

# Flow & Level Instruments



**GREYLINE**  
*instruments inc.*

[www.greylines.com](http://www.greylines.com)  
RELIABLE MEASUREMENT & CONTROL

# Level with Non-Contacting Ultrasonic Sensors

- Monitors Level or Open Channel Flow
- Displays and Totalizes
- Isolated 4-20mA
- False Echo Rejection
- 2 Programmable Control Relays
- Intrinsically Safe Sensor Option



## **SLT 5.0 Level & Flow Monitor**

Use this powerful new instrument to continuously measure, display, transmit and control level in tanks and pumping stations, or to monitor and totalize Open Channel flow through any flume or weir. Features a user-friendly keypad calibration system, backlit LCD display, an isolated 4-20mA output and a watertight electronics enclosure. Includes a non-contacting ultrasonic sensor which is rated Intrinsically Safe with optional safety barrier, and built-in temperature compensation for high accuracy. Plug-and-Play options include extra control relays and a 2-million point data logger.

- Non-Contacting Ultrasonic Sensor
- Redundant Sensor Feature
- 6 Control Relays
- Pump Alternation
- Relay 'Run Time' Reports
- Isolated 4-20mA Output



## **New! PSL 5.0 Hybrid Pump Station Level Controller**

Designed for pump stations, wet wells and tank level control, the Greyline PSL 5.0 includes 6 control relays for pump control (with programmable alternation), level alarms, dialers, or fault alarms. It features a non-contacting, ultrasonic sensor *plus* redundant sensing with connection of any 4-20mA level sensor. Monitor level, display reports and calibrate through the large backlit digital display and connect the isolated 4-20mA output to SCADA systems or PLC's. The PSL 5.0 automatically stores relay run time reports for pump performance analysis. A plug and play data logger and Intrinsically Safe sensor is optional.

- Two Non-Contacting Ultrasonic Sensors
- Differential Level Control plus Open Channel Flow
- User-friendly Calibration system
- Intrinsically Safe Sensor Option



## **New! DLT 2.0 Differential Level Transmitter**

A simple solution for barscreen level control at wastewater treatment plant headworks, pump stations and combined sewer systems. Install one Sensor on each side of a mechanical barscreen to continuously monitor, transmit and control level. Use the built-in control relays or 4-20mA outputs to automatically activate the barscreen rake at preset levels. The downstream sensor can also be installed above a flume to measure and totalize open channel flow. Intrinsically safe sensors and built-in data logger are optional.

- Low Cost
- Isolated 4-20mA Output
- Large LCD Display
- Programmable Signal Relay
- Non-Contacting Sensor
- Watertight Enclosure
- Built-in Keypad Calibrator



## **LIT25 Level Indicating Transmitter**

This compact Transmitter displays, controls and transmits level. Mount the non-contacting ultrasonic sensor at the top of your tank, and the compact, watertight electronics/display enclosure at a convenient location nearby. Use the built-in signal relay or isolated 4-20mA to transmit level to a PLC, and the Display as a local indicator. Features a simple, built-in menu/calibration system, temperature compensation, and self-tunes to extended sensor cable lengths. LIT25 - the ideal indicating, controlling smart level transmitter for tank level systems.

- Non-Contacting Ultrasonic
- Optional Measurement Ranges
- Optional Cable Lengths
- Models for Chemical Compatibility and Intrinsic Safety



## **Ultrasonic Level Sensors**

Each instrument includes a standard ultrasonic sensor, or you can choose from a wide range of optional models for chemical compatibility, measurement range, mounting configuration and intrinsic safety. Ultrasonic sensors are non-contacting and there are no moving parts. They are installed above the liquid being measured. Greyline sensors auto-tune to the cable length. Cables can be field-extended with a junction box for sensor installation up to 500 ft (152 m) from the instrument electronics.

# Flow Sensors Strap-On the Outside of a Pipe

- Strap-on Sensor
- Backlit LCD Display
- 18-Digit Totalizer
- Isolated 4-20mA Output
- Watertight Enclosure
- Built-in 5-Key Calibrator
- RFI Rejection Filters
- Signal Strength Display
- 2 Control Relays



## **DFM 5.0 Doppler Flow Meter**

Continuously monitor flow from outside a pipe. Includes an isolated 4-20mA output and 2 programmable control relays. Ideal for wastewater, chemicals, viscous liquids and slurries. No obstruction and no contact with the moving liquid. The standard sensor mounts on any pipe over 1/2" (12.7 mm) ID. The large, backlit LCD displays and totalizes bi-directional flow in gallons, liters, or any unit of measure. Shielded sensor cable self-tunes to extended lengths. Options include built-in data logger with direct output to USB Flash drives.

- For Dirty Liquids
- Strap-on Sensor
- Battery Powered
- Built-in 5-Key Calibrator
- Programmable Totalizer
- Fast, Easy Operation
- 4-20mA Output
- Data Logger, USB Output and PC Software



## **PDFM 5.0 Portable Doppler Flow Meter**

Ideal for flow troubleshooting, balancing and checking permanent flow meters. Mount the PDFM 5.0 sensor on the outside of a pipe to transmit, display and totalize flow in gallons, liters or any other unit of measure. It takes just a few seconds to install and calibrate. AC/DC powered with built-in rechargeable battery. The standard sensor fits any pipe ID from 1/2" to 180" 12.5 mm to 4.5 m). Includes 4-20mA output, programmable totalizer, adjustable sensitivity and damping. Built-in 300,000 point data logger with PC software and USB output for transfers to a computer.

- For Clean Liquids
- Wide Range of Pipe Sizes
- Measures and Totalizes Flow in Both Directions
- Isolated 4-20mA Output
- Pulse Output
- Optional Data Logger and USB Output



## **TTFM 1.0 Transit Time Ultrasonic Flowmeter**

Accurately measure the flow rate of clean liquids like water, oils and chemicals from the outside of metal or plastic pipes. Display, totalize and control flow with clamp-on ultrasonic transducers. Use the built-in keypad and menu system for step-by-step setup in just a few minutes. Powerful digital signal processing ensures high accuracy in clean liquids. Flow rate, flow direction, totalizer and relay status are shown on the large, backlit LCD display. Use the isolated 4-20mA output to connect to PLC's or a SCADA system. Plug-and-play options include a data logger, DC power input and extra control relays.

- For Clean Liquids
- Wide Range of Pipe Sizes
- Portable, Battery Powered
- Measures and Totalizes Flow in Both Directions
- 4-20mA Output
- Rugged Carry Case



## **New! PTFM 1.0 and PT400 Portable Transit Time Flow Meters**

Recommended for clean fluids like water, glycol, oil and most chemicals. Ultrasonic transducers clamp on the outside of metal or plastic pipes. Transducers can be mounted without shutting down flow and there is no obstruction or pressure drop. Calibration is fast and easy with the onscreen menu systems. The flow meters totalize and display flow in both directions (as positive or negative flow rates). PTFM 1.0 includes a built-in data logger with USB output. The PT400 model includes transducers for select pipe sizes. Rugged polycarbonate carry cases are included with both models.

- Non-Contacting Sensor
- Easy Calibration
- Repeatable, Accurate
- 5 amp DPDT Relay
- Separate ON/OFF Set-point Adjustment
- Relay Status LED
- Adjustable Time Delay
- Intrinsic Safety Option



## **DFS-II Doppler Flow Switch**

Control flow from outside a pipe. Recommended for liquids and pneumatically conveyed solids. Ideal for pump protection or to activate flow/no flow alarms. Sensor mounts on any pipe over 1 inch (25 mm) ID without shutting down flow. Includes one 5 amp DPDT control relay with adjustable time delay, and electronics housed in a watertight, dust tight enclosure. Includes bright LED indicators for relay status and signal strength. Installs in minutes and requires no maintenance. Accurate, repeatable - easy to install and calibrate.

# Open Channel

# Wastewater Flow Monitoring and Control

- Non-Contacting Sensor
- Built-in 2-million point Data Logger
- Daily Flow Reports
- Download to USB Flash Drives
- Isolated 4-20mA and 0-5V Outputs
- 2 Control Relays



## **OCF 5.0 Open Channel Flow Monitor**

Monitor, display, totalize and datalog flow through any flume or weir. The automatic flow reporting system prepares and stores daily reports including total, minimum and maximum flow rates. It logs up to 2-million time and date stamped data points and downloads to USB Flash Drives. The OCF 5.0 includes isolated 4-20mA and 0-5V outputs. Two control relays are programmable for flow proportional pulse output and/or level alarm. Features a password protected keypad system for easy calibration. The non-contacting sensor is rated Intrinsically Safe with optional safety barrier. Temperature compensated for continuous high accuracy.

- Measures both Level and Velocity
- Displays and Totalizes
- Simple Calibration System
- 3 Isolated 4-20mA Outputs
- 2 Control Relays
- Watertight Enclosure



## **AVFM 5.0 Area-Velocity Flow Meter**

Monitor flow through open channels of any shape, partially full sewer pipes *and* surcharged pipes *without* a flume or weir. Ideal for municipal stormwater, combined effluent, raw sewage and irrigation water. Uses a submerged ultrasonic sensor to continuously measure both Velocity and Level in the channel. Can be configured with the standard submerged Velocity/Level sensor, or with submerged velocity and a separate non-contacting ultrasonic level sensor. Intrinsically safe sensors, built-in data logger and pipe mounting bands are optional.

- Logs Level, Velocity and Temperature
- Operates up to 4 Years on Disposable Batteries
- 130,000 point Data Logger
- LCD Bargraph Display
- RS232 Output
- Watertight Enclosure



## **Stingray Portable Level-Velocity Logger**

For flow surveys in open channels and partially filled pipes. The sealed ultrasonic sensor mounts on the bottom of the pipe or channel. Stingray operates on standard Alkaline D-cell batteries for up to four years! The built-in 130,000 point data logger stores water level, velocity and temperature readings at programmable intervals from 10 seconds to 20 minutes. Use Greyline Logger software (included) to monitor readings in real-time and to retrieve log files, calculate flow or export data to other spreadsheet or database programs. Stingray includes an LCD bargraph display and RS232 output.

- Built-into Instrument Electronics
- Includes USB or RS232 Outputs
- Powerful Software for Windows
- Store, Display, Graph and Export log files



## **Data Logging**

Take the work out monitoring and reporting. Data Logger hardware is built into the instrument electronics and includes USB or RS232 outputs. The powerful 'Greyline Logger' software program runs in Windows to retrieve and display log files. Download directly to USB Flash Drives (available in most models) or connect your laptop to the instrument to download by RS232 or USB outputs. View data as graphics or tables. Save and export log files to other software programs for presentation and reporting.

## **How To Order**

Contact a Greyline sales representative in your area or phone one of our sales engineers. Describe your requirements and receive our prompt quotation.

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