**Moore 340 Pressure Transmitter-Controller**

**FEATURES & BENEFITS**

- Silicon-based MycroSENSOR™ provides exceptional performance
- Rotatable NEMA 4X/6P, IP66/68 housing and rotatable Smart Display (shown on the next page) deliver long, trouble-free operation and maximum flexibility in mounting options
- SmartDisplay in engineering units affords greater operator understanding
- Fully interchangeable components (shown on the next page) result in fewer spare parts and reduced inventory costs
- ABS/FM/CSA/CENELEC/SAA approvals ensure safe operation in various high industrial stress environments
- Built-in PID controller reduces hardware and wiring per loop costs
- 10 segment characterizer linearizes non-linear flow elements and valves
- Built-in common $x^{1/2}$, $x^{3/2}$, or $x^{5/2}$ transfer functions, totalizer, and process alarms reduce the need for additional loop components
- Re-ranging in engineering units, such as GPM, delivers easy configuration changes
- The ability to make on-line zero calibration adjustments without removing pressure simplifies maintenance and calibrations
DESCRIPTION

XTC transmitter-controllers offer an integral PID controller to deliver process sensing and control capabilities in a single instrument and eliminate the need for a separate controller to handle basic PID loops. Thus, using XTCs in a control application reduces the number of necessary devices, while minimizing wiring costs via a direct connection from the transmitter to the final control element.

Additional proven features include the silicon-based dual element capacitive pressure MycroSENSOR and the hermetically sealed pressure capsule, which combine to deliver high performance with minimal maintenance.

XTC models include differential gauge, absolute, and flanged level differential pressure transmitters, which can all be remotely re-ranged, calibrated, and configured via a number of HART™ devices. These include control systems, panelboard instruments, and universal handhelds. XTC accessories include the Moore XTC communicator, a handheld configuration terminal, PC-based configuration software, and remote diaphragm seals.

Unique Features of the XTC

- Rotatable Smart Display
- Rotatable NEMA 4X Enclosure
- Fully Interchangeable Components
- Terminal Board
- Electronics Module
- Smart Display
- Magnetic Switches
- Zero Damping
- Full Scale
- Enclosure Rotation
- Enclosure Rotation Set Screw
MODELS

Model 340D Differential Pressure Transmitter-Controller
- Spans from 0.2” H₂O to 450 PSID (0.05 to 3100 KPA)
- Standard Hastelloy-C diaphragms and 316SS wetted parts (Ranges D & F)
- 1/4” NPTF or 1/2” NPTF process connection
- Suitable for DP, level, and flow applications

Model 340A/G Absolute or Gauge Pressure Transmitter-Controller
- 10” H₂O Abs to 450 PSIA (2.5 to 3100 KPA abs)
- 10” H₂O to 5500 PSIG (2.5 to 37920 KPA)
- Standard Hastelloy-C diaphragms and 316SS wetted parts
- 1/2” NPTF process connection
- Suitable for pressure applications

Model 340F Flanged Level Transmitter-Controller
- 10” H₂O to 450 PSI (2.5 to 3100 KPA)
- Standard 316SS diaphragms and wetted parts
- Standard ANSI and DIN flanges
- Suitable for level and flanged pressure applications

Model 340 Transmitter-Controller with Sterling Output
- 0.035% of Reading Accuracy
- Available in DP, GP, and flanged and level configurations
- Suitable for HTG and other critical applications
**PROCESS CONNECTIONS**

**Model 340 Transmitter-Controller with Tantalum Diaphragms**
- Available in DP, GP, and AP configurations
- Suitable for harsh process fluids

**Model 340 Transmitter-Controller with Remote Diaphragm Seals**
- Available in various materials and process connections including threaded, flanged, weld-in, and sanitary

**Model 340D Differential Transmitter-Controller with Integral Orifice Assemblies**
- Six integral orifice sizes
- 316 SS construction
- 1/2” NPTF process connection
- “Wet” calibrations available
- Suitable for low-flow applications

**Model 340D Differential Transmitter-Controller with Integral 3-Valve Manifold**
- Factory mounted
- 316SS or CS construction
SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

Reference conditions: Zero-based, positive spans, ambient temperature 23ºC, D/A trim values equal to span endpoints, Silicone fill, standard diaphragms, 1 second damping.

Accuracy

Analog Output
Range A:
±0.2% of calibrated span for spans from 1:1 to 2:1 of URL
±(0.174 + 0.013[URL/Span]) % of calibrated span for spans from 2:1 to 25:1 of URL
Range B:
±0.1% of calibrated span for spans from 1:1 to 2.5:1 of URL
±(0.043 + 0.0228 [URL/span]) % of calibrated span for spans from 2.5:1 to 20:1 of URL
Range D, F, G:
±0.1% of calibrated span for spans from 1:1 to 10:1 of URL
±(0.028 + 0.0072 [URL/span]) % calibrated span for spans from 10:1 to 45:1 of URL

Digital Output
Range D, F, G:
±0.075% of Reading or 0.015% of URL, whichever is greater
Sterling Units:
±0.035% of Reading or 0.006% of URL, whichever is greater

Ambient Temperature Effect
Models 340A, 340G, 340D
Ranges A-B:
±(0.175% URL + 0.075% span) per 28ºC (50ºF)
Ranges D-G:
±(0.075% URL + 0.075% span) per 28ºC (50ºF)
Model 340F
Ranges D-F:
±(0.075% URL + 0.075% span + 1.5” H2O) per 28ºC (50ºF)

Temperature Limits
Sensor Assembly:
Silicon: -40 to 125ºC (-40 to 257ºF)
Inert Fill: 0 to 85ºC (32 to 185ºF)
Paratherm: -20 to 125ºC (-4 to 257ºF)
Electronics: -40 to 85ºC (-40 to 185ºF)

Stability
Zero Stability:
Range A: ±0.1% of URL for 6 months
Ranges B-G: ±0.1% of URL for 12 months
Span Stability: No Measurable Span Drift

Humidity
0-100% relative humidity, non-condensing

Vibration Effect
Less than ±0.05% of maximum span per G for 0 to 60 Hz in any axis up to 2 Gs max.

Power Supply Effect
Less than 0.005% of output span per volt

EMI/RFI Susceptibility
Less than 0.25% of max. span at 30 V/m, 30 MHz - 1 GHz

ESD Susceptibility
IEC severity level 4, 15 kV

Static Pressure Effect (340D)
Range Span Error Correctable To:
B 0.2% per 100psi
D 0.2% per 1000psi
F 0.2% per 1000psi

NOTES:
(1) Accuracy includes the effects of linearity, hysteresis and repeatability.
(2) Specifications for 3” & 4” flange size only. For smaller flange sizes, consult Moore.
(3) Limit to 85ºC (185ºF) in vacuum service.
(4) Zero effect eliminated at operating pressure.
FUNCTIONAL SPECIFICATIONS

Range and Sensor Limits
Model 340A, 340D, 340F, 340G

<table>
<thead>
<tr>
<th>Range</th>
<th>Min. Span</th>
<th>340A</th>
<th>340D</th>
<th>LRL/URL</th>
<th>340F</th>
<th>340G</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.20” (.05KPA)</td>
<td>NA</td>
<td>2/5° (-5/12.5KPA)</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>0.75° (0.185KPA)</td>
<td>NA</td>
<td>-15/15° (-3.7/3.7KPA)</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>10” (2.5KPA)</td>
<td>0/450° (0/112.5KPAabs)</td>
<td>-450/450° (-112.5/112.5KPA)</td>
<td>-450/450° (-112.5/112.5KPA)</td>
<td>-407/450° (-101/112.5KPA)</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>12.6psi (87KPA)</td>
<td>0/450psia (0/3045KPAabs)</td>
<td>-150/450psi (-689/3100KPA)</td>
<td>-150/450psi (-689/3100KPA)</td>
<td>-14.7/450psig (-101/3100KPA)</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>300psi (2068KPA)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>0/5500psig (0/37920KPA)</td>
<td></td>
</tr>
</tbody>
</table>

Zero Elevation and Suppression
The range may be set anywhere between the LRL and URL of the transmitter, as long as the calibrated span does not exceed the minimum allowable span (see Range table). Zero and span in the XTC are non-interactive.

Electronic Damping (Digital Filter)
Adjustable between 0 and 30 seconds

Transmitter Outputs
Each transmitter has:
1. Analog, Two-Wire 4-20mA
2. Digital, HART Communications
3. Optional Transient Suppressor

Power Supply Requirements
Minimum Terminal to Terminal Compliance
Voltage: +10 Vdc
Maximum Terminal to Terminal Voltage: +42 Vdc
Maximum Load: \( RL = 50 \times \text{(Supply Voltage)} - 500 \text{ Ohms}^1 \)

Maximum Working Pressure

<table>
<thead>
<tr>
<th>Range</th>
<th>340A</th>
<th>340D</th>
<th>340G</th>
<th>340F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>NA</td>
<td>+/-60 psi (1413KPA)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>B</td>
<td>NA</td>
<td>+/-100 psi (689KPA)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>D</td>
<td>250psi (1.72MPA)</td>
<td>+/-4000 psi (27.6MPA)</td>
<td>250 psi (1.72MPA)</td>
<td>Per Flange</td>
</tr>
<tr>
<td>F</td>
<td>1500psi (10.3MPA)</td>
<td>+/-4000 psi (27.6MPA)</td>
<td>1500 psi (10.3MPA)</td>
<td>Per Flange</td>
</tr>
<tr>
<td>G</td>
<td>NA</td>
<td>NA</td>
<td>9,000 psi (SS only 62.0MPA)</td>
<td>NA</td>
</tr>
</tbody>
</table>

NOTES:

1. To ensure digital communications, HART requires the loop resistance to remain between 250 and 1100 Ohms. HART also imposes the following requirements on the loop power supply:
   - Ripple: 0.2 Vp-p, 47-125 Hz
   - Noise: 0.6 mV RMS maximum
   - Impedance: 10 Ohms maximum

2. The Maximum Working Pressure (MWP) is defined as the maximum pressure which can be applied to the cell without damage, static or otherwise.

3. 340D Range A and Range B sensors have a body rating of +/- 4000 psi; however, no over pressure protection is employed in these units thereby limiting the MWP to +/- 100 psi.
Flange Rating

<table>
<thead>
<tr>
<th>Standard</th>
<th>Class</th>
<th>Carbon Steel Rating</th>
<th>Stainless Steel Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI</td>
<td>150#</td>
<td>285 psi(^1)</td>
<td>275 psi(^1)</td>
</tr>
<tr>
<td>ANSI</td>
<td>300#</td>
<td>740 psi(^1)</td>
<td>720 psi(^1)</td>
</tr>
<tr>
<td>DIN</td>
<td>PN 10/16</td>
<td>16 bar(^2)</td>
<td>16 bar(^2)</td>
</tr>
<tr>
<td>DIN</td>
<td>PN 25/40</td>
<td>40 bar(^2)</td>
<td>40 bar(^2)</td>
</tr>
</tbody>
</table>

Surge Protection
(with optional Transient Suppressor)

- Maximum clamping voltage (either loop terminal to enclosure)
  - DC: 68V
  - 100 kV per microsecond AC surge: 70V peak
  - 1000 kV per microsecond AC surge: 120V peak
- Transient surge current
  - Up to 5000 amp for 20 microseconds, repeated strikes
- Turn-On Time
  - The transmitter will begin operating within 5 seconds after power is applied. The transmitter will perform within specifications within 60 seconds after power is applied.

Local Indication
Optional 4 1/2 Digit SmartDisplay

MECHANICAL SPECIFICATIONS

Dimensions
See Installation Drawings (Pages 97-99)

Weight\(^5\)
- 340A/G: 4 lbs
- 340D: 7 lbs
- 340F: 20 lbs

Electronics Housing
Epoxy Powder Coated, Low Copper Cast Aluminum
316 SS (optional)
NEMA 4X/6P (IP66/68)
(2) 1/2" -14 NPTF Electrical Conduit Entrances (M20 x 1.5 optional)

Process Wetted Parts
Various Materials Available
NACE MR0175 compliant with options as noted in the model number breakdown.

Process Connections
Model 340A/G\(^3\)
- (1) 1/2" NPTF, no vent/drain (External block and bleed may be purchased separately)
Model 340D
- (2) 1/4" NPTF with vent/drains
  - (1/2" NPTF with optional process adapters)
Model 340F
High Pressure Side: Per flange size and rating selected
Low Pressure Side: 1/4" NPTF with vent/drain
(1/2" NPTF with process adapter provided)

Hazardous Area Classification/Approvals\(^6\)
- Intrinsically Safe:
  - Class I, Div. 1, Groups A, B, C, & D
  - Class II, Div. 1, Groups E, F, & G
  - Class III, Div. 1
- Explosion Proof:
  - Class I, Div. 1, Groups B, C, & D
  - Class II, Div. 1, Groups E, F, & G
  - Class III, Div. 1
- Non-Incendive:
  - Class I, Div. 2, Groups A, B, C, & D
- CENELEC Approval:
  - Intrinsically Safe: EEx ia IIC T6, T5, T4
  - Explosion Proof: EEx d [ia] ia, IIC T4\(^7\)
- BASEEFA Approval:
  - Non-Incendive: Exn IIC T6
- SAA Approval:
  - Intrinsically Safe: Ex ia IIC T6
  - Explosion Proof: Ex d IIB T6
  - Non-Incendive: Ex n DIP IIC T6

NOTES:
(1) At 100°F (38°C), the rating decreases with increasing temperature.
(2) At 120°C, the rating decreases with increasing temperature.
(3) Weights approximate.
(4) 340A/G with tantalum diaphragms: 7 lbs.
(5) 340A/G Transmitters with tantalum diaphragms are differential style units. Process connections are similar to 340D. See drawings.
(6) Consult Moore for information on additional approvals.
(7) Consult Moore for information on special power requirements for EExd models.
### MODEL NUMBER

**Absolute Pressure**

340A Absolute Pressure Transmitter-Controller

**Input Range: Span Limits, Min/Max**

- D 10/450” H₂O abs (2.5/112.5 KPA abs)
- F 12.6/450 psia (87/3100 KPA abs)

**Output**

- B 4-20 mA DC with HART Protocol¹
- C 4-20 mA DC with HART Protocol & Integral Transient Suppressor
- D Direct Connection to Model 348 Field Mounted Controller or Spare Capsule

**Process Diaphragm**

- H Hastelloy C-276⁶⁻³
- S 316L SS
- B Hastelloy C-276 with 1 Remote Seal (Specify AA for Body Parts)

**Body Parts**

<table>
<thead>
<tr>
<th>Wetted</th>
<th>Process Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA 316SS</td>
<td>1/2” NPT³</td>
</tr>
<tr>
<td>BA Hastelloy-C276</td>
<td>1/2” NPT</td>
</tr>
</tbody>
</table>

**Fill Fluid**

- B Silicone DC200¹
- C Inert
- D Paratherm

**Output Indicator**

- 5 4-1/2 Digit Digital SmartDisplay
- N Not Required⁵

**Standard Options**

- X Oxygen Cleaned
- Y Special Features⁴
- N Not Required⁵

**Mounting Bracket**

- 1 2” Pipe Mount Bracket with SS Hardware
- 2 Universal Bracket
- 3 2” Pipe Mount 316SS Bracket
- N Not Required⁵

**Housing**

- 1 Aluminum 1/2” - 14 NPT⁵
- 2 Aluminum M20 x 1.5⁶
- 3 316 SS 1/2” - 14 NPT
- 4 316 SS M20 x 1.5
- N Not Required⁵

**Hazardous Area Classification**

- 2 CSA/CRN
- M CENELEC Ex [ia] ia¹⁴
- R SAA All & ABS Type Approved¹⁴
- L CENELEC EEExia & BASEEFA Ex N
- N Non-Approved⁵
- W FM/CSA All & ABS Type Approved

<table>
<thead>
<tr>
<th>340AF</th>
<th>B</th>
<th>H</th>
<th>AAB</th>
<th>5</th>
<th>N</th>
<th>N</th>
<th>1</th>
<th>3</th>
</tr>
</thead>
</table>

*Sample Model Number*

See notes on page 95.
## Differential Pressure

### 340D Differential Pressure Transmitter-Controller

**Input Range: Span Limits, Min/Max**

- **A** 0.2/5 "H₂O (0.05/1.25 KPA)² (Remote seals not available with this range.)
- **B** 0.75/15 "H₂O (0.185/3.7 KPA)² (Matched remote seals only with this range.)
- **D** 10/450 "H₂O (2.5/112.5 KPA)²
- **F** 12.6/450 psi (87/3100 KPA)²

### Output

- **B** 4-20 mAdc with HART Protocol¹,²
- **C** 4-20 mAdc with HART Protocol & Integral Transient Suppressor
- **D** Direct Connection to Model 348 Field Mounted Controller or Spare Capsule

### Process Diaphragm

- **H** Hastelloy C-276,³,⁸,¹¹
- **S** 316L SS,²
- **A** Hastelloy C-276 with 2 Remote Seals,⁸,¹¹
- **B** Hastelloy C-276 with 1 Remote Seal on high side,⁹,¹²
- **C** Hastelloy C-276 with 1 Remote Seal on low side,⁹,¹²

### Body Parts

#### Wetted

- **AA** 316SS End 1/2 NPT,²
- **AB** 316SS Side (top) 1/2 NPT
- **AC** 316SS Side (bottom) 1/2 NPT
- **AD** 316SS Side (dual) 1/2 NPT
- **AE** 316SS End 1/4 NPT
- **AF** 316SS Side (top) 1/4 NPT
- **AG** 316SS Side (bottom) 1/4 NPT
- **AH** 316SS Side (dual) 1/4 NPT
- **BA** Hastelloy C-276 End 1/2 NPT
- **BB** Hastelloy C-276 Side (top) 1/2 NPT
- **BC** Hastelloy C-276 Side (bottom) 1/2 NPT
- **BD** Hastelloy C-276 Side (dual) 1/2 NPT
- **BE** Hastelloy C-276 End 1/4 NPT
- **BF** Hastelloy C-276 Side (top) 1/4 NPT
- **BG** Hastelloy C-276 Side (bottom) 1/4 NPT
- **BH** Hastelloy C-276 Side (dual) 1/4 NPT
- **RR** Remote Seals

#### Vent/Drain

- **5** 4-1/2 Digit Digital SmartDisplay²

#### Process Conn.

- **N** Not Required²

### Standard Options

- **D** B7M Bolts³
- **E** B8M Bolts¹⁷
- **X** Oxygen Cleaned
- **Y** Special Features⁴
- **N** Not Required²,⁵

### Mounting Bracket

- **1** 2" Pipe Mount Bracket with SS Hardware²
- **2** Universal Bracket
- **3** 2" Pipe Mount 316SS Bracket
- **N** Not Required³

### Housing

- **1** Aluminum 1/2" - 14 NPT²,³
- **2** Aluminum M20 x 1.5⁶
- **3** 316 SS 1/2" - 14 NPT
- **4** 316 SS M20 x 1.5
- **N** Not Required³

### Hazardous Area Classification

- **2** CSA/CRN
- **3** FM/CSA All¹²
- **M** CENELEC Ex d [ia] ia¹⁴
- **R** SAA All & ABS Type Approved
- **L** CENELEC Exia & BASEEEFA
- **N** Non-Approved
- **W** FM/CSA All & ABS Type Approved

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See notes on page 85.
Flanged Level

340F Flanged Level Transmitter-Controller

Input Range: Span Limits, Min./Max.
D 10/450 °H₂O (2.5/112.5 KPA)^2
F 12.6/450 psi (87/3100 KPA)^2

Output
B 4-20 mADC with HART Protocol^1,2
C 4-20 mADC with HART Protocol & Integral Transient Suppressor

Body Parts

<table>
<thead>
<tr>
<th>Body Parts</th>
<th>High Side Dia/Wetted</th>
<th>Low Side Dia/Wetted</th>
<th>Extension Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0 316SS</td>
<td>Hastelloy C-276/316SS</td>
<td>Flush Mount</td>
<td>H0 Hastelloy C-276 Remote Seal Flush Mount</td>
</tr>
<tr>
<td>A2 316SS</td>
<td>Hastelloy C-276/316SS</td>
<td>4&quot;</td>
<td>H2 Hastelloy C-276 Remote Seal 2&quot;^15</td>
</tr>
<tr>
<td>A4 316SS</td>
<td>Hastelloy C-276/316SS</td>
<td>6&quot;</td>
<td>H4 Hastelloy C-276 Remote Seal 4&quot;^15</td>
</tr>
<tr>
<td>A6 316SS</td>
<td>Hastelloy C-276/316SS</td>
<td>8&quot;</td>
<td>H6 Hastelloy C-276 Remote Seal 6&quot;^15</td>
</tr>
<tr>
<td>B0 Hastelloy C-276</td>
<td>Hastelloy C-276/316SS</td>
<td>Flush Mount</td>
<td>B0 Hastelloy C-276 Remote Seal Flush Mount</td>
</tr>
<tr>
<td>B2 Hastelloy C-276</td>
<td>Hastelloy C-276/316SS</td>
<td>2&quot;</td>
<td>B2 Hastelloy C-276 Remote Seal 2&quot;^15</td>
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<tr>
<td>B4 Hastelloy C-276</td>
<td>Hastelloy C-276/316SS</td>
<td>4&quot;</td>
<td>B4 Hastelloy C-276 Remote Seal 4&quot;^15</td>
</tr>
<tr>
<td>B6 Hastelloy C-276</td>
<td>Hastelloy C-276/316SS</td>
<td>6&quot;</td>
<td>B6 Hastelloy C-276 Remote Seal 6&quot;^15</td>
</tr>
<tr>
<td>C0 Monel</td>
<td>Hastelloy C-276/316SS</td>
<td>8&quot;</td>
<td>C0 Monel Hastelloy C-276 Remote Seal Flush Mount</td>
</tr>
<tr>
<td>C2 Monel</td>
<td>Hastelloy C-276/316SS</td>
<td>10&quot;</td>
<td>C2 Monel Hastelloy C-276 Remote Seal 10&quot;</td>
</tr>
<tr>
<td>C4 Monel</td>
<td>Hastelloy C-276/316SS</td>
<td>12&quot;</td>
<td>C4 Monel Hastelloy C-276 Remote Seal 12&quot;</td>
</tr>
<tr>
<td>C6 Monel</td>
<td>Hastelloy C-276/316SS</td>
<td>14&quot;</td>
<td>C6 Monel Hastelloy C-276 Remote Seal 14&quot;</td>
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<tr>
<td>D0 Tantalum</td>
<td>Hastelloy C-276/316SS</td>
<td>16&quot;</td>
<td>D0 Tantalum Hastelloy C-276 Remote Seal 16&quot;</td>
</tr>
<tr>
<td>G0 316SS</td>
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<td>G0 316SS Remote Seal 18&quot;</td>
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<tr>
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<td>Remote Seal</td>
<td>20&quot;</td>
<td>G2 316SS Remote Seal 20&quot;</td>
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<tr>
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<td>G4 316SS Remote Seal 22&quot;</td>
</tr>
<tr>
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<td>Remote Seal</td>
<td>24&quot;</td>
<td>G6 316SS Remote Seal 24&quot;</td>
</tr>
</tbody>
</table>

Mounting Flange

<table>
<thead>
<tr>
<th>Size</th>
<th>Rating</th>
<th>Material</th>
<th>Size</th>
<th>Rating</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 2&quot;</td>
<td>150#</td>
<td>CS</td>
<td>J 3&quot;</td>
<td>150#</td>
<td>SS</td>
</tr>
<tr>
<td>B 2&quot;</td>
<td>300#</td>
<td>CS</td>
<td>K 3&quot;</td>
<td>300#</td>
<td>SS</td>
</tr>
<tr>
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<td>150#</td>
<td>CS</td>
<td>L 4&quot;</td>
<td>150#</td>
<td>SS</td>
</tr>
<tr>
<td>D 3&quot;</td>
<td>300#</td>
<td>CS</td>
<td>M 4&quot;</td>
<td>300#</td>
<td>SS</td>
</tr>
<tr>
<td>E 4&quot;</td>
<td>150#</td>
<td>CS</td>
<td>N 50mm</td>
<td>10/16 Bar</td>
<td>CS</td>
</tr>
<tr>
<td>F 4&quot;</td>
<td>300#</td>
<td>CS</td>
<td>P 50mm</td>
<td>25/40 Bar</td>
<td>CS</td>
</tr>
<tr>
<td>G 2&quot;</td>
<td>150#</td>
<td>SS</td>
<td>Q 80mm</td>
<td>10/16 Bar</td>
<td>CS</td>
</tr>
<tr>
<td>H 2&quot;</td>
<td>300#</td>
<td>SS</td>
<td>R 80mm</td>
<td>25/40 Bar</td>
<td>CS</td>
</tr>
</tbody>
</table>

Fill Fluid

<table>
<thead>
<tr>
<th>High Side</th>
<th>Low Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Siliconic DC200</td>
<td>Silicone DC200^2</td>
</tr>
<tr>
<td>C Fluorolube</td>
<td>Inert</td>
</tr>
<tr>
<td>D NEOBEE</td>
<td>Paratherm</td>
</tr>
<tr>
<td>E Siliconic DC500</td>
<td>Silicone DC200</td>
</tr>
<tr>
<td>F Siliconic DC704</td>
<td>Silicone DC200</td>
</tr>
<tr>
<td>G Syltherm 800</td>
<td>Silicone DC200</td>
</tr>
</tbody>
</table>

Output Indicator

5 4-1/2 Digit Digital Smart Display^2
N Not Required

Standard Options

D B7M Bolts^2
E B8M Bolts^17
X Oxygen Cleaned
Y Special Features^4
N Not Required^2

Mounting Bracket

N Not Required

Housing

1 Aluminum 1/2" - 14 NPT^2
2 Aluminum M20 x 1.5^8
3 316 SS 1/2" - 14 NPT
4 316 SS M20-1.5

Hazardous Area Classification

2 CSA/CRN
3 FM/CSA All^2
M CENELEC EEx d [ia] i^4
R SAAAll & ABS Type Approved
L CENELEC EExia & BASEEFA Type N
N Non-Approved
W FM/CSA All & ABS Type Approved

See notes on page 85.
**Gauge Pressure**

340G  **Gauge Pressure Transmitter-Controller**

**Input Range: Span Limits, Min/Max**

- D 10/450 "H2O (2.5/112.5 KPA)
- F 12.6/450 psig (87/3100 KPA)
- G 300/5500 psig (2008/37920 KPA)

**Output**

- B 4-20 mA with HART Protocol¹²
- C 4-20 mA with HART Protocol & Integral Transient Suppressor
- D Direct Connection to Model 348 Field Mounted Controller or Spare Capsule

**Process Diaphragm**

- H Hastelloy C-276¹²³
- S 316L SS
- B Hastelloy C-276 with 1 Remote Seal (Specify AA for Body Parts)

**Body Parts**

<table>
<thead>
<tr>
<th>Wetted</th>
<th>Process Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA 316SS</td>
<td>1/2&quot; NPT¹²</td>
</tr>
<tr>
<td>BA Hastelloy C-276</td>
<td>1/2&quot; NPT</td>
</tr>
</tbody>
</table>

**Fill Fluid**

- B Silicone DC200¹²
- C Inert
- D Paratherm

**Output Indicator**

- 5 4-1/2 Digit Digital SmartDisplay²
- N Not Required⁵

**Standard Options**

- X Oxygen Cleaned
- Y Special Features⁴
- N Not Required⁵

**Mounting Bracket**

- 1 2" Pipe Mount Bracket with SS Hardware²
- 2 Universal Bracket
- 3 2" Pipe Mount 316SS Bracket
- N Not Required⁵

**Housing**

- 1 Aluminum 1/2" - 14 NPT¹²
- 2 Aluminum M20 x 1.5⁶
- 3 316 SS 1/2" - 14 NPT
- 4 316 SS M20 x 1.5
- N Not Required⁵

**Hazardous Area Classification**

- 2 CSA/CRN
- 3 FM/CSA All¹²
- M CENELEC EEx d [ia] ia¹⁴
- R SAA All & ABS Type Approved
- L CENELEC EExia & BASEEFA
- N Non-Approved⁷
- W FM/CSA All & ABS Type Approved

---

**Sample Model Number**

340G F B H AA B 5 N 1 1 3

See notes on page 85.
### Sterling High Performance

#### 340 Sterling Performance Transmitter-Controller

<table>
<thead>
<tr>
<th>Type and Input Range: Span Limits, Min/Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD Differential 10/450 °H₂O (2.5/112.5 KPA)</td>
</tr>
<tr>
<td>FD Flanged Level 10/450 °H₂O (2.5/112.5 KPA)</td>
</tr>
<tr>
<td>GF Gauge 12.6/450 psi (87/3100 KPA)</td>
</tr>
</tbody>
</table>

**Output**

- E 4-20 mA dc High Performance Output with HART Protocol

**Process Diaphragm**

- H Hastelloy C-276

**Body Parts**

<table>
<thead>
<tr>
<th>Wetted</th>
<th>Process Conn.</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA</td>
<td>316SS 1/2” NPT</td>
<td>D</td>
</tr>
<tr>
<td>DB</td>
<td>316SS 1/4” NPT</td>
<td>D</td>
</tr>
<tr>
<td>GA</td>
<td>316SS 1/2” NPT</td>
<td>G</td>
</tr>
<tr>
<td>FA</td>
<td>CS 2”, 150#, CS</td>
<td>F</td>
</tr>
<tr>
<td>FB</td>
<td>CS 2”, 300#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FC</td>
<td>CS 3”, 150#, CS</td>
<td>F</td>
</tr>
<tr>
<td>FD</td>
<td>CS 3”, 300#, CS</td>
<td>F</td>
</tr>
<tr>
<td>FE</td>
<td>CS 4”, 150#, CS</td>
<td>F</td>
</tr>
<tr>
<td>FF</td>
<td>CS 4”, 300#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FG</td>
<td>SS 2”, 150#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FH</td>
<td>SS 2”, 300#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FI</td>
<td>SS 3”, 150#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FJ</td>
<td>SS 3”, 300#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FK</td>
<td>SS 4”, 150#, SS</td>
<td>F</td>
</tr>
<tr>
<td>FL</td>
<td>SS 4”, 300#, SS</td>
<td>F</td>
</tr>
</tbody>
</table>

**Fill Fluid**

- B Silicone DC200°

**Output Indicator**

- 5 4-1/2 Digit Digital Smart Display
- N Not Required

**Standard Options**

- D B7M Bolts¹
- E B8M Bolts²
- X Oxygen Cleaned
- Y Special Features³
- N Not Required

**Mounting Bracket**

- 1 2” Pipe Mount Bracket with SS Hardware
- 2 UniversalBracket
- 3 2” Pipe Mount 316SS Bracket
- N Not Required

**Housing**

- 1 Aluminum 1/2” - 14 NPT¹
- 2 Aluminum M20 x 1.5⁵
- 3 316 SS 1/2” - 14 NPT
- 4 316 SS M20 x 1.5

**Hazardous Area Classification**

- 2 CSA/CRN
- 3 FM/CSA All¹⁰
- M CENELEC EEx d [ia] ia¹⁴
- R SAA All & ABS Type Approved
- L CENELEC EExia & BASEEFA Type N
- N Non-Approved
- W FM/CSA All & ABS Type Approved

---

**Sample Model Number**

340 DD E H DA B 5 N N L 3

See notes on page 85.
### Tantalum Diaphragms

**Absolute, Gauge & Differential Pressure Transmitter-Controllers with Tantalum Diaphragms**

<table>
<thead>
<tr>
<th>Type</th>
<th>Input Range</th>
<th>Span Limits, Min/Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Differential</td>
<td>10/450 °H₂O (2.5/112.5 KPA)</td>
</tr>
<tr>
<td>G</td>
<td>Gauge</td>
<td>10/450 °H₂O (2.5/112.5 KPA)</td>
</tr>
<tr>
<td>F</td>
<td>Gauge</td>
<td>12.6/450 psi (87/3100 KPA)</td>
</tr>
<tr>
<td>A</td>
<td>Absolute</td>
<td>10/450 °H₂O Abs (2.5/112.5 KPA)</td>
</tr>
<tr>
<td>A</td>
<td>Absolute</td>
<td>12.6/450 psia (87/3100 KPA)</td>
</tr>
</tbody>
</table>

#### Output

- B: 4-20 mA with HART Protocol
- C: 4-20 mA with HART Protocol & Integral Transient Suppressor
- D: Direct Connection to Model 348 Field Mounted Controller or Spare Capsule

#### Diaphragm

- T: Tantalum

#### Body Parts

<table>
<thead>
<tr>
<th>Hi Side</th>
<th>Lo Side</th>
<th>Use with</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB</td>
<td>Hastelloy-C</td>
<td>316SS A, G</td>
</tr>
<tr>
<td>TC</td>
<td>Hastelloy-C</td>
<td>Hastelloy-C D</td>
</tr>
<tr>
<td>TD</td>
<td>Monel</td>
<td>316SS A, G</td>
</tr>
<tr>
<td>TE</td>
<td>Monel</td>
<td>Monel D</td>
</tr>
</tbody>
</table>

#### Fill Fluid

- B: Silicone DC200
- C: Inert

#### Output Indicator

- 5: 4-1/2 Digit Digital SmartDisplay
- N: Not Required

#### Standard Options

- D: B7M Bolts
- E: B8M Bolts
- X: Oxygen Cleaned
- Y: Special Features
- N: Not Required

#### Mounting Bracket

- 1: 2" Pipe Mount Bracket with SS Hardware
- 2: Universal Bracket
- 3: 2" Pipe Mount 316SS Bracket
- N: Not Required

#### Housing

- 1: Aluminum 1/2" - 14 NPT
- 2: Aluminum M20 x 1.5
- 3: 316 SS 1/2" - 14 NPT
- 4: 316 SS M20 x 1.5
- N: Not Required

#### Hazardous Area Classification

- 2: CSA/CRN
- 3: FM/CSA All
- M: CENELEC EEx d [ia] ia¹
- R: SAA All & ABS Type Approved
- L: CENELEC EExia & BASEEFA
- N: Non-Approved
- W: FM/CSA All & ABS Type Approved

#### Sample Model Number

340 DB B T TE B N N N I 3

---

**NOTES:**

1. Standard for all ranges.
2. Stock model selection.
3. NACE MR0175 compliance requires this option.
4. Please describe the modification or provide a quotation reference number.
7. Standard on Input Ranges A & B.
8. Standard on Input Ranges D & F.
9. Must specify Body Parts code “RR”.
10. Must select Body Parts “AA”.
11. Not available with Input Range “A”.
12. Not available with Input Range “A” or “B”.
13. Available with Body Parts “TD” or “TE” only.
14. CENELEC EExd & SAA units are only available with OUTPUT code “B”.
15. 2" flanges with an extension or not available.
16. 3" and 4" flanges with an extension will fit into Schedule 80 and larger i.d. pipes.
17. B8M (316SS) bolting may have a reduced pressure rating. Consult Moore for information.
MODEL DIFFERENCES & MODIFICATIONS

If no range is selected, the instrument will be calibrated as follows:

<table>
<thead>
<tr>
<th>Range Code</th>
<th>Default Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-0.5 to 0.5 &quot;H₂O</td>
</tr>
<tr>
<td>B</td>
<td>0 to 10 &quot;H₂O</td>
</tr>
<tr>
<td>D</td>
<td>0 to 100 &quot;H₂O (or &quot;H₂O abs)</td>
</tr>
<tr>
<td>F</td>
<td>0 to 100 PSI (or PSIA)</td>
</tr>
<tr>
<td>G</td>
<td>0 to 1000 PSIG</td>
</tr>
</tbody>
</table>

Common modifications can be specified by selecting a Y in the Special Features category and describing the modification. Always consult your salesperson before ordering a modification.

TRANSMITTER COMPONENTS

Cap O-Ring

Terminal Board

Enclosure and Nameplate

Magnetic Screwdriver

Flush Cap Wrench

Electronics Module

Smart Display

Crenelated Cap

Flush Cap

Capsule with MycroSENSOR
INSTALLATION DRAWINGS

Models 340A and Model 340G

Dimensions are in inches (millimeters).

Supplied U-Bolt, Lockwashers, and Nuts

Universal Mounting Bracket

2" Pipe Mount Bracket, Steel or Stainless Steel

Enclosure Rotation Set Screw

1/2 NPT Process Connection

Americas +1 215 646 7400 ext. 6613  Asia Pacific +65 299 6051  Europe +44 1935 706262
Model 340D and Models 340A and 340G with Tantalum Diaphragms
## Flange Dimensions

<table>
<thead>
<tr>
<th>SIZE</th>
<th>DIM “D”</th>
<th>DIM “BC”</th>
<th>DIM “T”</th>
<th>DIM “RF”</th>
<th>BOLT DIA.</th>
<th>BOLT NO.</th>
<th>FLANGE PER</th>
<th>DIM “ED”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;-150#</td>
<td>6.00 (152.40)</td>
<td>4.75 (120.65)</td>
<td>0.75 (19.05)</td>
<td>5/8</td>
<td>4</td>
<td>1.95 (49.53)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2&quot;-300#</td>
<td>6.50 (165.10)</td>
<td>5.00 (127.00)</td>
<td>0.88 (22.23)</td>
<td>5/8</td>
<td>8</td>
<td>1.95 (49.53)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3&quot;-150#</td>
<td>7.50 (190.50)</td>
<td>6.00 (152.40)</td>
<td>0.94 (23.81)</td>
<td>0.06 (1.58)</td>
<td>5/8</td>
<td>4</td>
<td>2.81 (71.37)</td>
<td></td>
</tr>
<tr>
<td>3&quot;-300#</td>
<td>8.25 (209.55)</td>
<td>6.625 (168.28)</td>
<td>1.13 (28.58)</td>
<td>3/4</td>
<td>8</td>
<td>ANSI B16.5</td>
<td>2.81 (71.37)</td>
<td></td>
</tr>
<tr>
<td>4&quot;-150#</td>
<td>9.00 (228.60)</td>
<td>7.50 (190.50)</td>
<td>0.94 (23.81)</td>
<td>5/8</td>
<td>8</td>
<td>3.70 (93.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4&quot;-300#</td>
<td>10.00 (254.00)</td>
<td>7.875 (200.03)</td>
<td>1.25 (31.75)</td>
<td>3/4</td>
<td>8</td>
<td>3.70 (93.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50MM-10/16 BAR</td>
<td>6.50 (165.00)</td>
<td>4.92 (125.00)</td>
<td>0.71 (18.00)</td>
<td>M16</td>
<td>4</td>
<td>50MM-25/40 BAR</td>
<td>6.50 (165.00)</td>
<td>4.92 (125.00)</td>
</tr>
<tr>
<td>80MM-10/16 BAR</td>
<td>7.87 (200.00)</td>
<td>6.30 (160.00)</td>
<td>0.79 (20.00)</td>
<td>0.12 (3.00)</td>
<td>M16</td>
<td>8</td>
<td>80MM-25/40 BAR</td>
<td>7.87 (200.00)</td>
</tr>
<tr>
<td>100MM-10/16 BAR</td>
<td>8.66 (220.00)</td>
<td>7.09 (180.00)</td>
<td>0.79 (20.00)</td>
<td>M16</td>
<td>8</td>
<td>TYPE C Moore</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100MM-25/40 BAR</td>
<td>9.25 (235.00)</td>
<td>7.48 (190.00)</td>
<td>0.94 (24.00)</td>
<td>M20</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Extension Length

(Not available on 2" or 50mm flanges.)

<table>
<thead>
<tr>
<th>DIM “L”</th>
<th>0 (0.00)</th>
<th>2.00 (50.80)</th>
<th>4.00 (101.60)</th>
<th>6.00 (152.40)</th>
</tr>
</thead>
</table>

---

## Model 340F Flange Mounted Transmitter

Dimensions are in inches (millimeters). See table for dimensions that depend upon model number.

- **ED**: Enclosure Rotation Set Screw
- **D**: Flange Dia
- **BC**: Bolt Circle
- **RF**: Tapped Hole
- **L**: Vent/Drain Plug
- **D**: Bolt Circle

(Side Vent Options - Top, Bottom, or Both)