HYDRO D1900

PORTABLE FLOWMETER

SELF CONTAINED BUBBLE TO BULLBE AND EXTERNAL SENSORS

FOR OPEN CHANNEL AND COLLECTORS

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

New portable flowmeter sensor, self contained, low power consumption, allowing level measurement by bubble to bubble or by external sensors (ultrasons, radar, piezo, any 4-20mA sensor)

Bubble to bubble :
Thanks to its integrated compact air generator, HYDRO D1700 flowmeter measures the waterlevel by sending a small continous pressure at a low flow to the bottom of the water column. This pressure is then aplied to a silicium menbrane sensor which delidervs a signal proportionnal to the waterlevel.

External sensor
Any external sensor with a 4-20mA output signal image of flow level.

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 D1900 flowmeter is delivered with the following features

- Temperature compensation of the measurements and outputs
- Memorization of flow, level and modification or incident type events.
- 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
- A display with an LCD screen with 4 lines of 20 alphanumeric characters, alarm activated threshold ans 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 D1900 can be delivered with the following features:

- HydroExpress software for configuration and operation

MEASUREMENT	
Measuring range	0-1m or 0-5m
Level resolution	1 mm
Temperature range	-40° to +60°C
Flow accuracy	3 to 5 % depending on the open channel
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
Working mode	Instantaneous or deferred
Level/flow conversion curves	Multi curves: 71 standard Hydrologic curves and 48 configurable curves.
Human Machine Interface	Display of current values. Access protected by access code
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 (excluding external sensor)
Autonomy	Two weeks if periodic purges are planned – Three weeks in other cases
EMC protection	EMC according EMC certifications
CASE FEATURES	
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
Charging connection	Waterproof connector on the back of the case for mains connection or external battery
Display and keypad	LCD with 4 lines of 20 characters, alarm and activity indicators with color leds

SENSORS				
BUBBLE TO BUBBLE			**EXTERNAL**	
Temperature drift	+/- 0.1 % full scale in the range -40°C et +60°C		**Output signal**	4-20 mA
Purge	* Automatic : at the start of the unit and programmable from 0 to 255 hrs * Manual : access from the keypad		**Type**	Ultrason, Radar, Piezo, autre
Field of no sensor deteriotation	At least 2 times sensor full scale		**Accuracy**	According to sensor characteristics

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