

## ST 3000 Smart Transmitter Series 100 Absolute Pressure Models

34-ST-03-61  
6/2002

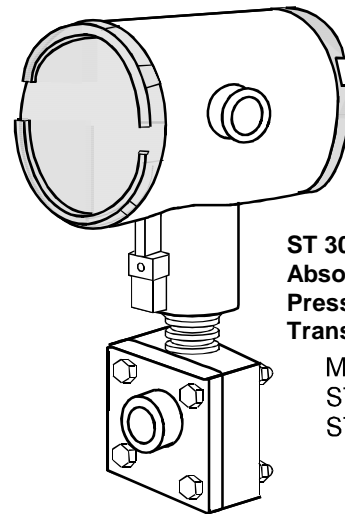
## Specification and Model Selection Guide

STA122	0 to 780 mmHgA	0 to 1,040 mbarA
STA140	0 to 500 psia	0 to 35 barA

### Function

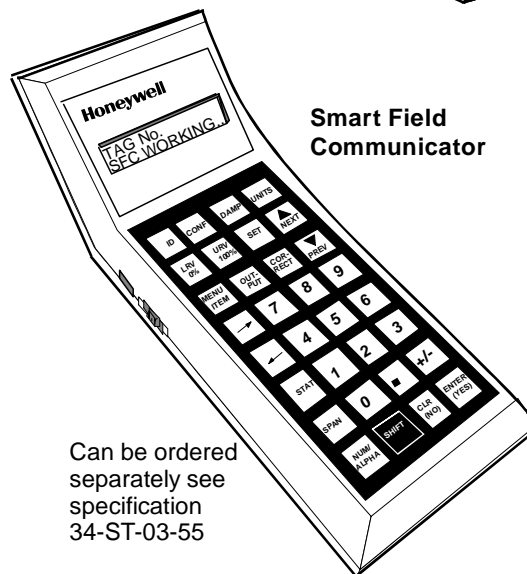
Honeywell's ST 3000® Series 100 Absolute Pressure Transmitters bring proven "smart" technology to a wide spectrum of absolute pressure measurement applications with varying process interface requirements. They transmit an output signal proportional to the measured variable in either an analog 4 to 20 milliampere format or in a digital DE protocol format for direct digital integration with our TDC 3000® control system. Additional protocol options available for the ST 3000 Series 100 transmitters include FOUNDATION™ Fieldbus<sup>1</sup> and HART®<sup>2</sup>. See the Model Selection Guide for help in selecting the correct ordering code for the desired protocol.

You easily select the analog or digital transmission format through the Smart Field Communicator (SFC®) which is the common hand-held operator interface for our Smartline® Transmitters. All configuration, operation, and communications functions are under the control of the ST 3000 Smart Transmitter's micro-processor and are accessible through the SFC.



**ST 3000  
Absolute  
Pressure  
Transmitter**

Models:  
STA122  
STA140



**Smart Field  
Communicator**

Can be ordered  
separately see  
specification  
34-ST-03-55

24802

- <sup>1</sup> FOUNDATION™ Fieldbus is a trademark of the Fieldbus Foundation.
- <sup>2</sup> HART is a registered trademark of the Hart Communication Foundation.

**Figure 1**—Series 100 Absolute Pressure Transmitters feature proven "smart" technology and come in two models to meet varying application needs.

Features	Description	
<ul style="list-style-type: none"> <li>• Only need two models to cover wide range of pressure measurements.</li> <li>• Direct digital integration with TDC 3000<sup>X</sup> system provides local measurement accuracy to the system level without adding typical A/D and D/A converter inaccuracies</li> <li>• Unique piezoresistive sensor automatically compensates input for temperature.</li> <li>• Added “smart” features include configuring lower and upper range values, simulating accurate analog output, and selecting preprogrammed engineering units for display.</li> <li>• Smart transmitter personality with local or remote interfacing means significant manpower efficiency improvements in commissioning, start-up, and ongoing maintenance functions.</li> </ul>	<p>The ST 3000 transmitter can replace any 4 to 20 milliampere output transmitter in use today, and operates over a standard two-wire system.</p> <p>The measuring means is a piezoresistive sensor which actually contains a pressure sensor and a temperature sensor.</p> <p>Microprocessor-based electronics provide higher span-turn-down ratio, improved temperature compensation, and improved accuracy.</p> <p>Like other Smartline Transmitters, the ST 3000 features two-way communication between the operator and the transmitter through our SFC.</p>	<p>You can connect the SFC anywhere that you can access the transmitter signal lines, and it provides the capabilities of transmitter adjustments and diagnostics from remote locations, such as the control room.</p> <p>The transmitter’s meter body and electronics housing resist shock, vibration, corrosion, and moisture. The electronics housing contains a compartment for the single-board electronics, which is isolated from an integral junction box. The single-board electronics is replaceable and interchangeable with any other ST 3000 Series 100 and Series 900 model transmitter.</p>

### Specifications

#### Operating Conditions – All Models

Parameter	Reference Condition		Rated Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F	°C	°F
<b>Ambient Temperature</b>	25±1	77±2	-40 to 85	-40 to 185	-40 to 93	-40 to 200	-55 to 125	-67 to 257
<b>Meter Body Temperature</b>								
STA122	25±1	77±2	See Figure 2		See Figure 2		-55 to 125	-67 to 257
STA140	25±1	77±2	-40 to 80	-40 to 176	-40 to 80	-40 to 176	-55 to 125	-67 to 257
<b>Humidity</b> %RH	10 to 55		0 to 100		0 to 100		0 to 100	
<b>Overpressure</b>								
STA122 mmHgA	0		Full vacuum to 1550		Full vacuum to 1550			
mbarA	0		Full vacuum to 2066		Full vacuum to 2066			
STA140 psia	0		750		750			
barA	0		52		52			
<b>Vacuum Region - Minimum Pressure</b>	<p>    STA122      See Figure 2.</p> <p>    STA140      Operate within specifications above 25 mmHgA (33 mbarA). Short term exposure (2 hours at 70°C/158°F) to full vacuum will not result in damage.</p>							
<b>Supply Voltage, Current, and Load Resistance</b>	<p><b>Voltage Range:</b> 10.8 to 42.4 Vdc at terminals</p> <p><b>Current Range:</b> 3.0 to 21.8 mA</p> <p><b>Load Resistance:</b> 0 to 1440 ohms (as shown in Figure 3)</p>							

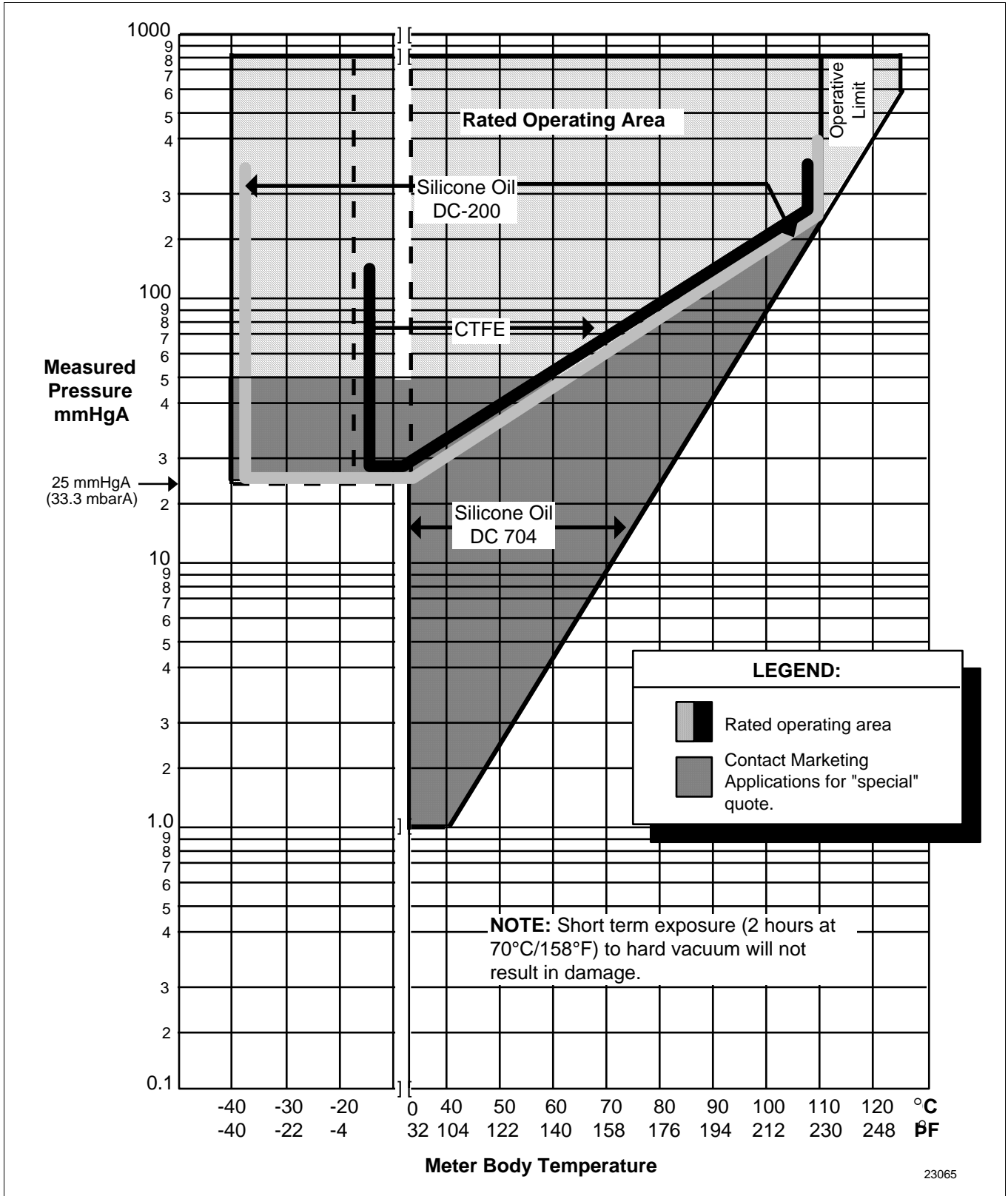


Figure 2 - Measured pressure versus meter body temperature chart for model STA122.

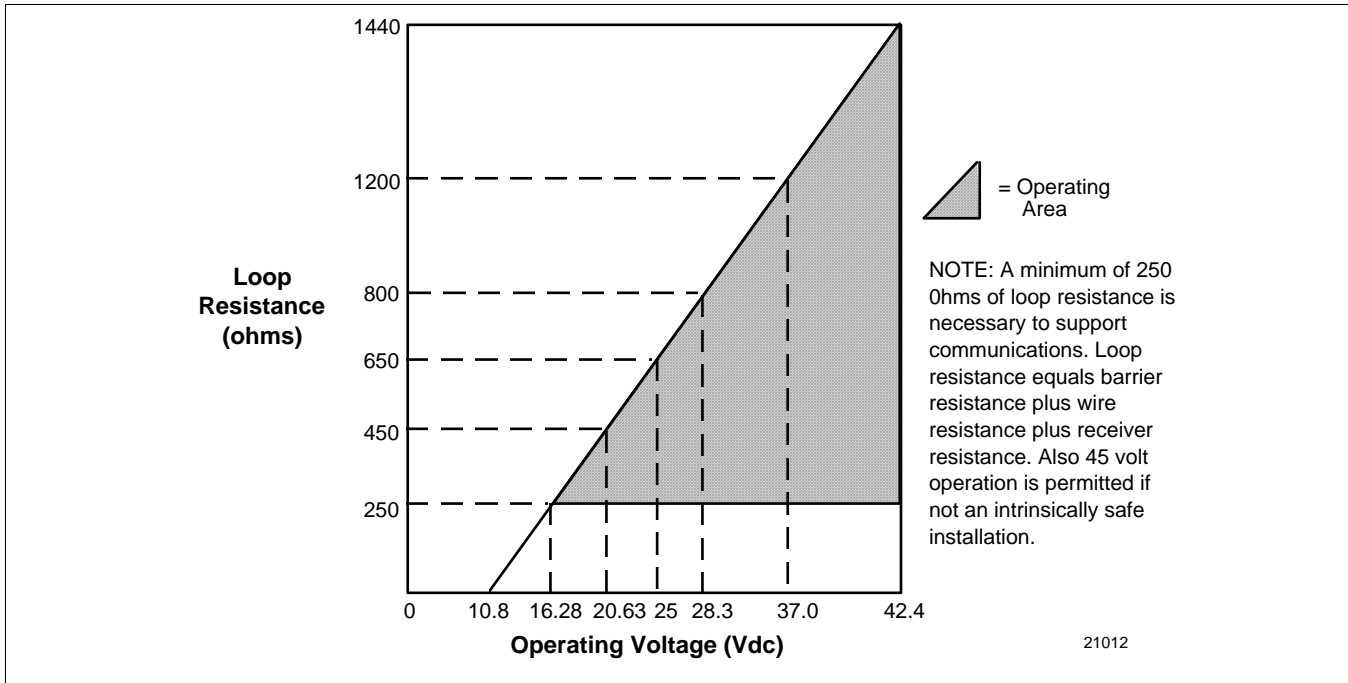


Figure 3 - Supply voltage and loop resistance chart.

**Performance Under Rated Conditions\* - Model STA122 (0 to 780 mmHgA)**

Parameter		Description
<b>Upper Range Limit</b>	mmHgA mbarA	780 (0°C/32°F is standard reference temperature for mmHg range.) 1040
<b>Minimum Span</b>	mmHgA mbarA	50 67
<b>Turndown Ratio</b>		15 to 1
<b>Zero Suppression</b>		No limit except minimum span within 0 (absolute zero) to +100% URV.
<b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • Accuracy includes residual error after averaging successive readings. • For FOUNDATION Fieldbus use Digital Mode specifications. For HART use Analog Mode specifications.		<b>In Analog Mode:</b> ±0.075% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (90 mmHgA), accuracy equals: $\pm 0.025 + 0.05 \left( \frac{90 \text{ mmHgA}}{\text{span mmHgA}} \right)$ or $\pm 0.025 + 0.05 \left( \frac{120 \text{ mbarA}}{\text{span mbarA}} \right)$ in % span <b>In Digital Mode:</b> ±0.0625% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (90 mmHgA), accuracy equals: $\pm 0.0125 + 0.05 \left( \frac{90 \text{ mmHgA}}{\text{span mmHgA}} \right)$ or $\pm 0.0125 + 0.05 \left( \frac{120 \text{ mbarA}}{\text{span mbarA}} \right)$ in % span
<b>Zero Temperature Effect per 28°C (50°F)</b>		<b>In Analog Mode:</b> ±0.0875% of calibrated span. For URV below reference point (180 mmHgA), effect equals: $\pm 0.0125 + 0.075 \left( \frac{180 \text{ mmHgA}}{\text{span mmHgA}} \right)$ or $\pm 0.0125 + 0.075 \left( \frac{240 \text{ mbarA}}{\text{span mbarA}} \right)$ in % span <b>In Digital Mode:</b> ±0.075% of calibrated span. For URV below reference point (180 mmHgA), effect equals: $\pm 0.075 \left( \frac{180 \text{ mmHgA}}{\text{span mmHgA}} \right)$ or $\pm 0.075 \left( \frac{240 \text{ mbarA}}{\text{span mbarA}} \right)$ in % span

\* Performance specifications are based on reference conditions of 25°C (77°F), 10 to 55% RH, and 316L Stainless Steel barrier diaphragm.

**Performance Under Rated Conditions - Model STA122 (0 to 780 mmHgA), Continued**

Parameter	Description
<b>Combined Zero and Span Temperature Effect per 28°C (50°F)</b>	<p><b>In Analog Mode:</b> ±0.175% of calibrated span. For URV below reference point (180 mmHgA), effect equals:  <math>\pm 0.1 + 0.075 \left( \frac{180 \text{ mmHgA}}{\text{span mmHgA}} \right)</math> or <math>\pm 0.1 + 0.075 \left( \frac{240 \text{ mbarA}}{\text{span mbarA}} \right)</math> in % span</p> <p><b>In Digital Mode:</b> ±0.15% of calibrated span. For URV below reference point (180 mmHgA), effect equals:  <math>\pm 0.075 + 0.075 \left( \frac{180 \text{ mmHgA}}{\text{span mmHgA}} \right)</math> or <math>\pm 0.075 + 0.075 \left( \frac{240 \text{ mbarA}}{\text{span mbarA}} \right)</math> in % span</p>

**Performance Under Rated Conditions\* - Model STA140 (0 to 500 psia)**

Parameter	Description
<b>Upper Range Limit</b> psia barA	500 35
<b>Minimum Span</b> psia barA	5 0.35
<b>Turndown Ratio</b>	100 to 1
<b>Zero Suppression</b>	No limit except minimum span within 0 (absolute zero) to +100% URL.
<p><b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability)</p> <ul style="list-style-type: none"> <li>• Accuracy includes residual error after averaging successive readings.</li> <li>• For FOUNDATION Fieldbus use Digital Mode specifications. For HART use Analog Mode specifications.</li> </ul>	<p><b>In Analog Mode:</b> ±0.075% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (20 psia), accuracy equals:  <math>\pm 0.025 + 0.05 \left( \frac{20 \text{ psia}}{\text{span psia}} \right)</math> or <math>\pm 0.025 + 0.05 \left( \frac{1.4 \text{ barA}}{\text{span barA}} \right)</math> in % span</p> <p><b>In Digital Mode:</b> ±0.0625% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (20 psia), accuracy equals:  <math>\pm 0.0125 + 0.05 \left( \frac{20 \text{ psia}}{\text{span psia}} \right)</math> or <math>\pm 0.0125 + 0.05 \left( \frac{1.4 \text{ barA}}{\text{span barA}} \right)</math> in % span</p>
<b>Zero Temperature Effect per 28°C (50°F)</b>	<p><b>In Analog Mode:</b> ±0.0625% of calibrated span. For URV below reference point (50 psia), effect equals:  <math>\pm 0.0125 + 0.05 \left( \frac{50 \text{ psia}}{\text{span psia}} \right)</math> or <math>\pm 0.0125 + 0.05 \left( \frac{3.5 \text{ barA}}{\text{span barA}} \right)</math> in % span</p> <p><b>In Digital Mode:</b> ±0.05% of calibrated span. For URV below reference point (50 psia), effect equals:  <math>\pm 0.05 \left( \frac{50 \text{ psia}}{\text{span psia}} \right)</math> or <math>\pm 0.05 \left( \frac{3.5 \text{ barA}}{\text{span barA}} \right)</math> in % span</p>
<b>Combined Zero and Span Temperature Effect per 28°C (50°F)</b>	<p><b>In Analog Mode:</b> ±0.10% of calibrated span. For URV below reference point (50 psia), effect equals:  <math>\pm 0.05 + 0.05 \left( \frac{50 \text{ psia}}{\text{span psia}} \right)</math> or <math>\pm 0.05 + 0.05 \left( \frac{3.5 \text{ barA}}{\text{span barA}} \right)</math> in % span</p> <p><b>In Digital Mode:</b> ±0.075% of calibrated span. For URV below reference point (50 psia), effect equals:  <math>\pm 0.025 + 0.05 \left( \frac{50 \text{ psia}}{\text{span psia}} \right)</math> or <math>\pm 0.025 + 0.05 \left( \frac{3.5 \text{ barA}}{\text{span barA}} \right)</math> in % span</p>

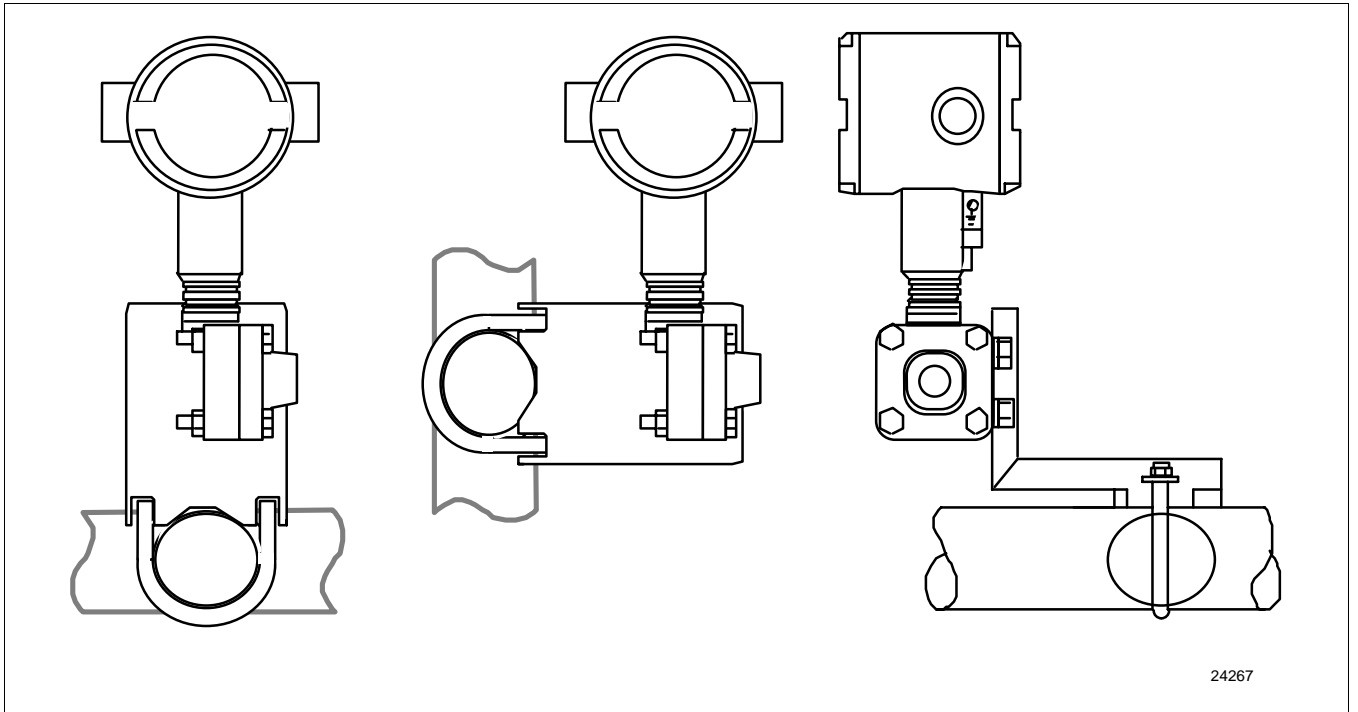
\* Performance specifications are based on reference conditions of 25°C (77°F), 10 to 55% RH, and 316L Stainless Steel barrier diaphragm.

### Performance Under Rated Conditions - General for all Models

Parameter	Description
<b>Output (two-wire)</b>	Analog 4 to 20 mA or digital communications DE mode. Options available for FOUNDATION Fieldbus and HART protocol.
<b>Supply Voltage Effect</b>	0.005% span per volt.
<b>Damping Time Constant</b>	Adjustable from 0 to 32 seconds digital damping.
<b>CE Conformity (Europe)</b>	89/336/EEC, Electromagnetic Compatibility (EMC) Directive.
<b>Lightning Protection Option (Code "LP")</b>	Leakage Current: 10 microamps max. @ 42.4 VDC, 93°C Impulse Rating: 10/20 μ sec. 5,000 Amps (50 strikes) 10,000 Amps (20 strikes) (rise/decay) 10/1000 μ sec. 250 Amps (1000 strikes) 500 Amps (400 strikes)

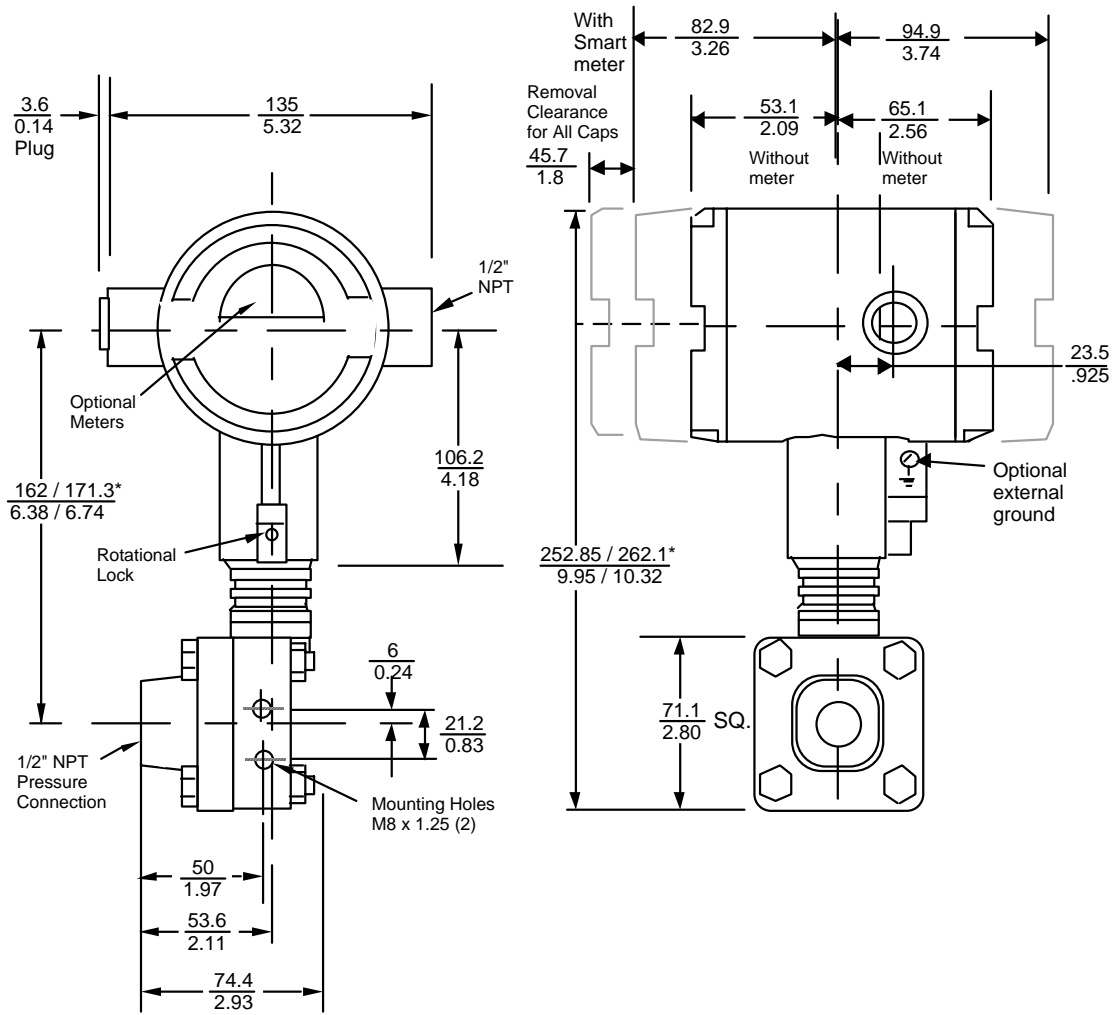
### Physical and Approval Bodies

Parameter	Description
<b>Barrier Diaphragm Material</b>	316L SS, Hastelloy C-276, Monel
<b>Process Head Material</b>	316 SS, Carbon Steel (Zinc-plated), Monel, Hastelloy C-276
<b>Head Gaskets</b>	Viton is standard. Teflon is optional but not recommended for leak-proof service under full vacuum.
<b>Meter Body Bolting</b>	Carbon Steel (Zinc plated, standard) or A286 SS (NACE) bolts and 302/304 SS (NACE) nuts for heads.
<b>Mounting Bracket</b>	Carbon Steel (Zinc-plated) or Stainless Steel angle bracket or Carbon Steel flat bracket available.
<b>Fill Fluid</b>	Silicone DC 200 oil or CTFE (Chlorotrifluoroethylene) Note that DC 704 is available – Please contact Product Marketing.
<b>Electronic Housing</b>	Epoxy-Polyester hybrid paint. Low Copper-Aluminum. Meets NEMA 4X (watertight) and NEMA 7 (explosion proof). Stainless steel optional.
<b>Process Connections</b>	1/2-inch NPT, 9/16-18 Aminco, DIN.
<b>Wiring</b>	Accepts up to 16 AWG (1.5 mm diameter).
<b>Mounting</b>	Can be mounted in virtually any position using the standard mounting bracket. Bracket is designed to mount on 2-inch (50 mm) vertical or horizontal pipe. See Figure 4.
<b>Dimensions</b>	See Figure 5
<b>Net Weight</b>	10 pounds (4.5 Kg)
<b>Approval Bodies</b>	Approved as explosion proof and intrinsically safe for use in Class I, Division 1, Groups A, B, C, D locations, and nonincendive for Class I, Division 2 Groups A, B, C, D locations. Approved EEx ia IIC T5 and EEx d IIC T6 per CENELEC standards; and Ex N II T5 per BS 6941.



**Figure 4** - Examples of typical mounting positions for single-head models STA122 and STA140.

Reference Dimensions:  $\frac{\text{millimeters}}{\text{inches}}$



\* Dimensions vary due to slight differences in electronics housing designs

24803

Figure 5 - Typical mounting dimensions for single-head models for reference.

## Options

### **Mounting Bracket**

The angle mounting bracket is available in either zinc-plated carbon steel or stainless steel and is suitable for horizontal or vertical mounting on a two inch (50 millimeter) pipe, as well as wall mounting. An optional flat mounting bracket is also available in carbon steel for two inch (50 millimeter) pipe mounting.

### **Indicating Meter**

Two integral meter options are available. An analog meter (option ME) is available with a 0 to 100% linear scale. The Smart Meter (option SM) provides an LCD display for both analog and digital output and can be configured to display pressure in pre-selected engineering units.

### **HART Protocol Compatibility (Option HC)**

An optional electronics module is available for the Series 100 that provides HART Protocol compatibility. Transmitters with the HART Option are compatible with the AMS System. (Contact your AMS Supplier if an upgrade is required.)

### **Lightning Protection**

A terminal block is available with circuitry that protects the transmitter from transient surges induced by nearby lightning strikes.

### **Lifetime Warranty**

Extends limited 1-year warranty policy to 15 years for ST 3000 S100 pressure transmitters. See Honeywell Terms and Conditions.

### **Tagging (Option TG)**

Up to 30 characters can be added on the stainless steel nameplate mounted on the transmitter's electronics housing at no extra cost. Note that a separate nameplate on the meter body contains the serial number and body-related data. A stainless steel wired on tag with additional data of up to 4 lines of 28 characters is also available. The number of characters for tagging includes spaces.

### **Transmitter Configuration (Option TC)**

The factory can configure the transmitter linear/square root extraction, damping time, LRV, URV and mode (analog/digital) and enter an ID tag of up to eight characters and scratchpad information as specified.

### **Custom Calibration and ID in Memory (Option CC)**

The factory can calibrate any range within the scope of the transmitter's range and enter an ID tag of up to eight characters in the transmitter's memory.

### **FOUNDATION Fieldbus (Option FF)**

Equips transmitter with FF protocol for use in 31.25 kbit/s FF networks. See document 34-ST-03-72 for additional information on ST 3000 Fieldbus transmitters.

## Ordering Information

Contact your nearest Honeywell sales office, or

In the U.S.:

Honeywell  
Industrial Automation & Control  
16404 North Black Canyon Hwy.  
Phoenix, AZ 85053  
1-800-288-7491

In Canada:

The Honeywell Centre  
155 Gordon Baker Rd.  
North York, Ontario M2H 3N7  
1-800-461-0013

In Latin America:

Honeywell Inc.  
480 Sawgrass Corporate Parkway,  
Suite 200  
Sunrise, FL 33325  
(954) 845-2600

In Europe and Africa:

Honeywell S. A.  
Avenue du Bourget 1  
1140 Brussels, Belgium  
[32-2] 728-2111

In Eastern Europe:

Honeywell Praha,  
s.r.o. Budejovicka 1  
140 21 Prague 4,  
Czech Republic

In the Middle East:

Honeywell Middle East Ltd.  
Khalifa Street,  
Sheikh Faisal Building  
Abu Dhabi, U. A. E.

In Asia:

Honeywell Asia Pacific Inc.  
Honeywell Building,  
17 Changi Business Park Central 1  
Singapore 486073  
Republic of Singapore

In the Pacific:

Honeywell Pty Ltd.  
5 Thomas Holt Drive  
North Ryde NSW Australia 2113  
(61 2) 9353 7000

In Japan:

Honeywell K.K.  
14-6 Shibaura 1-chrome  
Minato-ku, Tokyo, Japan 105-0023

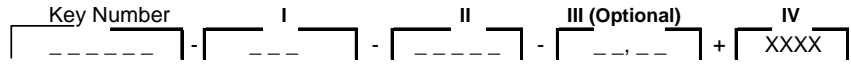
Or, visit Honeywell on the World Wide Web at: <http://www.honeywell.com>

**Model Selection Guide**

**Instructions**

- Select the desired Key Number. The arrow to the right marks the selection available.
- Make one selection from each Table I and II using the column below the proper arrow.
- Select as many Table III options as desired (if no options or approvals are desired, specify 9X). A (♦) denotes unrestricted availability. A letter denotes restricted availability. Restrictions follow Table IV.

List Price equals the sum of all selections made.



KEY NUMBER		Selection	Availability			
Design	Span					
Gage Pressure	Head	0-5 to 0-500 psi/0-0.34 to 0-35 bar	STG140	↓		
		0-100 to 0-3000 psi/0-7 to 0-210 bar	STG170	↓		
		0-100 to 0-6000 psi/0-7 to 0-420 bar	STG180		↓	
	In-Line	0-5 to 0-500 psi/0-0.34 to 0-35 bar	STG14L			↓
		0-100 to 0-3000 psi/0-7 to 0-210 bar	STG17L			↓
		0-100 to 0-6000 psi/0-7 to 0-420 bar	STG18L			↓
0-200 to 0-10000 psi/0-14 to 0-690 bar		STG19L			↓	
Absolute Pressure	Single	0-50 to 0-780 mm HgA/0-67 to 0-1040 mbarA	STA122	↓		
	Head	0-5 to 0-500 psi/0-0.34 to 0-35 bar absolute	STA140	↓		

**TABLE I - METER BODY**

	Wetted Process Heads	Vent/Drain Valves **	Barrier Diaphragms				
	Materials of Construction	Carbon Steel *	-	316 LSS	A __	♦	♦
Carbon Steel *		-	Hastelloy C	B __	♦	♦	♦
Carbon Steel *		-	Monel	C __	♦	♦	
316 St. St.		-	316 LSS	E __	♦	♦	♦
***		-	316 LSS	E __			♦
316 St. St.		-	Hastelloy C	F __	♦	♦	♦
***		-	Hastelloy C	F __			♦
316 St. St.		-	Monel	G __	♦	♦	
Hastelloy C		-	Hastelloy C	J __	♦	♦	♦
Monel	-	Monel	L __	♦	♦		
Fill Fluid	Silicone DC200 ****			_ 1 _	♦	♦	♦
	CTFE			_ 2 _	♦	♦	♦
Process Head	9/16" - 18 Aminco			_ _ A	♦	♦	♦
Configuration	1/2 NPT (female)			_ _ G	♦	♦	♦

\* Carbon Steel heads are zinc-plated. Not recommended for water service due to hydrogen migration. Use Stainless Steel heads.

\*\* Vent/Drains are Teflon coated for lubricity.

\*\*\* STGIXL has 316 SS process interface.

\*\*\*\* If STA122 operating below 50mm HgA, see Figure 2 in Specification 34-ST-03-61 and contact Marketing Applications for a "Special" Silicone DC704 quote.

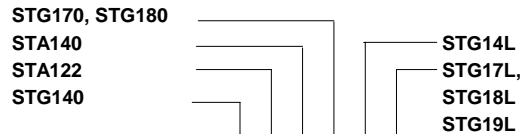


TABLE II

No Selection	Selection						
	00000	*	*	*	*	*	*

TABLE III - OPTIONS

None	00	*	*	*	*	*	
FOUNDATION Fieldbus Communications	FF	r	r	r	r	r	b
HART Protocol compatible electronics	HC	y	y	y	y	y	
Analog Meter (0-100 Even 0-10 Square Root)	ME	*	*	*	*	*	b
Smart Meter	SM	*	*	*	*	*	
Local Zero & Span	ZS	m			m	m	b
Local Zero	LZ	x			x	x	
Lightning Protection	LP	*	*	*	*	*	
Custom Calibration and I.D. in Memory	CC	*	*	*	*	*	
Transmitter Configuration - non-Fieldbus	TC	*	*	*	*	*	
Write Protection	WP	*	*	*	*	*	
A286SS (NACE) Bolts and 302/304SS (NACE) Nuts for Head	CR	*	*	*	*	*	
Stainless Steel Customer Wired-On Tag	TG	*	*	*	*	*	
(4 lines, 28 characters per line, customer supplied information)							
Stainless Steel Customer Wired-On Tag (blank)	TB	*	*	*	*	*	
Modified DIN Process Heads - 316SS	DN	w	w	w	w		
Viton Process Head Gasket (Teflon is standard)	VT	z			z		
Mounting Bracket - Carbon Steel	MB	*	*	*	*	*	b
Mounting Bracket - ST. ST.	SB	*	*	*	*	*	
Flat Mounting Bracket - Carbon Steel	FB	*	*	*	*	*	b
316 ST.ST. Electronics Housing - (with M20 Conduit Connections)	SH	n	n	n	n	n	
1/2" NPT to M20 316SS Conduit Adapter (BASEEFA EE x d IIC)	A1	n	n	n	n	n	
1/2" NPT to 3/4" NPT 316 SS Conduit Adapter	A2	u	u	u	u	u	b
Stainless Steel Housing with M20 to 1/2" NPT 316 SS Conduit Adapter (use for FM and CSA Approvals)	A3	i	i	i	i	i	
Clean Transmitter for Oxygen or Chlorine Service with Certificate	OX	h	h	h	h	h	
Over-Pressure Leak Test with F3392 Certificate	TP	*	*	*	*	*	
Calibration Test Report and Certificate of Conformance (F3399)	F1	*	*	*	*	*	b
Certificate of Conformance (F3391)	F3	*	*	*	*	*	
Certificate of Origin (F0195)	F5	*	*	*	*	*	
FMEDA (SIL) Certificate	F6	*	*	*	*	*	
NACE Certificate (F0198)	F7	o	o	o	o	*	
Additional Warranty - 1 year	W1	*	*	*	*	*	b
Additional Warranty - 2 years	W2	*	*	*	*	*	
Additional Warranty - 3 years	W3	*	*	*	*	*	
Additional Warranty - 4 years	W4	*	*	*	*	*	
Lifetime Warranty - 15 years	WL	*	*	*	*	*	
High Accuracy	HA	*				*	

### Model Selection Guide

Approval Body	Approval Type	Location or Classification	Selection							
No hazardous location approvals			9X	*	*	*	*	*	*	*
Factory Mutual	Explosion Proof	Class I, Div. 1, Groups A,B,C,D	1C	*	*	*	*	*	*	*
	Dust Ignition Proof	Class II, III Div. 1, Groups E,F,G								
	Non-Incendive	Class I, Div. 2, Groups A,B,C,D								
	Intrinsically Safe	Class I, II, III, Div. 1, Groups A,B,C,D,E,F,G								
CSA	Explosion Proof	Class I, Div. 1, Groups B,C,D	2J	*	*	*	*	*	*	*
	Dust Ignition Proof	Class II, III, Div. 1, Groups E,F,G								
	Intrinsically Safe	Class I, II, III, Div. 1, Groups A,B,C,D,E,F,G								
Zone 2 (Europe)	Self-Declared per 94/9/EC (ATEX4)	Ex II 3 GD T <sup>(1)</sup> X (1) T4 at Tamb. 93°C, T5 at Tamb. 80°C, T6 at Tamb. 65°C	3N	*	*	*	*	*	*	
SA (Australia)	Intrinsically Safe	Ex ia IIC T4	4G	*	*	*	*	*	*	
	Non-Sparking	Ex n IIC T6 (T4 with SM option)								
LCIE	Flame Proof/ CENELEC	EEx d IIC T6	3A	*	*	*	*	*	*	
	Intrinsically Safe/ CENELEC	EEx ia IIC T5 <sup>(1)</sup> <sup>(1)</sup> HC Option T4 @ 93°C, T5 @ 63°C								
	Flame Proof/ CENELEC	EEx d IIC T6								

STG170, STG180  
STA140  
STA122  
STG140

STG14L  
STG17L, STG18L

Selection

b

TABLE IV

Factory Identification	XXXX	*	*	*	*	*	*
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#### RESTRICTIONS

Restriction Letter	Table	Available Only With		Not Available With Selection
		Selection	Table	
a		Pending		
b		Select only one option from this group		
h		_ 2 _		
i	III	1C or 2J		
m			III	ME, FF
n			III	1C, 2J
o	III	CR		
r			III	TC, ME, 4G, 3A
u	III	1C, 2J		
w	I	E _ G, F _ G, G _ G		
x	III	FF, SM		
z			I	B _ _ , F _ _ , J _ _
y			III	4G

**Note:** See ST-83 for Published Specials with pricing.  
See ST-89 and User's Manual for part numbers.  
See ST-OE-9 for OMS Order Entry Information including TC, manuals, certificates, drawings and SPINS.  
See ST-OD-1 for tagging, ID, Transmitter Configuration (TC) and calibration including factory default values.  
To request a quotation for a non-published "special", fax RFQ to Marketing Applications.

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**Honeywell**

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