

4150 Area Velocity Flow Logger - Specifications	
Size:	10.5 x 9.0 x 6.0 in (26.7 x 22.9 x 15.2 cm)
Weight:	8.0 lbs (3.6 kg) (without batteries)
Material:	Body and battery end are structural foam molded polystyrene. Connector end is Ryton® (polyphenylene sulfide).
Enclosure:	NEMA 4X, 6 (IP67)
Operating temperature:	0° to 140°F (-18° to 60°C)
Storage temperature:	-40° to 140°F (-40° to 60°C)
Power:	Two 6 volt lantern batteries (alkaline recommended) or one rechargeable 12 volt Isco 947 Lead Acid Battery
Typical battery life (1-hour data storage interval):	With alkaline lantern batteries - 12 months. With Isco 947 Lead Acid Battery - 4 months (between recharges). Battery life is proportionately less with more frequent data storage, e.g. 3 months for 15-minute storage interval with alkaline batteries.
Program memory:	Non-volatile, programmable flash; can be updated via Interrogator port without opening enclosure
Time base accuracy:	±1 second per day
Level-to-Area Conversions	
Channel shapes:	Round, U-shaped, rectangular, trapezoidal
Data points:	50 level-area points
Level-to-Flow Rate Conversions	
WEIRS:	V-notch, rectangular, Cipolletti.
FLUMES:	Parshall, Palmer-Bowlus, Leopold-Lagco, trapezoidal, H.
MANNING FORMULA:	Round, U-channel, rectangular, trapezoidal.
EQUATIONS:	Two-term polynomial of the form $K^1H^N1 \pm K^2H^N2$.
DATA POINTS:	50 level-flow rate points.
Data Storage	
Memory capacity:	230,000 bytes; equal to over 700 days of level and rainfall readings at 15 minute intervals, plus 5000 sample events.
Data Partitions:	Maximum of 6
Data types:	Level, flow rate, rainfall or sample data
Storage modes:	Rollover, slate or triggered slate
Storage interval:	1, 2, 5, 10, 15, 30, 60 or 120 minutes
Communication	
Serial:	connection to IBM PC® or compatible computer with Isco Flowlink Software
Baud rate:	300, 1200, 2400, 4800 or 9600
Sampler pacing output:	12 volt pulse
Sampler activation conditions:	Enabled, disabled, level, flow rate, rainfall and time; AND and OR combinations of any two of level, flow rate, rainfall and time; values may be above or below a set-point, inside or outside a range, or a rate of change
Area Velocity Sensor (See separate specifications for low-profile sensor)	
Size (LxWxH):	6.6 x 1.6 x 1.2 inches (16.8 x 4.1 x 3.0 cm)
Weight, incl. cable:	2.1 lbs (0.96 kg) for standard probe with 25 foot cable; 3.9 lbs (1.8 kg) for extended range probe with 50 ft cable.
Ambient Operating	0° to 140°F (-18° to 60°C)

Temperature Range:	
Compensated Temperature Range:	32° to 140°F (0° to 60°C)
Materials: Polybutadiene-based polyurethane, stainless steel; PVC and CPVC cable	
Velocity Measurement	
Method:	Doppler Ultrasonic, 500 kHz
Velocity range:	-5 to +20 ft/s (-1.5 to 6.1 m/s)
Level Measurement	
Method:	Submerged pressure transducer
Standard range probe:	measurement range 0.05 to 10 ft (0.015 to 3.05 m); max level 20 ft (6.1 m)
Extended range probe:	measurement range 0.05 to 30 ft (0.015 to 9.1 m); max level 40 ft (12.2 m)
Standard probe accuracy (Non-linearity, repeatability, and hysteresis at 25°C (77°F). Max error for indicated level range.	
0.05 to 5 ft (0.015 to 1.52m):	±0.01 ft (±0.003 m)
0.05 to 7 ft (0.015 to 2.13m):	±0.03 ft (±0.009 m)
0.05 to 10ft (0.015 to 3.05m):	±0.1 ft (±0.03 m)
Extended probe accuracy (Non-linearity, repeatability, and hysteresis at 25°C (77°F). Max error for indicated level range.	
0.05 to 15ft (0.015 to 4.57m):	±0.03 ft (±0.009 m)
0.05 to 21ft (0.015 to 6.4m):	±0.09 ft (±0.027 m)
0.05 to 30ft (0.015 to 9.14m):	±0.3 ft (±0.09 m)