

Isco 6712FR Refrigerated Fiberglass-bodied

The 6712FR is a sequential or composite refrigerated sampler designed for indoor or outdoor applications where rugged, corrosion-resistant construction is required. The heart of the 6712FR is Isco's advanced 6700 Series Controller. It allows you to select different programming modes to assure the most suitable routine for your application. Programming is fast and simple, with on-line help just a key stroke away.

The environmentally-sealed 6712 controller delivers maximum accuracy and easily handles all of your sampling applications, including:

- wastewater effluent
- CSO monitoring
- permit compliance

In the Standard Programming Mode, the controller walks you through the sampling sequence step-by-step, allowing you to choose all parameters specific to your application. Selecting the Extended Programming Mode lets you enter more complex programs.

Factory installed options

An optional built-in telephone modem lets you change programs and download data remotely, from a touch-tone phone. It also has dial-out alarm features.

For automatic documentation of sample storage temperature, specify the 6712FR with optional temperature sensor. With this thermally ballasted sensor, the 6712 controller can log compartment temperatures at programmable intervals with 0.1°C precision.



Rugged, durable construction

The FR model features a corrosion-proof refrigerator cabinet molded from polyester resin fiberglass and supported by a stainless steel frame. A UV-resistant gel coat provides a smooth, non-porous finish for added protection and easy cleaning.

The 6712FR uses thick, foamed-in-place insulation to keep samples preserved at the EPA-recommended 39°F (4°C). An automatically controlled, built-in heater ensures that samples won't freeze, even when ambient temperatures drop to -20°F (-29°C). Coolant is environmentally safe R134a.

Durable powder-coated epoxy, phenolic paint, or polyester tubing, protects refrigeration components.

All 6712 Samplers share the following features:

Advanced Delivery System

The 6712's peristaltic pump delivers samples at the EPA-recommended velocity of 2 ft/sec., even at head heights of 26 feet. At a head height of 3 feet, line velocity is 3 ft/sec. No other automatic sampler achieves this level of performance!

Our patented* pump revolution counter tells you when tubing should be replaced. Changing tubing is a snap; there are no pump covers, collars or tools to slow you down. An exclusive safety interlock removes power from the pump when it's opened.

Step-by-Step Programming

This feature walks you through the sampling sequence and allows you to choose all parameters specific to your application:

- When to start
- What volume to collect
- How to distribute samples
- If samples are to be time- or flow-paced.

You can easily enter complex programs to suit your unique needs. Available routines include:

- Pause and resume for intermittent discharge flow monitoring
- Sampler pacing by time, non-uniform time, flow or external event
- Random interval sample collection

Convenient Data Retrieval

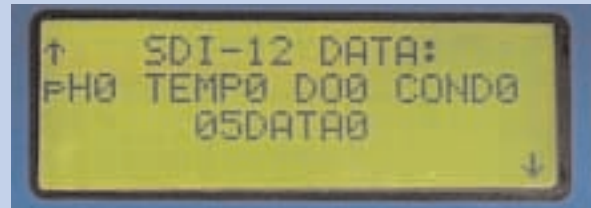
Every 6712 Sampler is also a powerful data logger. Sampling, flow, rainfall, and other water quality data can be stored in its 512 KB memory.

Data may be retrieved directly into a Flowlink® 4 equipped PC in three ways:

- Via cable connection
- Remotely, via Isco's 2102 Wireless Communication System
- By phone, using our optional built-in modem

SDI-12 Interfacing

The 6712 functions as a SDI-12 logger and connects to any sensor that fully implements the protocol standard.



Display window showing SDI-12 connection status.

In addition, Isco has defined extended commands to enable "plug and play" communications and ease of programming. These commands are implemented by the sensor manufacturer. Data are identified and logged by their specific type.

Expand your monitoring capabilities with these products and accessories.

Contact Isco or your Isco Representative to receive specific literature and prices on the following items.

Telephone Modem

A factory-installed option that lets you set up and make programming changes, or collect data from your 6712 sampler from the comfort of your office.

581 RTD (Rapid Transfer Device)

Slim enough to fit in your shirt pocket, yet rugged enough to withstand submersion, the 581 RTD lets you quickly retrieve and transfer data without taking your laptop computer into the field.



ProPak™ Disposable Sample Bags

Isco's patented ProPak bags eliminate the expense of washing and storing bottles, while taking away worries about contamination from previous samples. The bags are available with a 1000 ml capacity, or in a 2-gallon version for composite sampling.

Flowlink Software

Isco's advanced Flowlink® 4 for Windows Data Management Software harnesses the power of Microsoft Windows® to retrieve, import, compare, and analyze data, generate advanced charts and graphs, create comprehensive reports, and more.

700 Series Modules

Our 700 Series Modules let you adapt your 6712 sampler for a variety of jobs. These compact modules are environmentally sealed and may be added to your 6712 system at any time.



701 – pH and Temperature Module

Combines accurate pH and temperature monitoring in one module. It will also activate your 6712 Sampler at a user-elected pH or temperature range.

710 – Ultrasonic Flow Module

Uses our field-proven ultrasonic level sensor that doesn't require submersion in the flow stream.

720 – Submerged Probe Flow Module

Provides accurate measurement at sites where wind, steam, foam, turbulence, or air temperature fluctuations exist. Suitable for small channels, it accurately senses pressure even when covered with silt and sand.

730 – Bubbler Flow Module

Get the dependability and accuracy of Isco bubbler flow meters in a miniaturized package. The 730 is unaffected by changing stream conditions, and level measurement remains accurate despite temperature fluctuations or exposure to harsh chemicals.

750 – Area Velocity Flow Module

Gives greater accuracy where weirs and flumes are not practical, and where submerged, full pipe, surcharged, and reverse flow conditions may occur. And, you don't have to estimate the slope and roughness of the channel.

780 – Smart 4-20 Module

Add intelligence to a simple analog signal. Flow rates are displayed in actual volume units, not merely a percent of full scale. Any linear 4-20 mA input can be characterized by using the 780. The information can be stored and retrieved for later analysis.

Integrated Water Monitoring

Isco 6712 Samplers feature “plug and play” connection with SDI-12 compatible measuring devices - including multi-parameter sondes from leading manufacturers. Combined with the 6712's standard 512 KB of memory, enough for more than

200,000 stored readings. SDI-12 networking gives you great flexibility for logging environmental data, and for “smart sampling” event notification, triggered on any combination of up to 16 inputs.

Example Configuration (Stormwater Monitoring)



Isco 6712
Sampler

Plug-in
Flow
Module



Rainfall
Measurement

SDI-12 compatible Sonde

● pH ● Dissolved Oxygen (DO) ● Conductivity ● Temperature

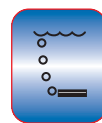
Flow Measurement



Ultrasonic



Submerged
Probe



Bubbler



Area
Velocity

Isco 6712FR Refrigerated Fiberglass-bodied Sampler Specifications

Sampler			Controller		
Height	49.3 in.	125 cm	Weight	13 lbs.	5.9 kg
Width	26 in.	66 cm	Dimensions	10.3 x 12.5 x 10 in.	26 x 31.7 x 25.4 cm
Depth	26 in.	66 cm	Operational Temperature	32° to 120°F	0° to 49°C
Weight (Dry)	160 lbs.	73 kg	Enclosure Rating	NEMA 4X, 6	IP67
Refrigerator Body Material	Fiberglass-reinforced plastic with UV-resistant gel coat		Program Memory	Non-volatile ROM	
Power Requirements	Two Models, 120 Volts 60 Hz, 240 Volts 50 Hz		Flow Meter Signal Requirements	5 to 15 volt DC pulse or 25 millisecond isolated contact closure.	
Pump			Number of Programmable Composite Samples	1 to 999 samples.	
Intake Purge	Adjustable air purge before and after each sample.		Real Time Clock Accuracy	1 minute per month, typical	
Tubing Life Indicator	Provides a warning to change pump tubing.		Software		
Intake Suction Tubing			Sample Frequency Selection	1 minute to 99 hours 59 minutes, in 1 minute increments. Non-uniform times in minutes or clock times 1 to 9,999 flow pulses	
Length	3 to 99 ft.	1 to 30 m	Sampling Modes	Uniform time, non-uniform time, flow, event. <i>(Flow mode is controlled by a flow module or external flow meter pulses.)</i>	
Material	Vinyl or Teflon® lined		Programmable Sample Volumes	10 to 9,990 ml in 1 ml increments	
Inside Dimension	3/8 in.	1 cm	Sample Retries	If no sample is detected, up to 3 attempts; user selectable	
Pump Tubing Life	Typically 1,000,000 pump counts		Rinse Cycles	Automatic rinsing of suction line up to 3 rinses for each sample collection	
Maximum Suction Lift	28 ft.	8.5 m	Program Storage	5 sampling programs	
Typical Repeatability	±5 ml or ±5% of the average volume in a set		Sampling Stop/Resume	Up to 24 real time/date sample stop/resume commands	
Typical Line Transport Velocity at head heights of:			Controller Diagnostics	Tests for RAM, ROM, pump display, and distributor	
3 ft. (0.9 m)	3.0 ft./s	0.91 m/s			
10 ft. (3.1 m)	2.9 ft./s	0.87 m/s			
15 ft. (4.6 m)	2.7 ft./s	0.83 m/s			
Liquid Presence Detector	Non-wetted, non-conductive sensor detects when liquid sample reaches the pump to automatically compensate for changes in head heights.				



The 6712 Controller is an SDI-12 logger. Manual pump operations are now located on the front panel keys.



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Ordering Information

Description	Part Number
6712FR Refrigerated Sampler, 120V AC, 60 Hz Includes controller, distributor arm, instruction manual, pocket guide.	68-6710-072
6712FR Refrigerated Sampler, 120V AC, 60 Hz As above with Internal Temperature Sensor	68-6710-144
6712FR Refrigerator (only), 120V AC, 60 Hz	60-9004-236
6712FR Refrigerated Sampler, 240V AC, 50 Hz Includes controller, distributor arm, instruction manual, pocket guide.	68-7610-073
6712FR Refrigerated Sampler, 240V AC, 50 Hz As above with Internal Temperature Sensor	68-6710-145
6712FR Refrigerator (only), 240V AC, 50 Hz	60-9004-235

Note: Bottle configuration, suction line, and strainer must be ordered separately. Other options and accessories are also available. Contact Isco or your Isco Representative for complete information.