

# Flow & Level Instruments

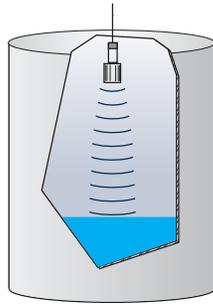


**GREYLINE**  
*instruments inc.*

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

# Level with Non-Contacting Ultrasonic Sensors

- Measures from Above the Liquid surface
- No Moving parts
- Rejects False Echoes from Turbulence and Splashing
- User-friendly Calibration system
- Intrinsic Safety Option



## How It Works

Greyline level instruments use non-contacting ultrasonic sensors to measure level from above the liquid. There are no moving parts and no maintenance is required. Ultrasonic pulses are reflected from the liquid surface to accurately calculate level with 0.25% accuracy. Temperature compensation is automatic. Different sensor models are available for chemical compatibility, measurement range and for restricted mounting locations. With optional Intrinsic Safety Barriers, Greyline sensors are certified for installation in hazardous-rated locations.

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



## SLT32 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, two digital displays, and isolated 4-20mA output, electrical surge protection and a watertight enclosure. Includes a non-contacting ultrasonic sensor which is rated intrinsically safe with optional safety barrier, and built-in temperature compensation for high accuracy. Options include extra control relays and a 50,000 point data logger.

- Non-Contacting Ultrasonic Sensor
- 6 Control Relays
- Programmable Pump Alternation
- RS232 and PC Software
- Relay 'Run Time' Reports
- Isolated 4-20mA Output



## PSL Pump Station Level Controller

Designed for pump stations, wet wells and tank level control. The Greyline PSL includes 6 control relays for pump control (with programmable alternation), level alarms, dialers, or fault alarms. Features a non-contacting, ultrasonic sensor, large 4-digit display, isolated 4-20mA and RS232 outputs. The PSL automatically stores relay run time reports for pump performance analysis. Calibrate with the built-in keypad, or with password-protected "PSL Remote" Windows™ software – Free with each PSL. Use "PSL Remote" and modems to dial-up Pump Stations and monitor wet-well level and relay states from your PC.

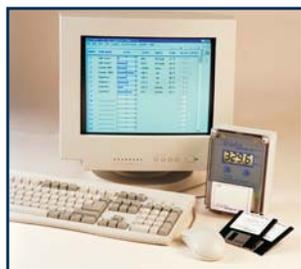
- Low Cost
- Isolated 4-20mA Output
- Large LCD Display
- Programmable Signal Relay
- Non-Contacting Sensor
- Watertight Enclosure
- Built-in Keypad Calibrator



## 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.

- Central PC Monitoring of Tank Farms
- Network up to 32 Transmitters
- Use Ultrasonic, 4-20mA or Pressure Sensors
- RS485 Serial Output
- Display at each Tank
- PC Software



## TFT32 Tank Farm Transmitter System

Monitor and Data Log tank farm inventory from your PC computer. Install one TFT32 Transmitter at each tank with your choice of Sensors including ultrasonic, pressure or 4-20mA from existing sensors (including flow, pH or any process variable). Connect up to 32 TFT32 Transmitters in a network and run Greyline TFS Tank Farm Supervisor PC software to display levels, monitor relay status and data log tank levels. The system is reliable – TFT32 Transmitters and additional Control Relays continue to operate even without PC connection.

# Flow Sensors Strap-On the Outside of a Pipe

- For Clean Liquids
- Battery Powered
- Measures and Totalizes Flow in Both Directions
- 4-20mA Output
- Data Logger and RS232 Output
- Stores Calibration set-ups for Multiple Sites



## **New! PORTAFLOW Portable Transit Time Flow Meter**

Recommended for clean fluids like water, glycol, oil and most chemicals,. Portaflow ultrasonic sensors mount on the outside of pipes from 2" to 40" (50 to 1000 mm) diameter. The ultrasonic signal penetrates most common metal and plastic pipe materials. Sensors can be mounted without shutting down flow and there is no obstruction or pressure drop. Calibration is easy with the onscreen menu system. Stores calibration parameters for up to twenty different sites. Totalizes and displays flow in both directions (as positive or negative flow rates). The built-in data logger stores up to 50,000 data points. View data log files as graphs right on the Portaflow display, or transfer to your PC through the RS232 output.

- For Dirty Liquids
- Strap-on Sensor
- Battery Powered
- Built-in 3-Key Calibrator
- Programmable Totalizer
- Fast, Easy Operation
- 4-20mA Output
- Data Logger, RS232 Output and PC Software



## **New! PDFM 4.0 Portable Doppler Flow Meter**

Ideal for flow troubleshooting, balancing and checking permanent flow meters. Mount the PDFM 4.0 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" to 180" (25mm to 4.5m). Includes 4-20mA output, programmable totalizer, adjustable sensitivity and damping. Built-in 50,000 point data logger with PC software and RS232 output for transfers to a computer.

- Strap-on Sensor
- 4-Digit LCD Display
- 10-Digit Totalizer
- Isolated 4-20mA Output
- Watertight Enclosure
- Built-in 3-Key Calibrator
- RFI Rejection Filters
- Signal Strength Display
- 3 Control Relays



## **New! DFM 4.0 Doppler Flow Meter**

Continuously monitor flow from outside a pipe. Includes an isolated 4-20mA output and 3 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" (25 mm) ID. Features easy keypad calibration. Displays and totalizes in gallons, liters, or any unit of measure. Shielded sensor cable self-tunes to extended lengths. Accepts dry contact input for back flow rejection. Options include built-in data logger and intrinsically safe Sensor for installation in hazardous rated locations.

- 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.

- Low Cost
- For Liquids or Solids
- Non-Contacting Sensor
- 5 amp SPDT Relay
- Sensitivity/Set-point Adjustment
- Power and Relay Status Indication
- Watertight Enclosure



## **MFS100 Microphone Flow Switch**

A low cost flow/no flow alarm. Ideal for liquids and solids. The acoustic sensor mounts on the outside of any pipe and listens for flow noise. Adjust sensitivity to indicate flow or no flow conditions. Remote mounted electronics amplify the flow noise signal and activate the control relay at an adjustable flow noise level. Face panel includes power and relay indicator LED's. Sensor includes armored, flexible cable for connection to electronics.

# Open Channel

# Wastewater Flow Monitoring and Control

- Built-in 50,000 point Data Logger
- Flow Report System
- RS232 and USB Outputs
- Isolated 4-20mA and 0-5V Outputs
- User-Friendly
- 3 Programmable Control Relays



### **New! OCF 4.0 Open Channel Flow Monitor**

Monitor, display, totalize and log flow through any flume or weir. The automatic flow reporting system prepares and stores daily or hourly flow including total, minimum and maximum flow rates and logs up to 50,000 time and date stamped data points. The OCF 4.0 includes isolated 4-20mA and 0-5V outputs. 3 control relays are programmable for flow proportional pulse output and/or level alarm. Features a password protected keypad system for easy calibration. 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



### **New! AVFM-II Area-Velocity Flow Meter**

Monitor flow through open channels, 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 RS232 or RS485 Output
- 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 RS232 (or RS485) serial output. The powerful 'Greyline Logger' software program runs in Windows to retrieve and display log files. Connect your PC to the instrument by serial cable (included) or through modems and phone lines. 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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