

PRIOR - PRIMARY FLOW ELEMENT IN LINE SENSOR

PRIOR, on line primary flow element sensor. Simple, accurate and affordable design. As for all volumetric flow meters, it needs of one couple of static pressure and temperature sensors, if mass flow rate continuous calculation is required.

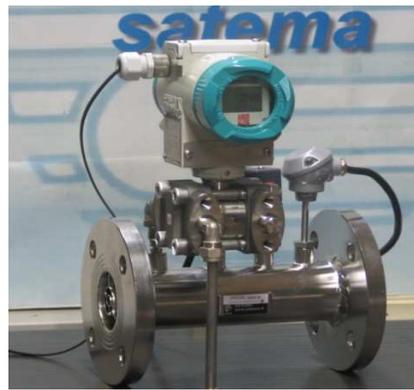
Measurement assembly installing, even compact or remote, works wired by hydraulic connection to one Captor, smart differential pressure transmitter (quadratic DP transmitter). Captor converts from the DP, differential pressure impulse, to one analogue current signal, in function of the volumetric flow rate. Display and function keys enable on field set up or by hand held programmer terminal on option. Digital interface on serial bus enabled as option.

APPLICATIONS AND FEATURES

Extreme boundaries about pressure and temperatures and mixing liquid/gas phases. Aggressive, contaminant, particles into carrying liquids. Wet or condensing gases mixtures. Waste or clear waters; cryogenic gases or liquids, steam, superheated water, compressed air, oil and smokes, combustion gas, flue gases, up to +800°C or over.

No moving parts, not affected by liquids conductivity. Anywhere mounting, without traditional upstream downstream straight section lengths. Easy replacement by ISO valve with the same size.

- No predictive maintenance
- Hydrostatic pressure test (ultrasounds, penetrant liquid, on option)
- Conformity certification to ISO 5167, ISO8402-18
- FLOW PC * Calculation electronic unit and software data supervision



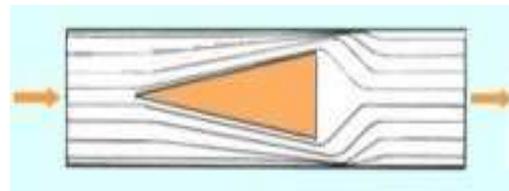
QM mass flow version



QV volume flow version

DESCRIPTIONS

Based on the Bernoulli theorem, PRIOR get, thank to its original design and construction, the combined effects of isentropic thermodynamic flow plus the subsonic Venturi flow, with the two convergent divergent circular sections, transformed in to annular throat chamber. DP/P ratio (pressure signal range vs. overall drop pressure) very good and most favorable matching against the Venturi 7° and 15°. Vortices and turbulences effects strongly minimized.



TECHNICAL SPECIFICATIONS

Accuracy: $\pm 0.5\%$ reading over the whole range. Repeatability \pm Linearità ≥ 1500 Re n.ro di Reynolds

Rangeability: from 1 to 10 standard, expandable to 30

Diameters: 1/2" ... 10" standard (other on request)

Materials: S.S. AISI304 standard (other materials on request)

Electronic: CAPTOR see differential pressure chapter. The accuracy and repeatability further improved with the use of digital electronic instrumentation. Separators and capillary tubes opt.

Accessories: 3 way valve manifold, flexible tubes pulse outlet

Note: The electronic components, optional accessories and software can be configured according to the specific characteristics of process fluids. The data shown are representative and perfected based on the project.



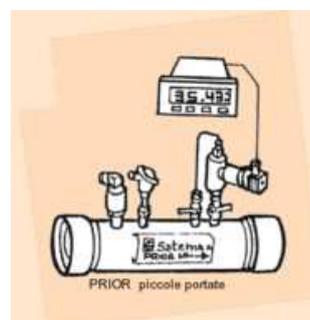
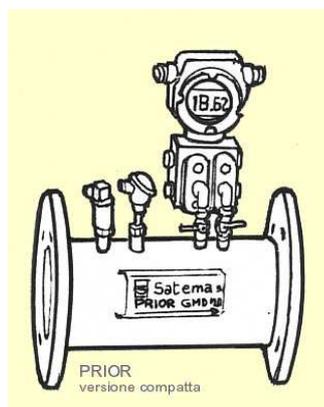
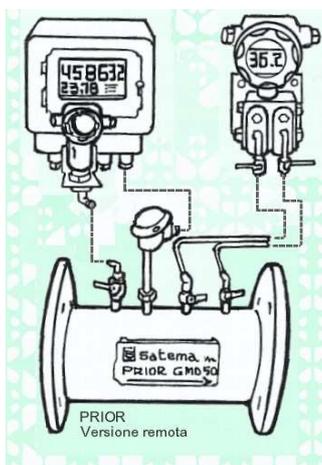
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CONFIGURATIONS



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