

Isco 730 Bubbler Flow Module

Bubbler level sensing provides the most accurate measurement

Isco 730 Bubbler Flow Modules use an internal air compressor to force a metered amount of air through a bubble line submerged in the flow channel. By measuring the pressure needed to force air bubbles out of the line, the water level is accurately determined. The 6700 Series or Avalanche Sampler then converts the level into flow rate.

The 730 provides accurate measurement in a variety of conditions. It is suitable for small channels, and it is not affected by wind, steam, foam or turbulence. And, because only the bubble tube contacts the flow, corrosive chemicals are not a problem. Automatic bubble line purging prevents clogging. The 730 also resists damage by lightning and debris, making it ideal for stormwater applications.

Automatic drift compensation makes Isco bubbler flow meters the most accurate level measurement technology. In standby applications, such as stormwater runoff monitoring, Automatic drift compensation also allows the 730 to maintain calibration for extended periods.

Applications

- ◆ Level and flow measurement in shallow streams, and/or where lightning and debris may occur
- ◆ Trigger sampling based on flow or level
- ◆ Flow-proportioned sample collection
- ◆ Treatment-capacity analysis
- ◆ River and stream gauging



Standard Features

- ◆ Bubbler line is unaffected by flow stream composition
- ◆ Automatic Drift Compensation provides high accuracy and maintains calibration in standby applications such as stormwater monitoring
- ◆ Built-in flow conversions for most applications, including weirs and flumes, Isco flow metering inserts, Manning formula, data points, or equation for special situations
- ◆ During the program's operation, current flow and level values are viewable on the sampler's LCD display
- ◆ All level data stored in the sampler is available for later retrieval, reporting, and graphing using Isco Flowlink® software



Simply plug in one of the environmentally-sealed modules to expand monitoring capabilities. They can easily be added or changed in the field.

Specifications

730 Module			Bubbler				
Size (H x W x D)	4.9 x 5.7 x 2.0 in	12.4 x 14.5 x 5.1 cm	Range	0.01 to 10 ft.		0.003 to 3.05 m	
Weight	1.5 lbs	0.7 kg	Level Measurement Accuracy <i>Linearity, Repeatability, and Hysteresis at 77 °F (25 °C)</i>	Level*	Error	Level*	Error
Material	Polystyrene			0.1 to 5.0 ft	±0.005 ft	0.03 to 1.52 m	±0.002 m
Enclosure	NEMA 4X, 6	IP67		0.1 to 7.0 ft	±0.01 ft	0.03 to 2.13 m	±0.003 m
				0.1 to 10 ft	±0.035 ft	0.03 to 3.05 m	±0.011 m
Power (provided by 6700 Series Sampler)	9 to 14V DC		Temperature Coefficient <i>Maximum error over compensated temperature range (per degree of temperature change)</i>	Level*	Error	Level*	Error
Program Memory	Non-volatile, programmable flash; can be updated via interrogator port on 6700 Series Sampler using a PC			0.01 to 5.0 ft	±0.0006 x level x temperature change from 77°F	0.003 to 1.52 m	±0.00108 x level x temperature change from 25°C
Level Measurement Data Storage Interval (programmable through 6700 Series Sampler)	1, 2, 5, 10, 15, or 30 minutes			0.01 to 10 ft	±0.0005 x level x temperature change from 77°F where level is measured in feet	0.003 to 3.05 m	±0.0009 x level x temperature change from 25°C where level is measured in meters
Operating Temperature	32° to 120°F	0° to 49°C	Automatic Drift Correction	After a 5-minute warm up period, zero level is corrected to ±0.002 ft. (±0.0006 m) at programmed intervals between 2 and 15 minutes			
Storage Temperature	0° to 140°F	-18° to 60°C	Operating Temperature	32° to 120°F		0° to 49°C	
			Compensated Temperature	32° to 140°F		0° to 60°C	
			*Actual vertical distance between the end of the bubble tube and the liquid surface.				

Ordering Information

Description	Part Number
730 Bubbler Flow Module	68-6700-050
730 Accessories	
Flow Metering Inserts	
6 in. (150 mm) Insert	68-3230-005
8 in. (200 mm) Insert	68-3230-006
10 in. (250 mm) Insert	68-3230-007
12 in. (300 mm) Insert	68-3230-008



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