 2100 Series flow modules can be networked by stacking and/or extension cables
- Modbus output interface



OPEN CHANNEL FLOW MEASUREMENT

2100 Series Communication Options



Gather data with cell phone speed and convenience.

The 2103Ci and 2103Gi Modem modules enable remote two-way dial-up communication with 2100 Series instruments via cell phone modem and your desktop computer, equipped with Teledyne ISCO Flowlink software.

2103Ci Cellular Modem Module

- Field instrument connectivity via internet
- Gather data with cell phone speed and convenience
- LTE

2103Gi GSM Cellular Modem Module

- Field instrument connectivity via internet
- Remote downloading from 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, pulse Doppler flowmeters, and rain gauges are directly compatible. It can also interface with non-Teledyne 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.

LTE, GSM, GPRS communication options are available.

2108 Analog Output

- 4–20 mA output from 2100 Series for monitoring and control
- Easy interface with SCADA/DCS and other secondary systems



Signature® Flowmeter

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



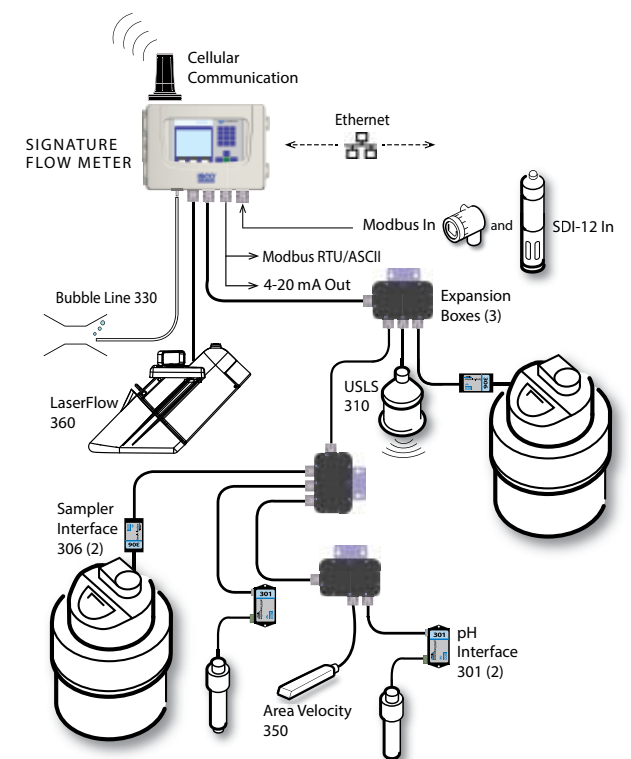
The Teledyne ISCO Environmental Network—TIENet™—is key to the Signature flowmeter's flexibility. The Signature supports multiple TIENet devices to monitor one or more channels with multiple, redundant, or alternate technologies, without hardware or firmware changes. This network's intelligent design 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.



FLOWLINK® SOFTWARE

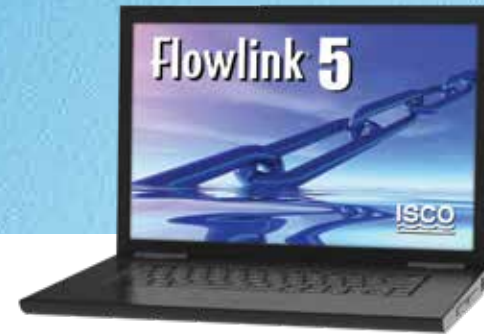
SUPPORT PRODUCTS



Flowlink® CIPHER

Flowlink Cipher represents the latest advancement in Teledyne ISCO's Flowlink series of data management solutions. Now an advanced cloud-based solution, Flowlink Cipher allows site managers to view and manage all data at multiple sites through an easy-to-use and powerful browser-based user interface. Centralized, secure, cloud-based access to device status, site status, and flow data occurs through desktops, laptops and tablet mobiles devices with no need for client software or mobile apps. With AWS hosting security, there is no better protection from service interruptions or data loss. Advanced user administration provides five levels of access with user profiles including View Only, Editor, Analyst, Site Manager, and Administrator.

Flowlink Cipher is built for speed and accuracy. Adding sites, devices and desired data sets is fast and easy, as is graph creation using drag and drop tools to bring data directly into graphical format. A broad range of controls for graph design and builtin mathematical calculations allows site managers to develop state-of-the-art data analysis with insightful views and reporting without the need for expensive analysts or time-consuming data export and data manipulation procedures.



Flowlink and Flowlink LE

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

Set up and retrieve data from these Teledyne ISCO instruments:

- 2100 Series Flow Modules
- Signature Flowmeter
- 4200 Series Flowmeters
- ADFM Pro20 & accQmin Flow Loggers
- 6712 Samplers and Avalanche, with 700 Series Modules
- 676 Rain Gauge Logger

Flowlink Pro

A server/client package for municipalities and service providers.

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

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.



674 Rain Gauge

The Teledyne ISCO 674 Rain Gauge connects directly to 6712 Series Samplers and 4200 Flowmeters to log rainfall along with sampler and flow data. Our 676 Logging System records rainfall at sites where no sampler or flowmeter 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 instruments:

- 6712 Samplers and Avalanche
- 4200 Flowmeters



Power Products

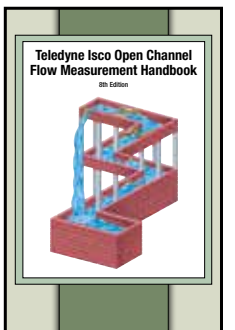
Rugged, reliable batteries and chargers for environmental monitoring applications.

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 www.teledyneisco.com



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.





ISCO



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TELEDYNE ISCO
Everywhere **you** look™