



**TELEDYNE ISCO**  
Everywhere you look™



# **WATER & WASTEWATER PRODUCT BOOK**

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

# AUTOMATED WATER SAMPLING

## Refrigerated Samplers



### BLZZRD™

#### Portable Peristaltic Pump Sampler

A sequential or composite refrigerated sampler featuring our legendary 6712 controller allowing you to select different programming modes to assure the most suitable routine for your application. The power-saving cooling system remains on standby until the first sample is drawn, and only then switches on to preserve the collected samples for pickup.

- 12 Vdc or 110/220 Vac power
- Indoor/outdoor use
- Optional mobility cart
- Composite and sequential sampling (14 bottles)
- Intelligent sampling with rain input, SDI-12 interface, and 700 module input for parameter monitoring and triggering



### 5800

#### Permanent Peristaltic Pump Sampler

The 5800 Refrigerated Sampler is Teledyne ISCO's answer to the rigorous demands of water monitoring. With user-friendly controls and task accommodating features, the 5800 is the only choice for stationary sampling in both municipal and industrial wastewater applications. The tough, double-wall LLDPE cabinet shrugs off exposure to weather and harsh environments.

- 110/220 Vac
- Indoor/outdoor use
- Composite and sequential sampling—wide choice for bottle configurations
- Modular design
- Slide-out bottle rack
- Certified to MCERTS



### 6712FR

#### Permanent Peristaltic Pump Sampler

A sequential or composite refrigerated sampler featuring our legendary 6712 controller allowing you to select different programming modes to assure the most suitable routine for your application. The corrosion-proof refrigerator cabinet molded from polyester resin fiberglass and supported by a stainless steel frame.

- 110/220 Vac
- Indoor/outdoor use
- Composite and sequential sampling—wide choice for bottle configurations
- 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



Teledyne ISCO samplers set the stage for 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
- Combined Sewer Overflow monitoring
- Regulatory compliance monitoring
- Water quality research
- Specialized applications, such as hazardous locations and monitoring for radio nuclides



# AUTOMATED WATER SAMPLING

## Portable Samplers and Accessories

All Teledyne ISCO brand portable samplers are built to withstand harsh environments and for easy manhole installation and removal.

- Vacuum-formed ABS plastic shell withstands exposure and abuse.
- Twin-wall construction with foamed-in-place insulation maximizes structural integrity along with the efficiency of ice used for sample preservation.
- NEMA 4X, 6 (IP67) controller rating for submersible, watertight, dust-tight, and corrosion resistant service.



### 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
- Certified to MCERTS



### 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.



### GLS Composite

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



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



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

## 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
- Modbus output interface



## TIENet® 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. Compatible with DuraTracker and Signature flowmeters.

- Single or multipoint velocity measurement below the liquid's surface
- The non-contact sensor avoids the need for 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, ATEX Category 1G
- Certified to MCERTS Class 2



MCERTS  
Sira MCI40265/03



## DuraTracker® and DuraTracker® Ex Flowmeter

The DuraTracker flowmeter is the most efficient and reliable flow monitoring solution on the market today for a wide range of open channel flow measurement applications. It supports flow measurement technologies including non-contact laser area velocity, submerged Doppler area velocity, and ultrasonic. The flowmeter calculates flow using standard open channel level-to-flow and area velocity conversions, user defined equations, level-to-area data points, or level-to-flow data points.

The DuraTracker package cost-effectively integrates cellular communications and multiple flow technologies within a single module. The standard Bluetooth capabilities make the programming, sensor calibration, and data retrieval job easy through wireless devices. A field upgradable remote cell phone communication option is also available.

The DuraTracker Ex is suitable for intrinsically safe applications in Class I, Div 1, Zone 0, ATEX Category 1G.



Above Left: DuraTracker portable with battery compartments.

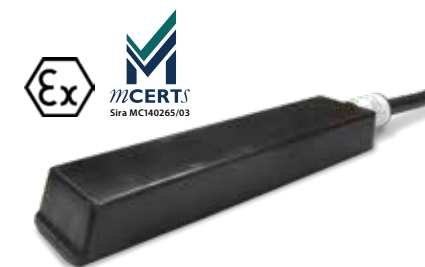
Above Right: DuraTracker Ex for intrinsically safe environments.

Left: DuraTracker for permanent applications without the battery compartment and an exposed desiccant container.

## TIENet® Sensors

Teledyne ISCO Environmental Network—TIENet—devices provide seamless integration of a variety of sensors to the flowmeter of your choice. Compatible with DuraTracker and Signature flowmeters.

- TIENet input and output devices use a common, proprietary interface protocol.
- Low system integration cost with multiple measurement technologies, input/outputs, protocols and communication options.
- Configurable and upgradable without hardware or firmware changes.
- Quick set-up with an identifiable, unique address for each device.
- Easy trouble-shooting with built in device diagnostics.



Area Velocity



Ultrasonic Level



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# OPEN CHANNEL FLOW MEASUREMENT



## 2103LTE Cellular Modem Module

The 2103LTE 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.

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



## 2105LTE Interface Module

An advanced interface and communication device.

The 2105LTE 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) 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 cellular communication options are available.

## ICell—Hassle-free, Budget-friendly Cellular Service

When you need a flowmeter or automated sampler that's durable and adaptable, yet hi-tech and precise, you turn to Teledyne ISCO. Now, when you need cellular service for two-way communication with those units, you can turn to us, too. Introducing ICell. Dedicated cellular service for ISCO products with set-up, account management and customer service—all from Teledyne ISCO. Just email or call the same number you do for all your flowmeter and sampler needs.

We're your one-stop-shop for all your ISCO-related cellular communications, taking the confusion out of finding the right cellular service at the right price.

- Trouble-free, communication from modem modules used in Teledyne ISCO flowmeters and samplers.
- Quick and easy connection with LTE speeds.
- Cost-savings with our volume-discount purchasing power.
- Backed by 70 years of industry experience.

We'll walk you through the process to get you running out of the gate. Think about it: cellular service will be one less thing to think about.



## Signature® Flowmeter

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

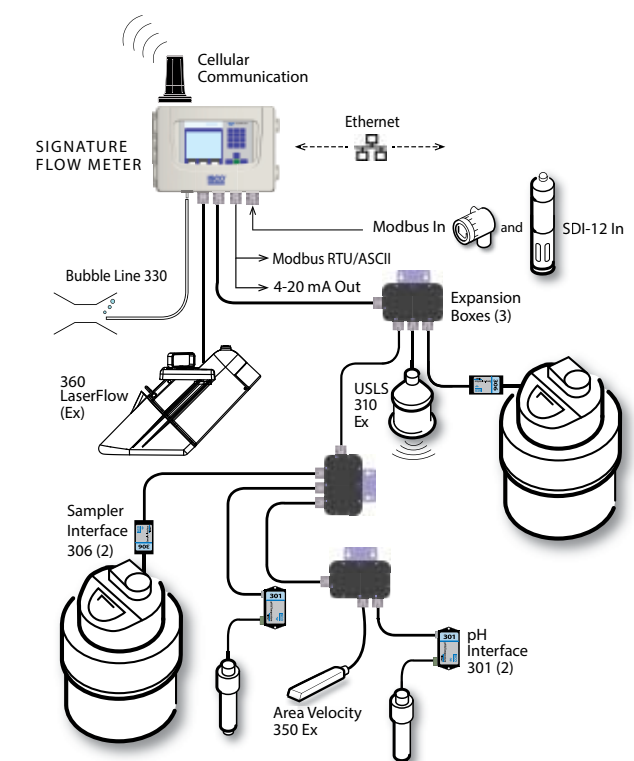
- Cost-effective and easy installation with simple programming and interchangeable sensors
- Integration with multiple input, output and communications options
- Provides a common data recording, reporting and communication platform for multiple parameters
- Easy data retrieval options
- Certified to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



Photo credit: John Morris Group

## 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 mobile devices with no need for client software or mobile app. 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 built-in 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 BLZZRD, 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.



## 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



## Power Products

Rugged, reliable batteries and chargers for environmental monitoring applications.

## 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.



## IRent—Equipment Rental Program

Introducing IRent, the way to obtain Teledyne ISCO water and wastewater flow measurement and sampling products on a temporary basis. Want to take something for a test spin? Looking to suit a specific project within a limited timeframe? Just need additional equipment for that one big job? IRent is what you're after.

IRent is the practical, cost-effective alternative to purchasing equipment you can't use full time. You get only the specific hardware you need for the job at hand. Since IRent originates directly from our factory, you receive the best rates available, along with fast, personalized service. Our large factory inventory assures timely delivery of first-rate equipment containing the latest upgrades.

## Common jobs suited to renting over buying include

- Needs that can't wait for your company's formal purchasing process (Teledyne ISCO delivers on short-term notice, typically shipping within 24-48 hours)
- Wastewater Based Surveillance (WBS)
- Large flow studies
- Storm water monitoring
- Short-term, one-time studies
- Supplementing existing equipment





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*Teledyne ISCO is continually improving its products and reserves  
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