

# TX100-200 Turbine Flow Sensors

Adjustable Depth Turbine Insertion Flow Sensors for Full Pipe Flows



## Description

The TX100-200 Turbine Flow Sensors are highly reliable adjustable depth insertion turbine flow sensors. The sensors use ruby bearings and a non-drag pick off to achieve a wide flow range and a long life. A depth adjustment system allows two basic sizes to cover pipes from 3" to 48" in diameter.

## How it Works

As fluid moves the TX100-200 turbine, a sensor detects the passage of miniature magnets in the rotor blades (magnets are in 2 or 4 blades only.) The resulting square wave signal can be sent over unshielded cable for hundreds of feet without a transmitter. This signal can be sent directly to a PLC or other controller, or it can be converted using a blind 4-20mA output or a flow rate and totalizer display. The TX115-215 Hot Tap meters incorporate an isolation valve and a longer tube, which allows these meters to be easily inserted into or removed from the pipe while it is under pressure.

## Versatile Output and Displays

Designed for modularity and versatility, the TX100-200 sensors have a current-sinking pulse output that you can integrate with an appropriate transmitter or indicator depending on your application. For a battery powered pulse output, select the FT415M meter display or FT415W wall display. For a scaled pulse and 4-20 mA output display, you can use the FT420M meter display or the FT420W wall display. For a 4-20 mA analog output only, you can mount the AO55 blind 4-20 mA converter directly onto the meter. If you are using a TX100-200 sensor with a programmable controller, you can feed the output signal directly with no other conditioning required.

## Easy Installation

The installation fitting included with the TX100-200 sensor is standard 1½" male NPT, which can be directly threaded into ordinary saddles or threaded weld fittings.

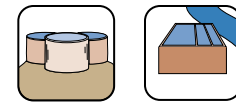
## Specifications

Accuracy	±1% full scale
Flow Range	0.2 to 30 ft/sec (.06 to 9.14 m/sec)
Sensor/Output	Hall Effect Sensor: 12 VDC current sinking pulse
Maximum Pipe Pressure	200 psi (14 bar)
Maximum Temperature	200°F (93°C)
Pipe Size	TX101: 3" to 10" (50 to 250mm) TX201: 10" to 48" (250 to 1200mm)
Fitting Size	1-1/2" NPT
Insertion Force	0.44 x pressure in pipe
Power	5 to 24 VDC, 1.5 mA
Materials	Sensor Body: Brass, 316 stainless steel Rotor: Polypro Shaft: Nickel-bound tungsten carbide Bearings: Ruby Cable: #22 AWG 3-con 18' (6m)
Maximum Cable	2,000' (650m)
Weight	TX101: 3 lbs (1.36 kg) TX201: 3.4 lbs (1.54 kg)
Dimensions	TX101: 4" square x 12" long (10cm square x 30.5cm long) TX201: 4" square x 17" long (10cm square x 43.2cm long) TX115: 15-3/4" (40 cm) tall w/ 2" male NPT TX215: 21-3/4" (55 cm) tall w/ 2" male NPT

## Features

- Easy installation through 1.5" NPT
- Two sizes fit entire pipe range: 3" to 10" and 10" to 48"
- Turbine rotor to optimize minimum flow limits
- High quality ruby bearings for long life
- One easily-replaced moving part
- Uses standard NPT threaded pipe fittings or saddles
- Optional 4-20 mA flow rate and totalizer display
- Signal can be sent directly to controller

## Applications



Ideal for metering clean water flows and chemical proportioning.

## Ordering & Options

### Adjustable Depth Turbine Flow Sensors

Order No.	Material	Pipe Dia.
TX101B	Brass	3" to 10"
TX101S	Stainless Steel	3" to 10"
TX201B	Brass	10" to 48"
TX201S	Stainless Steel	10" to 48"

### Hot Tap Adjustable Depth Turbine Meters

Order No.	Material	Pipe Dia.
TX115B	Brass Unit/Bronze Ball Valve	3" to 10"
TX115S	316 SS Unit/Bronze Ball Valve	3" to 10"
TX215B	Brass Unit/Bronze Ball Valve	10" to 48"
TX215S	316 SS Unit/Bronze Ball Valve	10" to 48"

### Optional Output Displays & Converters

Order No.	Description
FT415M	Battery Powered Pulse Output and Meter-Mounted Display
FT415W	Battery Powered Pulse Output and Wall-Mounted Display
FT420M	Pulse to 4-20 mA Output and Meter-Mounted Display
FT420W	Pulse to 4-20 mA Output and Wall-Mounted Display
AO55M	Blind 4-20 mA Converter
AO55W	Blind 4-20 mA Converter



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