

FM500 Ultrasonic Flow Meters

Ultrasonic flow meters that use transit time and Doppler methods to measure flow



- Clean or dirty water applications with selectable modes
- Quick and easy setup and operation
- Clamp-on transducers never contact process liquid
- Built in data logger downloads to standard SD card
- Fully configurable analog and pulse outputs

Description

The Global Water FM500 ultrasonic flow meters provide accurate and trouble free flow metering for a wide range full pipe applications including: potable water, raw wastewater, effluent, well water, slurries, or virtually any sound conducting liquid. The FM500 incorporates the latest ultrasonic technology to give you an accurate, easy to use hybrid flow meter with selectable Doppler or transit-time operating modes. With its quick and easy clamp-on transducer installation, factory pre-configuration and user programmable menu driven interface, the meter is a snap to commission in the field. The reliable ultrasonic flow meters use custom algorithms and DSP technology to ensure high accuracy flow metering, and the proprietary AGC (Automatic Gain Control) algorithm eliminates the need for manual gain adjustments.

Loaded with the features, the FM500 includes: five programmable and password protected configurations for multiple user and portable applications, an easy to read 320 x 240 pixel backlit LCD display, data logging to standard SD Card format (user configurable to time interval, flow rate and total set-point triggers), isolated 4-20mA analog and 0-1000Hz pulse outputs.

Optional features include: three configurable relay outputs and a communications package that allows the meter to connect to your computer via RS-232, RS-485, USB or Ethernet. The communication package also permits remote access and control of all functions including real-time display, system configuration, data logging, remote data capture and process control functions. The software included with the meter's communication package allows remote internet access through a local network set-up.

Specifications

Measuring principle: Ultrasonic Doppler or transit time via pipe mounted transducers

Condition of flow: Full pipe within the minimum and maximum velocity specifications

Liquid types: Virtually any acoustically conductive fluid

Transit time mode: from 0% to 1% (0 to 10,000 ppm) particulate

Doppler mode: from 0.02% to 15% (200 to 150,000 ppm) of 100 micron particulate

Nominal pipe sizes: 0.5 inch - 12.0 inch (20mm to 315mm)

Pipe materials: Most metal and plastic pipes

Pipe liner materials: Most plastic liners

Liquid velocity range: 0 to 30 f/s (0 to 9 m/s)

Accuracy at pipe inside diameter:

Flow rate averaging time (5.0s):

$\pm 1\%$ of rate > 8 ft/s and ± 0.06 ft/s < 8 ft/s (Transit time 1/2" to 1"

$\pm 1\%$ of rate > 1 ft/s and ± 0.01 ft/s < 1 ft/s (Transit time 1-1/4" to 12")

Flow rate averaging time (1.0s):

$\pm 1\%$ of rate > 12 ft/s and ± 0.12 ft/s < 12 ft/s (Transit time 1/2" to 1"

$\pm 1\%$ of rate > 5 ft/s and ± 0.05 ft/s < 5 ft/s (Transit time 1-1/4" to 12")

Flow rate averaging time (0.5s):

$\pm 2\%$ of rate > 12 ft/s and ± 0.25 ft/s < 12 ft/s (Transit time 1/2" to 1"

$\pm 2\%$ of rate > 12 ft/s and ± 0.25 ft/s < 12 ft/s (Transit time 1-1/4" to 12")

Other specifications available at WWW.GLOBALW.COM.

Options and Accessories

FM500 Ultrasonic Flow Meter

Transit time/Doppler flow meter with datalogger & 10 FT cable.

Options

FM500-B 3-relay option (for control and alarms)

FM500-A Smart communications/configuration package

FM500-50 50 FT transducer cable (for 2 transducers)

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at 1-800-876-1172
International: 1-979-690-5560
Fax: 1-979-690-0440
Email: globalw@globalw.com

Visit our online catalog at:
www.globalw.com
Our Address:
11390 Amalgam Way
Gold River, CA 95670