

CheckSonic Ultrasonic Gas Flow Meter



Elster Instromet

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Ideally suited for the measurement of pulsating flows over a large range, the CheckSonic is immune to particles and liquid residue.

Advantages

- No pressure drop
- Wide rangeability/turn down ratio 50:1
- Bi-directional flow
- No moving parts
- Very low cost ownership (maintenance)
- Insensitive to contamination
- Interfaces with major flow computer mfg
- Measures pulsating flow accurately

Applications

- Underground (natural) gas storage
- Gas compressor control
- Gas processing plants
- Measurement and regulation stations
- In-plant metering
- Power plants
- Check measurement
- Pipeline leak detection
- System balancing
- Gas well flowline measurement

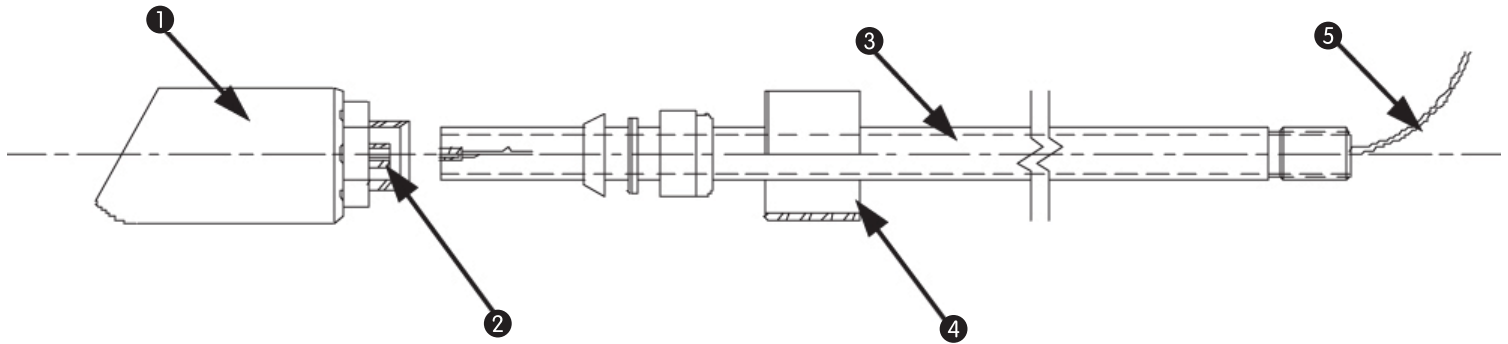


The Elster Instromet CheckSonic Single Path Ultrasonic Flow Meter is one-of-a-kind. With easy to install hot tap, inserted through a 2" or 3" full-port ball valve, retractable transducers, sophisticated digital electronics and the unique bounce path configuration results in a meter ideally suited for certain gas measurement applications. The proven accuracy (better than $\pm 1.0\%$), repeatability and linearity make the CheckSonic one of the world's finest non-custody transfer meters.

The single path meter has a very high repeatability and accuracy due to the linear performance of the meter. Bounce path technology gives increased accuracy. The absence of moving parts makes the single path meter ideally suited for measurement of pulsating flows over a large flow range, immune to particles and liquid residue.



Transducer With Insertion Tube



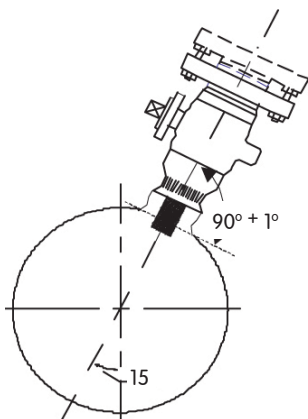
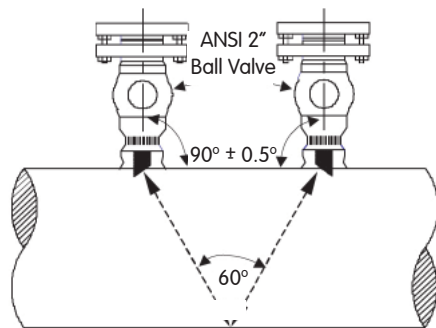
Legend

- 1 UltraSonic Transducer
- 2 SMB Connector
- 3 Epoxy filled extension shaft
- 4 FM Collar
- 5 Coaxial cable

Specifications

Outputs	- Dual Frequency: 0 to 5,000 Hz - Modbus or "Uniform" RS-232 & RS-485, 2each
Performance	- Rangeability of 2' to 100' ft/s (feet per second) (0.6m to 30m per second) - Accuracy within 1.0% at 5' to 100' ft/s - Repeatability equal to 0.2%, Bidirectional flow - Velocity Range: -100' to 100' ft/s (-30m to 30m per second) - Extended Range of 1' to 120' ft/s (0.3m to 36m per second)

Typical Hot Tap Location



Response Time	- 1 update per second
Approvals	- FM Class, Div 1, Group C,D.
Power	- 12/24 VDC, 10 Watts consumption
Pressure Range	- 218 to 1,450 PSIG, 15 to 100 bar
Gas Temperature	- -4° to 176° F, -20° to 80° C
Transducer Rating	- 218 to 1,450 PSIG, -4° to 176° F - 15 to 100 Bar, -20° to 80° C
Included	- Frequency Splitter Card - U-Linx converter, RS 485 to RS 232 converter. - Uniform software program for monitoring and configuring flow meter with a laptop computer
Recomenmed Straight Pipe	- 20D Upstream and 10D Downstream
Sizes	- 8" to 64" (200 mm to 1,600 mm)

Designed for check metering, with two transducers for a single path. With addition of two or four more transducers, a hot tap multi path meter can be designed and installed to give improved measurement.