HYDRO D1400

NEW RANGE OF SELF-CONTAINED FLOWMETERS WITH EXTERNAL SENSOR TO ASSOCIATE

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

Flow transmitter without level sensor

Capable of operating with all types of level sensors with analog voltage or current output :
- Hydrostatic pressure with submerged piezoresistive probe
- Air or submerged ultrasonic transmitter
- Radar, …

Several ranges are available : HYDRO D1401 : 1 meter water depth (full scale)
HYDRO D1405 : 5 meter water depth (full scale)

The level is then converted into discharge by a level/flow curve defined by a parametric formula or by a set of pairs of points (level/flow). Measured level and calculated flow are available in the form of an analog output, a serial copy, or from the protocols **SDI12, MODBUS : RTU** or **ASCII**.

I. HYDRO D1400 flowmeter has the following basic elements and functions:

- Compensation Temperature compensation of the measurements and outpouts
- Definition of the sensor type, the minimum and the maximum of the measurement scale ….
- The user has several possibilities : the water level measurement can be transmitted as an analog signal 4-20 mA or 0-10V or digital message on SDI12 ou RS232, RS485, USB, RTC, GSM,...
- An RS232 type COM1 serial link for communication with a PC in terminal mode (for configuration and local operation), or in exchange with the HYDRO PC software for the use of the history according to a proprietary protocol
- An RS232 or RS485 type COM2 link for digital copying of the measurement in ISP8 message format, in order to maintain upward compatibility with our old equipment (ALPHEE, DPN7)
- A display with an LCD color screen and a sensitive 6 button keypad
- Can drive 2 samplers
- Alarm thresholds on programmable logic outputs

II. HYDRO D1400 can be delivered with the following optional features:

- Modbus protocol on serial port COM2 when the numerical message ISP8 is not activated
- Protocol « HYDROLOGIC current values » on COM2 when the numerical message ISP8 or Modbus protocol are not activated
- Associated measurement (pH, temperature, …)
- Alert system
- A livrary (curves downloading) : 71 HYDROLOGIC standard curves + 30 user curves by points + 20 user curves by formula

MEASURES	
Measuring range	0 - 1 m / 0 - 5 m
Level resolution	1 mm
Level accuracy	Depending on the associated measurement sensor
Flow accuracy	3 to 5 % depending on the open channel
Temperature range	-40° to +60°C
Temperature drift	Depending on the associated measurement sensor
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
Final quantities	Serial or analog digital quantities
Level/flow conversion curves	Mono curve Q(H) ; Storage more curves optional
MEMORIZING	
Capacity	1.9 Mbytes flash memory
Autonomy	Logging at a fixed interval or by linearization Autonomy from 1 to 6 months depending on the site
COMMUNICATION	
Interfaces	SDI12, RS232/RS485, USB slave
Protocols	Terminal emulation SDI12 slave ISP8 / CDC9 (for parallel output Gray, BINAIRE, BCD) « PN2 current values » and MODBUS : optional Operating system and remote software update
INPUTS / OUTPUTS	
Logic inputs	3 optional
Analog outputs - 4-20mA / 0-10V	1 in standard + 2 optional - programmable in mini or maxi scale
Logic outputs **External sensor supply** **Sampler drive**	5 (to be programmed individually on threshold or alarm) 1 2 totalement indépendantes
MAINTENANCE	
Autodiagnostic with alarm indication	Monitoring of measurements in relation to their definition domain and alarm management
GENERALS FEATURES	
Power supply	12 VCC External : 24 Vdc ; 48 Vdc ; 220 Vac ; solar pannel
Consumption	Depending on the associated measurement sensor
EMC Protection	EMC according EMC certifications
Polycarbonate enclosure	Case size : 200 x 200 x 140 mm Weight : 1.7 kg
Safety class	IP 44
Relative humidity	< 80% without condensation
Electrical connection	Removal terminal blocks, keyed
Display and keypad	LCD with 4 lines of 20 characters, alarm and activity indicators with color leds

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