



Sewer Systems



Stormwater Runoff



Municipal/ Industrial Wastewater



**Rivers and Streams** 



Remote Communication & Data Management Software

Environmental Product Guide
Automated Water Sampling and Open
Channel Flow Measurement

## **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



Full-size



#### **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

3710 Compact



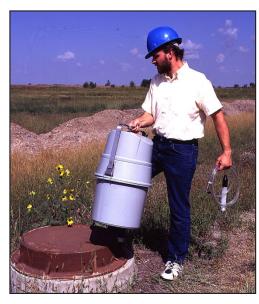


#### **GLS Composite Sampler**

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



#### 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



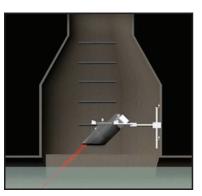
2100 Series modules may be stacked to customize a system for any site.



#### 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**



#### 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



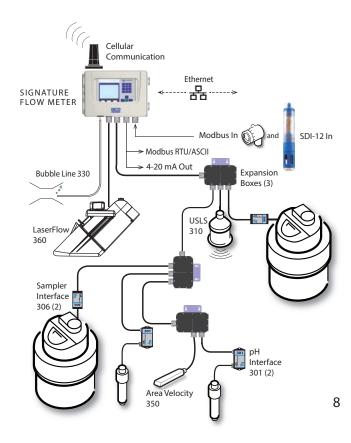
The Teledyne Isco Environmental Network —TIENet® — is key to the Signature flow meter's flexibility. The Signature supports multiple TIENet devices to monitor one or more channels with multiple, redundant, or alternate technologies, without hardware or firmware changes. This network's intelligent design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



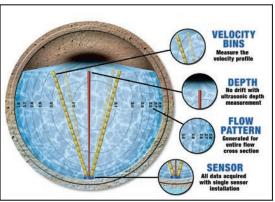
## **Velocity Profiling Flow Meters**

#### **ADFM® Pro 20**

For open channels and pipes from 12 to 180 inches (0.3 to 4.5 meters).

- Pulse-Doppler velocity profiling
- Upward-looking quad-redundant velocity sensors and integrated depth sensor in a single probe
- Real-time data output
- · In-situ calibration never required



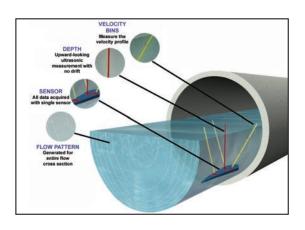


#### accQmin® Flow Meter

For shallow water and small pipes/channels from 8.0 to 48 inches (0.2 to 1.2 meters). Ideal for high-accuracy applications.

- Upward-looking tri-redundant velocity sensors
- · Integral depth sensor
- · NEMA 6P (IP 68) housing
- · Optional pressure or ultrasonic depth sensor

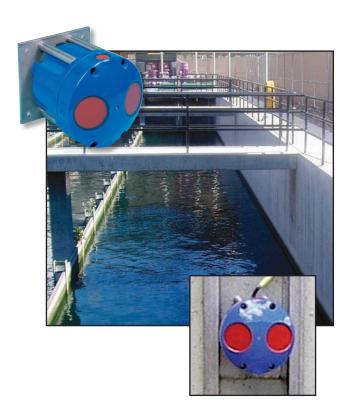


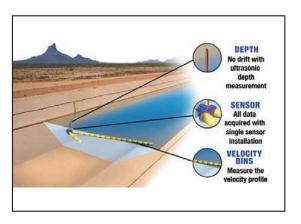


#### **Horizontal ADFM® Flow Meter (H-ADFM)**

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



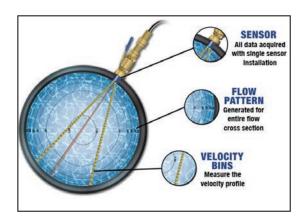


#### **ADFM® Hot Tap Insertion Flow Meter**

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





## **Open Channel Flow Meters**

#### **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





#### **Pump Station Monitor**

This monitor, along with Isco's exclusive Pumplink software, lets you simultaneously monitor flow and pump performance at lift stations. Allows early detection of abnormal pump activity.

- Installs quickly, with no shut-down
- · Never needs calibration
- Uses no level sensors
- · Eight analog inputs for logging other parameters





### **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 https://flowhandbook.teledyneisco.com



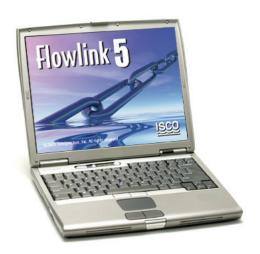
#### **Street Level Tools**

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.



### Flowlink® Software



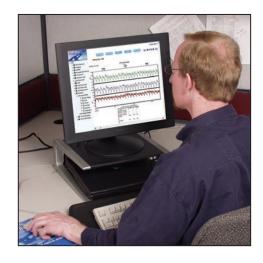
#### Flowlink and Flowlink LE

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**

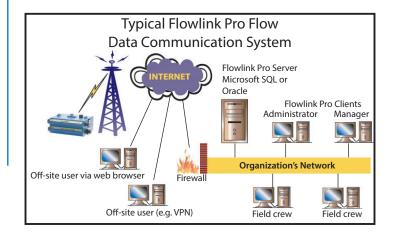
A server/client package for municipalities and service providers.

Flowlink

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.



# **Teledyne Isco Environmental Products**



