pulsar
MEASUREMENT

Pulsar Products
Brochure

Delivering the Measure of Possibility

AVFM 6.1
Greyline AVFM 6.1 Area-Velocity Flow Meter

Key Features

- Measure flow in partially filled pipes or channels without a flume or weir
- Multivariable sensing of velocity, level and temperature
- Easily configured for common channel shapes & sizes
- No moving parts and little to no maintenance
- Three 4-20 mA outputs, relays and Modbus

Common Applications

- Municipal wastewater
- Industrial wastewater
- Stormwater
- Combined sewers
- Natural streams
- Irrigation

BLACKBOX 130
Simple Level Measurement

Key Features

- Compact, low-cost, intelligent controller
- Integrated keypad & display for complete flexibility
- Local programming provides instant level indication
- Solids, powders, & liquid applications
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Tank level monitoring

- Silo level monitoring
- Simple level indication
- Stock control
- Compliance with health & safety
- Process automation

dB TRANSDUCER SERIES
Non-contacting Ultrasonics Sensors

Key Features

- Proprietary echo processing technology (DATEM) for greater measurement accuracy
- Strong signal to noise ratio & excellent resolution
- Integral temperature compensation
- Narrow beam angle for tight line of sight
- Cable extensions up to 1,000 m (3,281 ft)
- Range up to 40 m (131.2 ft)
- ATEX & cFMus approvals

Common Applications

- Wet well level measurement
- Tank level measurement
- Silo level measurement
- Pump control applications
- Shaft tank monitoring
- Digester levels

dBi HART & PROFIBUS ULTRASONIC
Non-contacting Intelligent Transducers

Key Features

- 2 wire, loop-powered, 4-20mA output
- Strong signal to noise ratio & excellent resolution

- Proprietary echo processing technology (DATEM) for greater measurement accuracy
- Communicates with FDT framework applications via Device Type Manager (DTM)
- Narrow beam angle for tight line of sight
- Range up to 15 m (49.2 ft)
- ATEX & cFMus approvals

Common Applications

- Liquids & solids measurement
- Level & volume measurement
- Remote level monitoring
- Tank level monitoring
- Event duration management
- Combined sewer overflows

dBMACH3 & dB3
With Double Sun Shields

Key Features

- Specifically designed for flow measurement
- Accuracy maximized at zero blanking distance
- Solar radiation protection for utilization of internal temperature & enhanced reliability
- ATEX approval

Common Applications

- Wastewater
- Industrial effluent
- Stormwater
- Natural streams
- Irrigation
- Flow monitoring
- Pipe flow & open channel flow monitoring
- Groundwater monitoring
- River level, velocity, & flow

MEASUREMENT TYPE LEGEND

Differential level	MCERT Certified	Pump control
Flow	Open channel flow	Sand in oil
Flow with PMD	Partially filled pipe flow	Sludge blanket
Level	Process protection	Volume

dBR RADAR SERIES
Non-contacting Radar Sensors

Key Features

- Perfect for applications with changing atmospheric conditions or heavy vapors or fumes
- Strong signal to noise ratio & excellent resolution
- Extremely low power consumption
- Minimal installation costs with no interruption to service
- Narrow beam angle
- Dynamically tracks level with proprietary echo processing technology (DATEM)
- Range up to 16 m (52.5 ft)
- Maintenance-free
- ATEX approved

Common Applications

- Foamy applications
- Application's subject to high electrical noise
- Atmospherically volatile applications
- Chemical dosing plants & IBCs
- Digester level monitoring

DFM 6.1
Greyline DFM 6.1 Doppler Flow Meter

Key Features

- Non-invasive flow measurement of "complex" fluids with suspended solids or entrained air
- Single transducer; no flow meter is easier to install and set up
- 4-20 mA, relays, HART, Modbus outputs

Common Applications

- Sewage
- Sludge – RAS & WAS
- Slurries
- Oil production
- Pulp stock & liquors

DFS 5.1
Greyline DFS 5.1 Doppler Flow Switch

Key Features

- Inexpensive & non-invasive flow switch for "difficult" to measure fluids like sewage, sludge, & slurries
- Protect expensive equipment from failure or damage
- Clamp-on ultrasonic sensor installs in minutes without system shutdown & is maintenance-free

Common Applications

- Sewage
- Sludge – RAS & WAS
- Slurries
- Oil production
- Pulp stock & liquors

DLT 2.0
Greyline DLT 2.0 Differential Level Transmitter

Key Features

- Two ultrasonic level sensors with a single controller allows for differential measurement of two tanks, across a screen, or across a screen plus open channel flow through a flume/weir
- Ultrasonic sensors are maintenance-free so you won't lose control of the process

Common Applications

- Differential tank level
- Screen differential
- Screen differential plus open channel flow

DUET
Dual, Ultrasonic Echo Transducer

Key Features

- Unique, patented & non-contacting
- Insensitive to air temperature variations
- Uses two transducers simultaneously for exceptional

accuracy & stability of measurements
- MCERT Class 1 Certified when combined with FlowCERT

Common Applications

- High accuracy, open channel flow measurement
- Environmental compliance
- Influent / effluent flow monitoring
- Effluent discharge monitoring

FLOW MONITOR
Fixed Installation for Pipe Flow Monitoring

Key Features

- Display flow / velocity from a single FlowPulse sensor
- Expands the capability of FlowPulse by providing two additional relays
- Provides power for FlowPulse 22-28 V DC & universal 85-264 V AC
- mA output & onboard logging for greater control over your process system

Common Applications

- Liquids & solids measurement
- Level & flow monitoring
- Semiconductor process
- Acid & caustic demineralizer flows
- Pipe flow & open channel flow
- Liquid tank level & flow monitoring

FLOWCERT
Open Channel Flow Monitoring

Key Features

- Flow monitoring for a complete range of flumes & weirs
- Compatible with a range of both contacting & non-contacting sensors
- Standard onboard memory gives 1-year log at 10-minute intervals
- Modbus RTU & Profibus options

Common Applications

- High accuracy flow on flumes & weirs
- Area-velocity applications
- Open channels

- Influent / effluent flow monitoring
- Effluent discharge monitoring

FLOWCERT LITE
Open Channel Flow Monitoring

Key Features

- Ideal for open channel flow measurement with flumes or weirs
- MCERTS Class 1 certified for greater accuracy
- Meets BS3680 open channel flow standard
- Five user-definable relays for initiation of control or indication devices
- Modbus RTU & Profibus options

Common Applications

- High accuracy flow on flumes & weirs
- Area-velocity applications
- Open channels
- Influent / effluent flow monitoring
- Effluent discharge monitoring

FLOWPULSE SENSOR
Non-invasive, Clamp-on, Flow Sensor

Key Features

- Non-invasive for simple & cost-effective installation
- Onboard digital signal processing for exceptional repeatability
- Ultrasound can be fired through a variety of pipe walls
- Digital platform offers robust performance, repeatability & flexibility

Common Applications

- Pipe flow monitoring
- Influent pipe flow
- Process effluent
- Leachate pipe monitoring
- Pump / process efficiency & asset monitoring

HANDHELD CONTROLLER
Portable System for Flow Monitoring

Key Features

- Mobile controller for portable flow monitoring
- View traces & recorded data files on integrated color display
- Extensive on-board memory provides storage for nearly a year's worth of data
- On-board logging & USB data download gives easy sensor programming
- Up to 5 hours of continuous operation on one charge

Common Applications

- Identify inefficient pumps & under-performing assets
- Identify faulty non-return valves
- Record flow for analysis & comparison
- Monitor pump system performance

IMP RANGE
Compact, Loop-powered Ultrasonic Measurement

Key Features

- Combined transducer & controller
- Range up to 10 m (32.8 ft)
- Calibrate without compromising the IP67 rating
- Simple, menu-led setup using built-in display & keypad
- High power & narrow beam angles for accurate & reliable level measurement
- ATEX option

Common Applications

- Tank level applications
- Chemical dosing
- Simple level indication
- Open & closed vessel level requirements
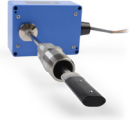- Solids level indication

ISM 5.0
Greyline ISM 5.0 Insertion Electromagnetic Flow Meter

Key Features

- Low-maintenance & accuracy of electromagnetic plus the ease of installation & cost-effectiveness of insertion meters
- Can be installed or removed without system shutdown

Common Applications

- Potable water
- Reclaimed/Recycled water
- Irrigation water
- Cooling water
- Raw water

LIT25
Greyline LIT25 Level Indicating Transmitter

Key Features

- Budget conscience, ultrasonic, level measurement with built-in display & outputs
- Ultrasonic sensor does not contact the fluid - perfect for fluids which foul or damage contacting solutions
- No frills signal processing with fast response time

Common Applications

- Water tanks
- Sewage tanks
- Chemical tanks

MANTARAY
Greyline MantaRay Portable, Area-Velocity Flow Meter

Key Features

- Portable flow measurement of partially filled pipes & channels without a flume or weir
- Deploy as a logger to gather data over weeks
- Extend logging sessions with external battery connection

- Rechargeable battery for continuous use without external power source

Common Applications

- Municipal sewers
- Industrial sewers
- Stormwater
- Infiltration & Inflow studies
- Natural streams
- Irrigation

MICROFLOW
Non-contacting, Area-Velocity Flow Sensor

Key Features

- Can be used stand-alone or as part of a complete flow meter system
- Non-contacting, meaning no interruption to process
- Minimal installation costs
- Maintenance-free
- ATEX approval

Common Applications

- Effluent flow
- Open channel flow
- Applications with no PMD
- Area-velocity
- Water & wastewater
- Quarry & mining

MICROFLOW-i
Loop-powered Velocity Sensor

Key Features

- Can be used stand-alone or as part of a complete data logging system
- Non-contacting, meaning no interruption to process
- Extremely low power consumption
- Minimal installation costs
- Maintenance-free

Common Applications

- Event duration measurement
- Combined sewer overflows
- Open channel flow monitoring
- Remote locations
- Area-velocity solutions

OCF 6.1
Greyline OCF 6.1 Open Channel Flow & Tank Level Meter

Key Features

- Accurate, reliable, non-contacting flow measurement in partially filled pipes & channels where a flume or weir is installed
- Ultrasonic level is easy to install above the fluid, & free of maintenance
- Get the data you need with standard analog output, & a 26 million point data logger with free software for easy report generation

Common Applications

- Municipal influent & effluent
- Industrial effluent
- Stormwater
- Natural streams
- Irrigation

PDFM 5.1
Greyline PDFM 5.1 Portable Doppler Flow Meter

Key Features

- Portable non-invasive flow measurement of "complex" fluids
- Flow verification is easy and inexpensive with one transducer that covers wide range of pipe sizes and materials
- Deploy as a logger for weeks or as continuous meter while inline flow meter is out of service

Common Applications

- Sewage
- Sludge – RAS & WAS
- Slurries
- Oil production
- Pulp stock & liquors

PSL 5.0
Greyline PSL 5.0 Hybrid, Pump Station Level Controller

Key Features

- Hybrid pump control with accurate & reliable ultrasonic level sensor plus redundant level input from submersible sensor
- Six relay outputs programmable for pump alternation
- Pump run-time reports

Common Applications

- Pump stations
- Tank level control

PTFM 1.0
Greyline PTFM 1.0 Portable, Transit-Time Flow Meter

Key Features

- Portable non-invasive flow measurement of "clean" fluids like water & chemicals
- Flow verification is easy and inexpensive with three transducers that cover wide range of pipe sizes and materials
- Deploy as a logger for weeks or as continuous meter while inline flow meter is out of service

Common Applications

- Treated water
- Raw water
- Cooling water
- Chemicals
- RO/DI water

PULSARGUARD 2001
iSensys SandAlert Pulsarguard 2001 Sand Sensor

Key Features

- Ultrasonic, acoustic sensor primarily designed for use in the oil & gas industry
- Non-invasive therefore no interruption to service
- Highly resistant to interference from background noise, fluid, or gas flow

- Intrinsically safe
- Use with the iSensys SandAlert Monitor

- Oil & gas
- Sand monitoring
- Pipe monitoring
- Asset management
- Well efficiency
- Valve protection
- Maximize well productivity

PULSARGUARD 2010
Acoustic Sensor for Non-invasive Solids Flow Detection

Key Features

- Non-invasive, therefore, no interruption to service
- Highly resistant to interference from machinery or process noise
- Compact design for fitting in the tightest of positions or environments
- No moving parts & vibration resistant
- Highly reliable in low or high temperature
- Hazardous options available

Common Applications

- Burst filter bag detection
- Blockage detection
- Pump cavitation
- Valve leakage detection
- Bearing failures
- Bridging or rat-holing in silos
- Pig Detection

QUANTUM 2
Pumping Station Controller

Key Features

- Easy, prompt-led set up
- 'Time to spill' alarm used in high-risk areas, to aid site management
- Onboard data logging for visibility of entire process of the pump station
- Automatically resets tripped pumps
- Pump efficiency alarm function &

- peak power tariff avoidance
- Operates with all dB & dBR

Common Applications

- Pump station monitoring
- 'Time to spill' alarms
- Well monitoring
- Pump efficiency monitoring
- Automated pump reset
- Predictive maintenance

QUANTUM 3
Pumping Station Controller

Key Features

- 'Time to spill' alarm used in high-risk areas, to aid site management
- Able to supply power to 4 FlowPulse units so all flow-rate based alarms & control are based on real measurements
- Pump efficiency alarm function & peak power tariff avoidance
- Totalizer sums real throughput rather than deriving from level measurement
- Storm detection & NRV leakage alarms
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Pump control
- 'Time to Spill' warning requirements
- Reduction in power costs
- Pump monitoring & control
- Pump station control

SANDALERT MONITOR
iSensys SandAlert Sand / Particle Monitor

Key Features

- Provides a quantitative, real-time, & accurate measure of produced solids / sand particles
- LCD display showing bar graph & instant sand mass readout.
- Real-time presentation of sand & trending information
- All the data saved & logged for further analysis & long-term records

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- Easy multi-point installation

Common Applications

- Oil & gas
- Sand monitoring
- Maximize well productivity
- Pipe monitoring
- Asset management
- Well efficiency
- Valve protection

SANDALERT PORTABLE
iSensys SandAlert Portable Sand Monitoring System

Key Features

- Supplied in a rugged pelican case for easy & secure transport
- Graphic display for real-time sand data & trend information
- Non-invasive therefore no interruption to service
- Intrinsically safe

Common Applications

- Oil & gas
- Sand monitoring
- Maximize well productivity
- Pipe monitoring
- Asset management
- Well efficiency
- Valve protection

SFM 6.1
Greyline SFM 6.1 Ultrasonic, Slurry Flow Meter

Key Features

- Non-invasive & robust clamp-on, ultrasonic flow meter for industrial slurries
- Sensor mounts on the outside of the pipe, eliminating maintenance or damage caused by abrasives in the pipe
- Rugged, stainless steel enclosure can handle the toughest industrial environments
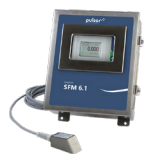
Common Applications

- Fly ash slurry
- Gypsum slurry

- Limestone slurry

SLUDGE FINDER 2 & VIPER TRANSDUCER
Sludge Blanket Level Detector

Key Features

- Continuous single or dual-channel level control
- High frequency gives high-reliability long term
- Self-cleaning transducer; no need for regular inspection
- Easy set up with drop-down menu on large, clear display
- High level FLOC alarm available
- Optional ultrasonic transducer can be added

Common Applications

- Primary & secondary settlement tanks
- DAF thickeners
- Gravity thickeners
- Stationary & traveling bridges

STINGRAY 2.0
Greyline Stingray 2.0 Portable Level-Velocity Logger
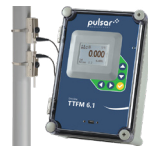
Key Features

- Log level & velocity in locations without power, only 4 D-cell alkaline batteries required
- Import level & velocity data into our Logger Software to calculate flow rate without a flume or weir
- Can be deployed within minutes & lasts for weeks to months at a time depending on your sampling interval

Common Applications

- Municipal sewers
- Industrial sewers
- Stormwater
- Infiltration & Inflow studies
- Natural streams
- Irrigation

TTFM 6.1
Greyline TTFM 6.1 Transit-Time Flow Meter

Key Features

- Non-invasive flow measurement of "clean" fluids like water & chemicals
- Three sizes of transducers to measure 15 mm to 1,200 mm (0.5 in to 48 in) pipes, intuitive 5 button interface for easy installation & set-up
- 4-20mA, relays, HART, Modbus outputs

Common Applications

- Treated water
- Raw water
- Cooling water
- Chemicals
- DI/RO water

ULTIMATE CONTROLLER
Combines Ultrasonic Level & Flow Measurement

Key Features

- Modular & expandable controller platform
- Provides cost savings through:
    - High-energy cost avoidance
    - Pre-blockage detection
    - Automatic resets
    - Selection of the most efficient pump
- Camera port for real-time viewing of your application
- Touchscreen display
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Advanced pump control
- Level measurement
- Flow monitoring
- Pump performance monitoring
- Asset management

ULTRA 4
Advanced Ultrasonic Level, Flow, Volume, & Pump Control

Key Features

- Multi-function display for easy setup & configuration
- On screen monitoring with echo profiles and trend graphs
- Built-in volume calculations from standard tank shapes or calibration curves
- On-board Micro SD card extends data logging
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Pump control
- Open channel flow & level
- Chemical dosing
- IBC tank level
- Storage tank levels
- CSO & sewer network monitoring

ULTRA 5
Non-contacting Level, Flow, Volume, Differential, & Pump Control

Key Features

- Quick & easy set-up with onboard, menu driven software tool
- Pre-programmed tank shapes
- 5 assignable relays with extra alarm options such as pump efficiency
- Optional data logging board to enable the user to log data for the lifetime of the product
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Solid & liquid tank level monitoring
- Differential level control
- Well level measurement
- Pump control & exercising
- Open channel flow measurement with flumes & weirs

ULTRATWIN
Twin-Channel, Ultrasonic Measurement

Key Features

- Dual display for two measurements
- Easy prompt-led setup
- Data logging option which records & charts data & trends in an easily accessible form
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Effluent discharge monitoring
- Shaft tank dual-chamber measurement
- Dual channel monitoring
- Screen house monitoring
- Sophisticated pump control

ZENITH
Intelligent Pumping Station Controller

Key Features

- Advanced pump control features as standard
- Reduce capital costs by eliminating PLC's on small sites
- Reduce power costs by intelligent use of lower tariff periods for pumping
- Monitoring of pumps or controls via the 7 digital inputs
- Totalizer volume throughput of well or station
- Operates with all dB & dBR transducers up to 40 m (131.2 ft) range

Common Applications

- Small pump station control
- Tariff change monitoring
- Energy savings
- Well monitoring
- Pump control & monitoring
- Well capacity & performance

Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, & our network of global partners all offer full support & training. Our facilities in Malvern, UK & Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, & Malaysia allows us to create close relationships with our customers & provide service, support, training, & information throughout the lifetime of your product.

For more information, please visit our website:

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