

# SS2 Pressure Transducers

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

- » Digital architecture with multiple calibration points
- » 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, B, C and D with approved barriers



## Product Description

The Celerity SS2 are pressure transducers designed for stable, accurate, and reliable pressure monitoring in ultra-high purity applications.

The third generation UHP pressure transducer by Celerity, 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 for the micro electronics industry.

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 “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 unique mechanical design eliminates the torque effects during installation.

SS2 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.

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

## Features

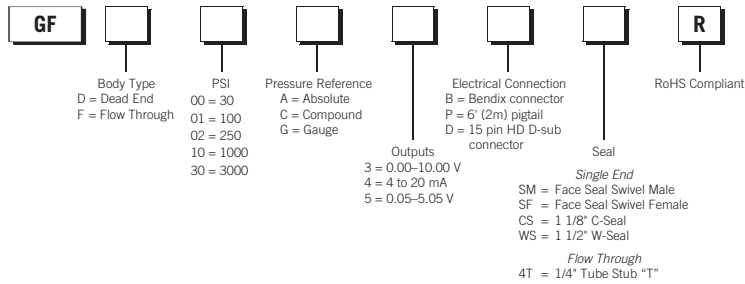
- Ultra stable glass bonded sensing elements
- Electropolished wetted material for UHP applications
- 4 to 20 mA, 0.05 to 5.05 V, and 0.00 to 10.00 V outputs available
- Digital signal processing, high performance digital electronics
- CE compliant
- 2 year warranty

## Applications

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

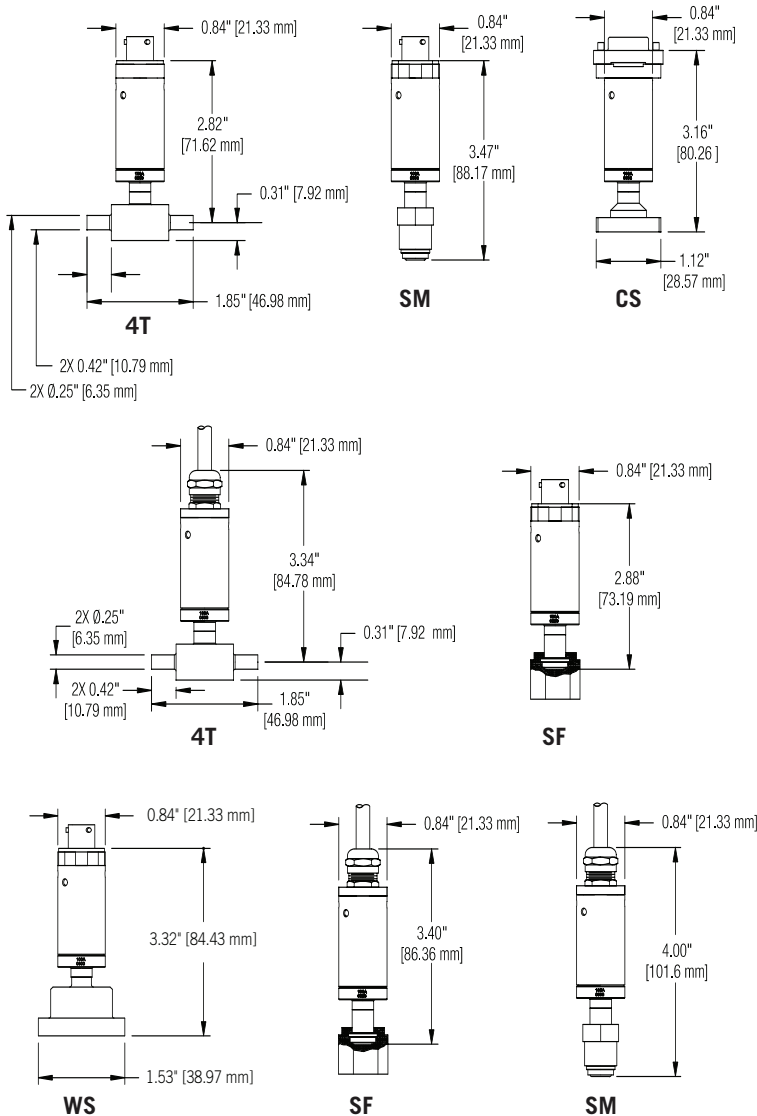
- Specialty gas cabinets
- Valve Manifold Boxes (VMBs)
- Gas panels
- Bulk gas distribution systems

## Product Configurations



For ATEX pressure transducer information, see SS2 ATEX data sheet 153-30110-000.

## Product Dimensions



## SS2 Pressure Transducer Specifications

**Supply Current** Max. 10 mA for 0.00 to 10.00 VDC output and 0.05 to 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  
13 to 32 VDC for 0.00 to 10.00 VDC output

**Electrical Connections** 4-pin male Bendix® connector, 6 ft. (2 m) Pigtail (24 AWG shielded) or 15-pin D-Sub HD male connection

**Electrical Protection** Reverse polarity for power connections

**Operating Temp.** -20 to 180°F (-29° to 82°C)  
**Storage:** -4° to 140°F (-20° to 60°C)  
**Compensated:** 68° to 140°F (20° to 60°C) 0 to 10 VDC version

**Housing** Stainless steel, polymer plastics

**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** 1.79 cc

**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 FS ±0.02% full scale/°F (-4° to 140°F, -20° to 60°C)  
±0.50% full scale (20° to 60°C) 0 to 10 VDC version

<100 PSI Range FS ±0.04% full scale/°F (-4° to 140°F, -20° to 60°C)  
±1.00% full scale (20° to 60°C) 0 to 10 VDC version

**Approximate Shipping Weight** 0.70 lb. (0.32 kg)

**FM Approved** Nonincendive for use in Class I, Div. II Groups A, B, C, and D Hazardous Applications  
Excludes 0 to 10 V and 15 pin HD D-sub connector configurations

**CE** Compliant to EMC directive EN61326

**RoHS** Compliant to EU Directive 2002/95/EC



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