

## 290 Series - 3A Sanitary Pressure Transducer

- ▶ For Clean-In-Place (CIP) and Sterilise-In-Place (SIP)
- ▶ 0.20% full scale accuracy
- ▶ No liquid fill diaphragms

The 290 Series meets 3A sanitary design standards and is fully sealed to withstand external high pressure washdowns. These units are packaged in rugged welded stainless steel housings and are exceptionally insensitive to vibration, shock and environmental extremes. A small size and tri-clover sanitary pressure fitting allow direct mounting in most CIP and SIP installations. Other features include IC-based circuitry, a 1/2" NPT conduit fitting and shielded cable with vent tube. Sealed screws provide access to zero and span adjustments.

### Specifications

#### Input

<b>Pressure Range</b>	1 to 1000psig
<b>Proof Pressure</b>	See ordering chart
<b>Burst Pressure</b>	See ordering chart
<b>Fatigue Life</b>	>1 million cycles

#### Performance

<b>Output</b>	4-20mA (2 Wire)
<b>Supply Voltage (Vs)</b>	18-38Vdc
<b>Accuracy</b>	0.20%FS
<b>Thermal Error Zero</b>	.036%FS/°C (.02%FS/°F)
<b>Thermal Error Span</b>	.036%FS/°C (.02%FS/°F)
<b>Compensated Temperatures</b>	-7°C to +80°C (20° to 180°F)
<b>Operating Temperatures</b>	-40°C to +125°C (-40° to +260°F)
<b>Storage Temperatures</b>	-54°C to +127°C (-65° to +260°F)
<b>Zero Tolerance</b>	1%FS (±0.5mA adjustable)
<b>Span Tolerance</b>	1%FS (±0.5mA adjustable)
<b>Maximum Loop Resistance</b>	(Vs-18) x 50
<b>Response Time</b>	10ms
<b>Mounting Effects</b>	.15%FS (.25%FS for 1.5" Tri-Clover)

#### Mechanical Configuration

<b>Pressure Port</b>	1.5" or 2" Tri-Clover Sanitary Fitting
<b>Wetted Parts</b>	316 Stainless Steel, 20 Rc finish
<b>Electrical Connection</b>	1/2" NPT Conduit Fitting and Strain Relief with 15ft. Cable
<b>Enclosure Stainless</b>	Steel
<b>Vibration</b>	10g Peak Sinusoidal, 50 to 1000Hz
<b>Acceleration</b>	10g
<b>Shock</b>	50g
<b>Approvals</b>	Meets 3-A Sanitary Standards
<b>Weight</b>	230gms



### Applications

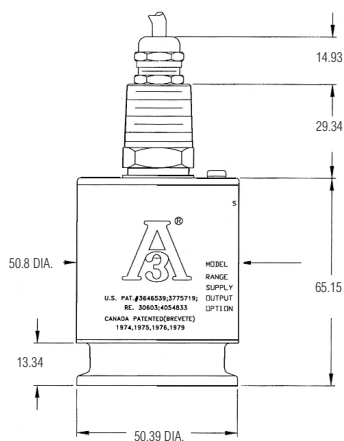
- ▶ Food Processing
- ▶ Dairy & Beverage Processing
- ▶ Pharmaceutical Processing
- ▶ Sanitary Pipelines

### How They Operate

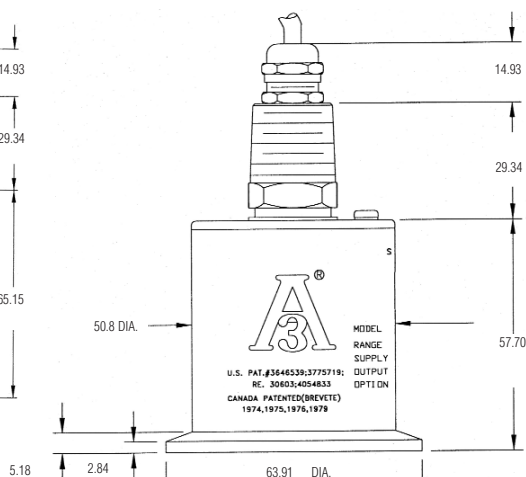
A stainless steel diaphragm and an insulated electrode form a variable capacitor. Pressure on the diaphragm alters the sensor's capacitance, which is then detected and converted to a highly accurate linear 4-20mA signal by electronic circuitry featuring Gems' patented charge-balance principle. Low hysteresis, very stable operation and negligible clamping effect are inherent.

## Dimensions (in mm)

1.5" Fitting



2" Fitting



Gems adheres to strict quality standards including MIL-1-45208A and ANSI-2540-1. MODEL

## How to Order

Order as 290 Series Sanitary Pressure Transmitters. Specify Pressure Range (tabulated below), Fitting Size and any Options. Use bold characters to construct a product code.

### SELECT

**C290** **10** **100mb 2 IN** **715** **822**

#### 1. Series

**C290** - 290 Series

#### 2. Pressure Ranges

##### 2" Tri-Clover Sanitary Fittings C290

PSI	Millibar
1 psig	100mbar
2 psig	160mbar
5 psig	400mbar
10 psig	600mbar
15 psig	1000mbar
30 psig	
60 psig	
100 psig	
150 psig	
-14.7 to 15 psig	

##### 1.5" Tri-Clover Sanitary Fittings C290

PSI
30 psig
60 psig
100 psig
300 psig
500 psig
1000 psig
-14.7 to 15 psig
-14.7 to 45 psig

#### 3. Pressure Port

**1.5IN** - 1.5" Tri-Clover Sanitary Fitting  
**2IN** - 2" Tri-Clover Sanitary Fitting

#### 4. Optional

**715** -  $\pm 0.1\%$  FS (RSS) accuracy

#### 5. Cable Length

**816-825** - For cable lengths of 16 to 25ft (15ft. is standard).  
Please specify cable length by code (e.g., 820 for 20ft. cable).  
Consult factory for cable longer than 25ft.