

4120 Submerged Probe Flow Logger – Specification

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 - 2 years. With Isco 947 Lead Acid Battery - 8 months (between recharges). Battery life is proportionately less with more frequent data storage, e.g. 6 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-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 Windows-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
Submerged probe	
Dimensions:	9.5 x 0.875 in (24.1 x 2.2 cm)
Cable:	25 ft x 0.3 in (7.6 m x 0.8 cm)
Materials:	Probe is Type 316 stainless steel and chlorinated polyvinyl chloride (CPVC); cable is Polyvinyl chloride (PVC)
Operating temperature:	32° to 160°F (0° to 71°C)

Compensated temperature:	32° to 100°F (0° to 38°C)
Level measurement method:	Submerged pressure transducer mounted in the flow stream
Transducer type:	Differential linear integrated circuit pressure transducer
Level Measurement Range:	0.1 to 10 ft (0.03 to 3.05 m)
Maximum allowable level:	20 ft (6.1 m)
Level Measurement Accuracy (at 25°C (77°F) - Max error (±) for indicated level range)	
0.1 to 5.0 ft (0.03 to 1.52 m):	±0.01 ft (±0.003 m)
0.1 to 7.0 ft (0.03 to 2.13 m):	±0.03 ft (±0.009 m)
0.1 to 10 ft (0.03 to 3.05 m):	±0.10 ft (±0.03 m)
Temperature Coefficient (Max error per degree temperature change over compensated range)	
0.1 to 4.0 ft (0.03 to 1.22m):	±0.005ft/°F (±0.0027m/°C)
4.0 to 10 ft (1.22 to 3.05m):	±0.007ft/°F (±0.0038m/°C)