

# SS2 Pressure Transducers (ATEX Compliant)

Superior stability and reliability in pressure measurement based on proven sensing technologies for harsh environments

- » Optimum choice for outdoor applications
- » Ultimate stability and reliability
- » Enhanced thermal compensation over a temperature range of  $-4^{\circ}$  to  $140^{\circ}\text{F}$  ( $-20^{\circ}$  to  $60^{\circ}\text{C}$ ) for gas distribution equipment
- » For Class I, Div. II, Groups A–D, with approved barriers



## Product Description

The Celerity SS2 (formerly SolidSense® II) (ATEX compliant) pressure transducers are designed for stable, accurate, and reliable pressure monitoring in ultra-high purity applications in the harshest environments.

The Celerity third generation UHP pressure transducer utilizes glass-fused strain gauge technology, developed for the demanding requirements of aerospace and proven in high volume automotive applications, enabling a new level of performance.

The ultra stable, micro machined silicon strain gauges are matched and fused, at high temperature to the metal diaphragm to relieve manufacturing induced stress. The process reduces the “drift” (lack of zero stability) commonly associated with competitive products. Consequently, down time for zero adjustment to compensate for “drift” are exponentially reduced. In addition, the SS2’s (ATEX compliant) unique mechanical design eliminates the torque effects during installation.

The SS2’s (ATEX compliant) digital architecture enables automated software driven calibration and a wide range of thermal compensation routines, unlike the passive compensation used in competitive devices. This not only enhances (measurement) repeatability regardless of changes to the operational environment, but also drives consistency of performance from one transducer to the next even in the harshest environments.

For specific pressure ranges, output signal types, and process fittings available, see [www.celerity.net](http://www.celerity.net).

## Features

- Ultra stable glass bonded sensing elements
- Electropolished wetted material for UHP applications
- 4 to 20 mA and 0.05 to 5.05 V outputs available
- Digital signal processing, high performance digital electronics
- ATEX compliant
- CE compliant
- RoHS compliant
- FM approved
- Nema 4X
- 2 year warranty

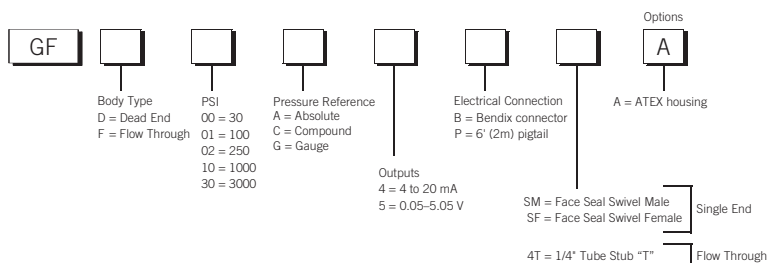
## Applications

Gas delivery systems and tools used for semiconductor processing, including:

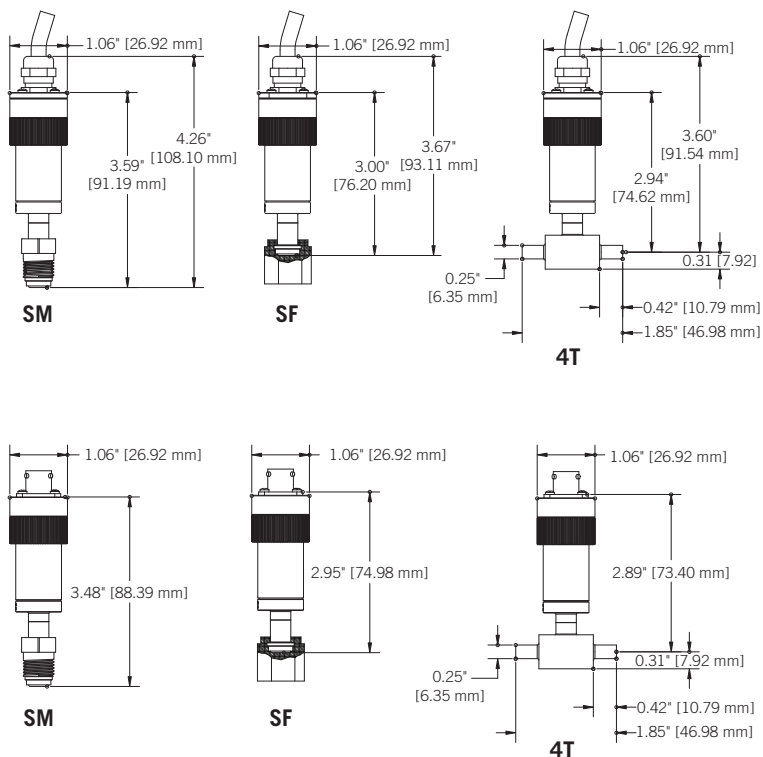
- Specialty gas cabinets
- Valve Manifold Boxes (VMBs)
- Gas panels
- Outdoor bulk gas distribution systems

## SS2 Pressure Transducers (ATEX Compliant) Specifications

### Product Configurations



### Product Dimensions



Supply Current	Max. 10 mA for 5.05 VDC output
Power Requirements	10 to 30 VDC for 4 to 20 mA output 11 to 30 VDC for 0.05 to 5.05 VDC output
Electrical Connections	4-pin male Bendix® connector, 6 ft. (2 m) Pigtail (24 AWG shielded)
Electrical Protection	Reverse polarity for power connections
Operating Temp.	-20 to 180°F (-29° to 82°C)
Storage Compensated	-4° to 140°F (-20° to 60°C)
Housing	Stainless steel
Burst Pressure	400% full scale
Proof Pressure	200% full scale up to 1000 psi, 150% full scale for higher ranges
Wetted Parts	316L stainless steel, SEMI F20
Surface Finish	Compliant with SEMI F19
Cleanliness	Compliant to ASTM F1374-92 (2005)
Internal Volume	1.79cc
Process Connections	See ordering guide for options.

### Accuracy

Linearity (BFSL)	
Hysteresis Repeatability	±0.25% full scale (RSS)
Response Time	<5 msec
Zero and Span Temp. Coefficient (each)	
≥100 PSI Range F.S.	±0.02% F.S./°F (-4 to 140°F, -20° to 60°C)
<100 PSI Range F.S.	±0.04% F.S./°F (-4 to 140°F, -20° to 60°C)
Approximate Shipping Weight	0.70 lb. (0.32 kg)
CE	Compliant to EMC directive EN61326
ATEX	Compliant to EU directive 94/9/EC
RoHS	Compliant to EU directive 2002/95/EC
FM Approved	Nonincendive for use in Class I, Div. II Groups A, B, C, and D Hazardous Applications



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