FLD3PRO - FLOW MONITORING STATION

Electronic unit detects flow rate and total flow in to open channels so as any conduit even shallow or entirely water filled. One compact ultrasonic sensor technology is based on the Doppler effect of frequency shift for burst signal sent and reflected by dissolved or suspending in microparticles contained inside the liquid stream. Smart electronic parses the algorithm AxV: wetted channel area per average flow velocity. Just knowing channel profile to proper set up the wide size for area calculation of regular sections or diameter for circular pipes. Lcd display shows flow rate and total counting volumes with site tag.

FLD3PRO station storages several variables, not only hydrodynamic, but physic chemical parameters also, depending on sensors wired to the boards: pH, conductivity, dissolved oxygen O2, turbidity, temperature. So as for microclimate: wind velocity, rain gauge, solar radiations.

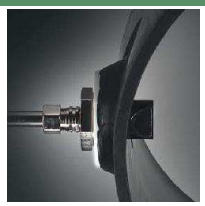
Electronic unit contains up to 5 slot boards within Dopppler to I/O card.

Communication card with Modbus or SDI 12 port protocoll available.

Data acquisition by FLD3PRO main unit are transmitted on option card to supervisory central station by serial cable to pc or remotely via Internet by wireless web server card.

TECHNICAL SPECIFICATIONS

Dimensions, weight:	36,5 Hx26Wx17D cm, kg 5
Housing material:	UV stabilized polycarbonate
Working temperature:	-15°C … +50°C battery included
	-20°C … +65°C with main supply
Supply:	internal 12Vdc-7.2Ah by battery pack and solar panel recharging, or by main supply battery chargher
Backlite display:	16 character per 2 line alphanumeric LCD
Control boards:	see XCI interface boards 5_092en sheet
Flow Sensors:	see SD* sensors 5_095en sheet
Memory:	2 Mb flash (sufficient for 600,000 discrete readings)
Units of measure:	User definable (metric/US)
Software:	PC software for system configuration, data downloading and velocity profile testing. Minimum system requirements - Windows® XP
Scan interval:	5, 10, 15, 30 and 60 minuts
Total scan interval:	none, hours, 12 h, 24 h
Time config:	real time clock



SDI4 - DOPPLER US INSERT VELOCITY SENSOR

SDV1 - DOPPLER US VELOCITY SENSOR

SDVP2 - DOPPLER US AREA/VELOCITY SENSOR

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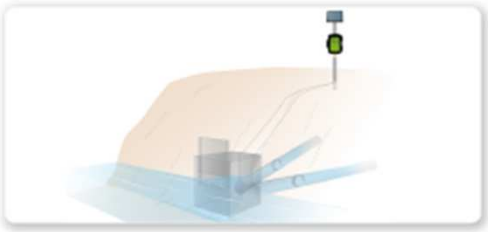
FLOWRATE MEASURING APPLICATIONS

WASTE WATER MONITORING FROM AGRICULTURAL DISCHARGERS

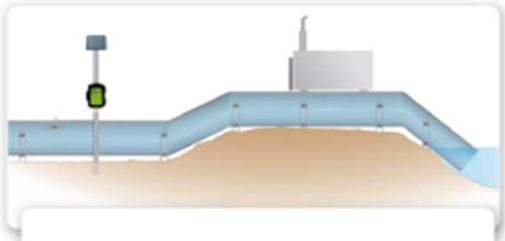
FLD3 Pro logger is suitable for continuous detection of food firms and animal farms waste waters, in compliance with national laws and international norms focused on environmental protection.

This instrumentation measures liquids volumes running due to permit granted to the discharging upstream and downstream to water treatment plants. One or more area per velocity submerged sensors check each the related site, refered for example, to the incoming and the outcoming points of charge-discharge lines.



STREAM MONITORING IN TO SIPHON, GULLY, WELLS

The ultrasonic area/velocity submerged sensor work easly and at cost effective in to the bottom side of wells or siphon tubes on to underground channels, gully or wells. Minimum diameter from 6” to 100” (150...2500mm). Sensor cable can easly fit to the unit station FLD3PRO at ground level. The instrument run stand alone with solar panel on option for battery recharging. Up to 5 meter points can be detected by the same one FLD3PRO unit.

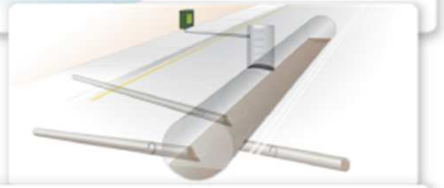


DISCHARGE PUMPS FLOW MONITORING

Continous detection for river pumps, flood pumps or similar. FLD3PRO runs with ultrasonic area per velocity sensor by external insertion on wall piping. Rounds number engine drive and basin deepth can be added. Up to 5 pumps controlled by one FLD3PRO unit. Pipes and conducts diameters from 4” (100 mm) to 100” (2500 mm). Velocity max 8 m/s.

CULVERTS MONITORING

Water flowing underground level but through prismatic sections channels is measured by ultrasonic submerged sensors to read deepth and velocity(max 3 sensors for single FLD3PRO unit). Software parses, with geometric spatial values acquired, amount of flow rates and total flow counter.

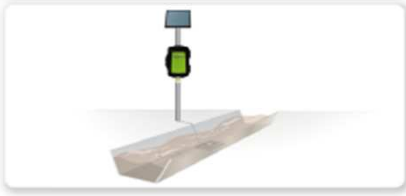


FLOWING SEWERS MONITORING

FLD3PRO detects from 1 to 5 flow points by related ultrasonic area velocity sensors submerged into sewer conducts. At the same time it is possible water quality analysis. Parameters measuring as pH, conductivity, O2, etc. plug on the dedicated sensors.

SURVEY AND MONITORING SLUDGES TREATMENT STATION

Lift pumps, sludges collectors, depuration and slurry treatments. Up to 5 velocity sensors by insertion on threaded wall pipe. Sensors can be easly plug on to the FLD3Pro unit. Piping minimum diameter from 4” (100mm) to max 100”(2500mm). Low cost, affordable solution for detection about carry in flow and liquid volumes of treatment. Alarms min. and max. selectable. Ultrasonic submerged area/velocity sensors are prefered in dam and basin applications when depth-flow rate measures are required. So as in flumes or open channel monitoring tasks.



FLOOD MONITORING

FLD3PRO is employed to oversight discharges collectors and flooding weirs to control and prevents possible damages and injuries

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SYSTEM OVERVIEW

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