



HYDRO D1700



**NEW PORTABLE SELF
CONTAINED FLOWMETER
BUBBLE TO BUBBLE**

**FOR OPEN CHANNEL AND
COLLECTORS**

APPLICATIONS FIELD

Industrials plants, Rivers, Reservoirs,
Wastewater, Treatment plants...

New portable flowmeter sensor, self contained, low power consumption, working on the bubbling principle self cleaning and designed to measure in remote area together. Several ranges are available :

HYDRO D1701 : 1 meter water depth (full scale)

HYDRO D1705 : 5 meter water depth (full scale)

Thanks to its integrated compact air generator, HYDRO D1700 flowmeter measures the waterlevel by sending a small continuous pressure at a low flow to the bottom of the water column. This pressure is then applied to a silicon membrane sensor which delivers a signal proportional to the waterlevel.

The level is converted to flow through a Q(H) curve clearly defined by a parametric formula or by a unity of points couples (metrics or data points).

The filtered flow and the cumulative hourly volume (first 168 hours for each site) are stored in flash.

The HYDRO D1700 flowmeter is delivered with the following features :

- Temperature compensation of the measurements and outputs
- The water depth compensation according to the influence factors
- RS232 type COM1 serial link for setting and using the history with our HydroExpress or HydroPC software according to a proprietary protocol
- Transfer of the history by USB key to our HydroExpress or HydroPC software
- Extension of the historical memory by USB key permanently installed on the D1700.
- A display with an LCD screen with 4 lines of 20 alphanumeric characters, alarm activated threshold and a sensitive 6 button keypad
- A library (curves downloading) : 71 Hydrologic standard curves + 28 user curves by points + 20 user curves by formula
- Can drive 2 samplers
- Configuration of 50 work sites, each with their own mode of operation and configuration.
- Supply of cords for mains charging, external battery charging, control of 2 samplers, a USB-RS232 converter, an RS232 female/female Null modem.

HYDRO D1700 can be delivered with the following features :

- Physico-chemical probes (up to 10 different measurements) via SDI12 or Modbus link
- HydroExpress or HydroPC software for configuration and operation

MEASUREMENTS	
Measuring range	0-1m or 0-5m
Level resolution	1mm
Level accuracy	+/- 0.2 % PE full scale on all of the temperature range for 1 m +/- 0.1 % PE full scale on all of the temperature range for 5 m
Flow accuracy	3 to 5 % depending on the open channel
Temperature range	-40° to +60°C
Temperature drift	+/- 0.1 % full scale in the range -40°C et +60°C
Sampling interval	5 to 120 sec adjustable set on full hour
Flow measurement filtering	Exponential filtering Adjustable filtering period 1 mn to 20 mn Adjustable threshold filtering from 0 to 100 % full scale flow
Purge	Automatic : at the start of the unit and programmable from 0 to 255 hrs Manual : access from the keypad
Field of no sensor deterioration	At least 2 times sensor full scale
Level/flow conversion curves	Multi curves Q(H)
Working mode	Instantaneous or deferred
MEMORIZING	
Capacity	Flash memory with an autonomy of 1 to 6 month according to configuration - Extended by adding a permanent USB key
Memory	Logging at a fixed interval or according to preselected thresholds in a 1,9 Mbytes flash memory
Fixed interval	1, 2, 3, 4, 5, 6, 8, 10, 12 hours or 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 30 minutes
COMMUNICATION	
Interfaces	RS232, USB master (USB key connection)
Protocols	Terminal emulation Operation and firmware update on RS232 by manufacturer software
SAMPLER	
Sampler collector Commands	2 outputs used to start water samplers when the preset total flow is reached Maximum voltage switched : 60V / Maximum current : 100 mA
MAINTENANCE	
Operating time and maintenance counter	Available for compressor, tube, battery, solenoid valve and air filter
Autodiagnostic with alarm indication	Monitoring of the measurements with respect to their domain of definition and alarm control
GENERALS FEATURES	
Power supply	Internal 12 Volt battery Integrated mains charger : 90 à 240 VAC - 47 à 63Hz Recharge by external 12 volt battery
Consumption	= 50mA when active / <= 2mA in sleep mode
Autonomy	Two weeks if periodic purges are planned – Three weeks in other cases
EMC protection	EMC according EMC certifications
Polycarbonate enclosure	Case size : 300x230x140 mm (with carrying strap) - Weight : 6,4 kg (battery included)
Safety class	IP 65
Relative humidity	< 80% without condensation
Pneumatic connection	Screw connection fitting for 4/6mm tubing
Electrical connection	Removal terminal blocks, keyed
Display and keypad	LCD with 4 lines of 20 characters, alarm and activity indicators with color leds
OTHER CHARACTERISTICS AND OPTIONS (Contact us)	
Physico-chemical	Up to 10 physicochemical measurements possible, fully customizable. SDI12 or Modbus link. Specific connector on the back of the box
Analog outputs	1 as standard and 2 other as option
Logic outputs	6 outputs individually programmable for alarm occurrence of for exceeded high/low thresholds on measurements
Logic inputs	3 logic inputs are available as an option to allow external even detection such as a power cut, an opening of the enclosure or even a fire alarm (the operation is similar to the inputs T S1, T S2, T S3 on our former levelmeter P N2). The Logic input accepts a free potential contact or a 0-12V signal contact

Features and specifications are not binding unless confirmed by our company.

