Pietro Fiorentini

FioSonic

FioSonic is the natural evolution of the Pietro Fiorentini know-how and experience in the gas industry. With its multi path-chordal ultrasonic technology **FioSonic** provides real time diagnostics high accuracy and redundancy for custody transfer gas flow measurement.

- Gas liquefaction
- Gas compression / booster stations
- Gas storage
- City gates
- Heavy industries
- Medium / small industries
- District stations
- Gas reverse flow
- Gas processing
- Regasification
- Gas storage

Features	Values
Design pressure*	up to 15.3 MPa(a) up to 153 bar(a)
Ambient temperature*	• Ambient Temperature for Non custody Transfer: from -40 °C to +60 °C from -40 °F to +140 °F • Ambient Temperature Custody Transfer (MID and OIML certified): from -25 °C to +55 °C from -13 °F to +131 °F
Operating (gas) temperature*	from -30 °C to +80 °C from -22 °F to +176 °F
Accuracy	Up to 0.5% with factory calibration Up to 0.2% with high pressure flow calibration
Rangeability	Up to 1:160 for non-custody transfer Up to 1:125 for custody transfer acc. to OIML R-137/MID
Repeatability	0.1%
Ingress Protection	IP 66 / NEMA 4X
Applicable metrology standards	AGA-9; OIML R137-1&2 ; MID 2014/32/EU
Power supply and consumption	Main power: 14 - 0,710 mW max I/O option board power: 10.8 - 1,626 mW max
Hazardous area certification	ATEX II 1 G Ex ia IIC/IIB T4 Ga (intrinsically safe) IECEx Ex ia IIC/IIB T4 Ga (intrinsically safe) cQPSus Class 1 Div.1 Gr. ABCD T4-T1(intrinsically safe)
Accessories	Transducers Extraction Tool ≥ 8” (DN200)
Nominal dimensions DN	From DN80 | 3” to DN 750 | 30” for four-paths meter From DN50 | 2” to DN 750 | 30” for three-paths meter Above DN750 | 30” on request
Connections*	Class 150/300/600/900 RF / RTJ according to ASME B 16.5 or PN 16/25/40 according to EN 1092-1

(*) REMARK: Different functional features and/or extended temperature ranges available on request. Stated temperature ranges are the maximum for which the equipment's full performance, including accuracy, are fulfilled. Standard product may have a narrower range.

Table 1 Features

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Materials and **Approvals**

Part	Material
Body	Forged steel ASTM A350 LF2 Cl.1 Other material on request
Electronic enclosure	Epoxy painted low copper aluminum alloy Stainless Steel 316, on request
Transducers	Titanium ASTM B348 Ti GR.2
Sealing ring	FKM or other material according to process conditions
REMARK: The materials indicated above refer to the standard models. Different materials can be provided according to specific needs.	

Table 2 Materials

The **FioSonic** is designed to meet AGA report N.9, ISO 17089-1, OIML R137-1&2 requirements.

AGA9 ISO17089-1

The product is certified according to European Directives 2014/68/EU (PED) as well as 2014/32/EU (MID), OIML R137 -1&2, ATEX, IECEx, CSA, UL (cQPSus).

OIML R137-1&2 PED-CE MID IECEx cQPSus ATEX

Fiosonic competitive advantages

- Titanium transducers for long durability
- Low voltage sensors
- No moving parts
- High rangeability
- Bi-directional Flow measurements
- BCW processing for reduction of noise interferences
- Easy maintenance
- 30% Hydrogen blending compatible. Higher blending available on request
- Metallic wetted parts

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