Honeywell

ST 3000 Smart Transmitter

Series 900 Gauge Pressure Models

STG944	0 to 500 psi	0 to 35 bar
STG94L	0 to 500 psi	0 to 35 bar
STG974	0 to 3000 psi	0 to 210 bar
STG97L	0 to 3000 psi	0 to 210 bar
STG98L	0 to 6000 psi	0 to 415 bar

34-ST-03-67
11/98

Specification and Model Selection Guide

Function

Honeywell's ST 3000® Series 900 Gauge Pressure Transmitters bring proven "smart" technology to a wide spectrum of gauge 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®X control system. An optional electronics module is available for the Series 900 that provides HART®[1] Protocol compatibility. A future protocol option will let you use these transmitters in FOUNDATION™ Fieldbus[2] networks.

In the standard transmitter 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 DE-based Smartline® Transmitters. All configuration, operation, and communications functions are under the control of the ST 3000 Smart Transmitter's microprocessor and are accessible through the SFC.

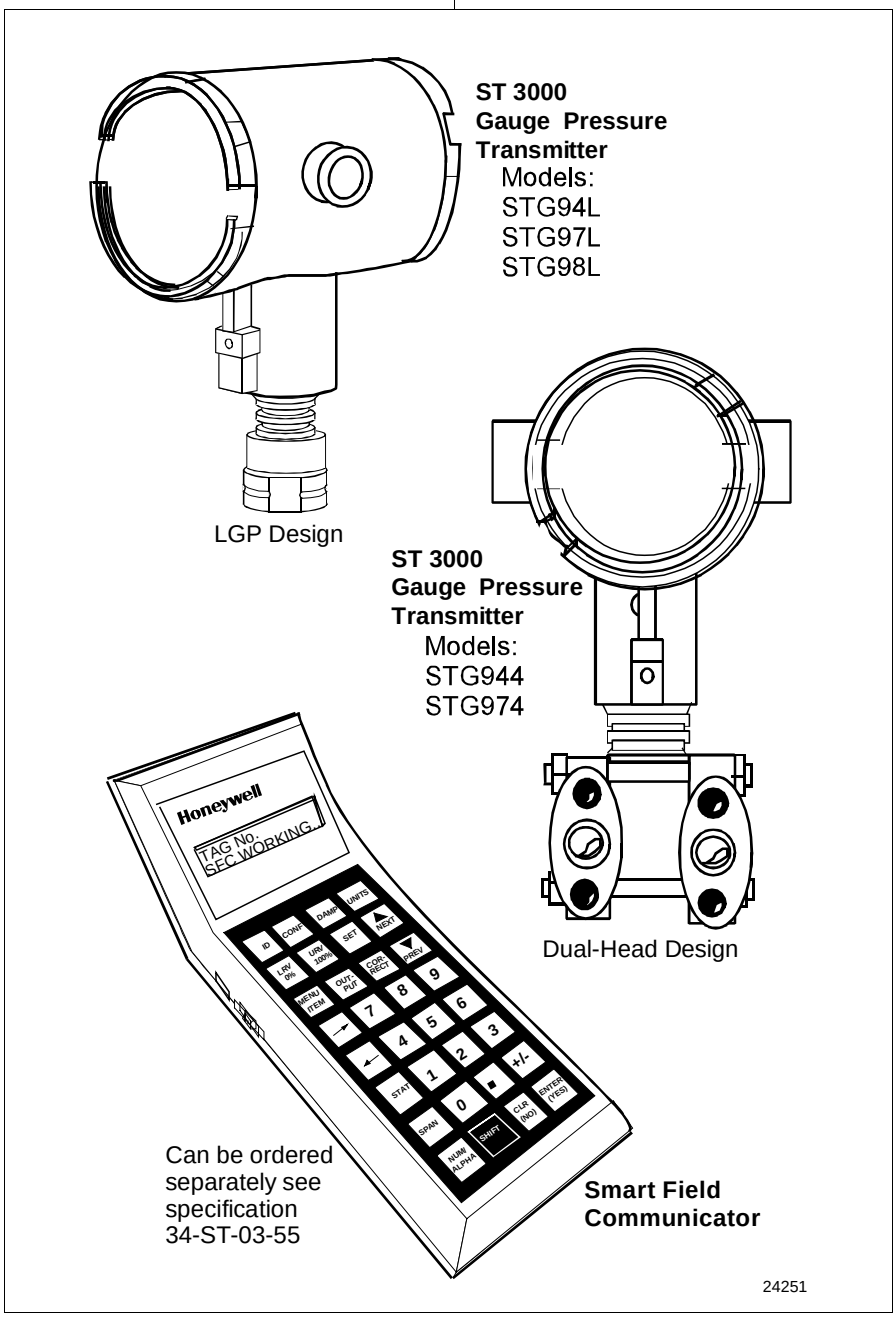

Figure 1—Series 900 Gauge Pressure Transmitters feature proven "smart" technology and come in dual-head and in-line models to meet varying application needs.

[1] HART is a registered trademark of the Hart Communication Foundation.

[2] FOUNDATION™ Fieldbus is a trademark of the Fieldbus Foundation.

Industrial Automation and Control, 16404 N. Black Canyon Highway, Phoenix, AZ 85023

Features

- Choice of dual-head or in-line model to match process interface requirements.
- Direct digital integration with TDC 3000^X system provides local measurement accuracy to the system level without adding typical A/D and D/A converter inaccuracies.
- Unique piezoresistive sensor automatically compensates input for temperature.
- Added “smart” features include configuring lower and upper range values, simulating accurate analog output, and selecting preprogrammed engineering units for display.
- Smart transmitter capabilities with local or remote interfacing means significant manpower efficiency improvements in commissioning, start-up, and ongoing maintenance functions

Description

The ST 3000 transmitter can replace any 4 to 20 milliampere output transmitter in use today, and operates over a standard two-wire system.

The measuring means is a piezoresistive sensor which actually contains a pressure sensor and a temperature sensor.

Microprocessor-based electronics provide higher span-turndown ratio, improved temperature compensation, and improved accuracy.

Like other Smartline Transmitters, the ST 3000 features two-way communication between the operator and the transmitter through our SFC. 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.

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 900 or Series 100e model transmitter.

Specifications

Operating Conditions – All Models

Parameter	Reference Condition (at zero static)		Rated Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F	°C	°F
Ambient Temperature	25 ±1	77 ±2	-40 to 70	-40 to 158	-40 to 85	-40 to 185	-55 to 125	-67 to 257
Meter Body Temperature	25 ±1	77 ±2	-40 to 110*	-40 to 230*	-40 to 125***	-40 to 257***	-55 to 125	-67 to 257
Humidity %RH	10 to 55		0 to 100		0 to 100		0 to 100	
Overpressure								
STG944, 94L **psi**	0		750		750			
bar	0		50		50			
STG974, 97L **psi**	0		4500		4500			
bar	0		310		310			
STG98L **psi**	0		9000		9000			
bar	0		620		620			
Vacuum Region - Minimum Pressure								
mmHg absolute	atmospheric		25		2 (short term**)			
inH_2O absolute	atmospheric		13		1 (short term**)			
Supply Voltage, Current, and Load Resistance	**Voltage Range:** 10.8 to 42.4 Vdc at terminals **Current Range:** 3.0 to 21.8 mA **Load Resistance:** 0 to 1440 ohms (as shown in Figure 2)							

*For model 944 with CTFE fill fluid, the rating is –15 to 70°C (5 to 158°F); for model 98L with CTFE fill fluid, the rating is –15 to 110°C (5 to 230°F).

**Short term equals 2 hours at 70°C (158 °F)

***For Models STG94L, STG97L, and STG98L, the upper limit is 110°C (230°F).

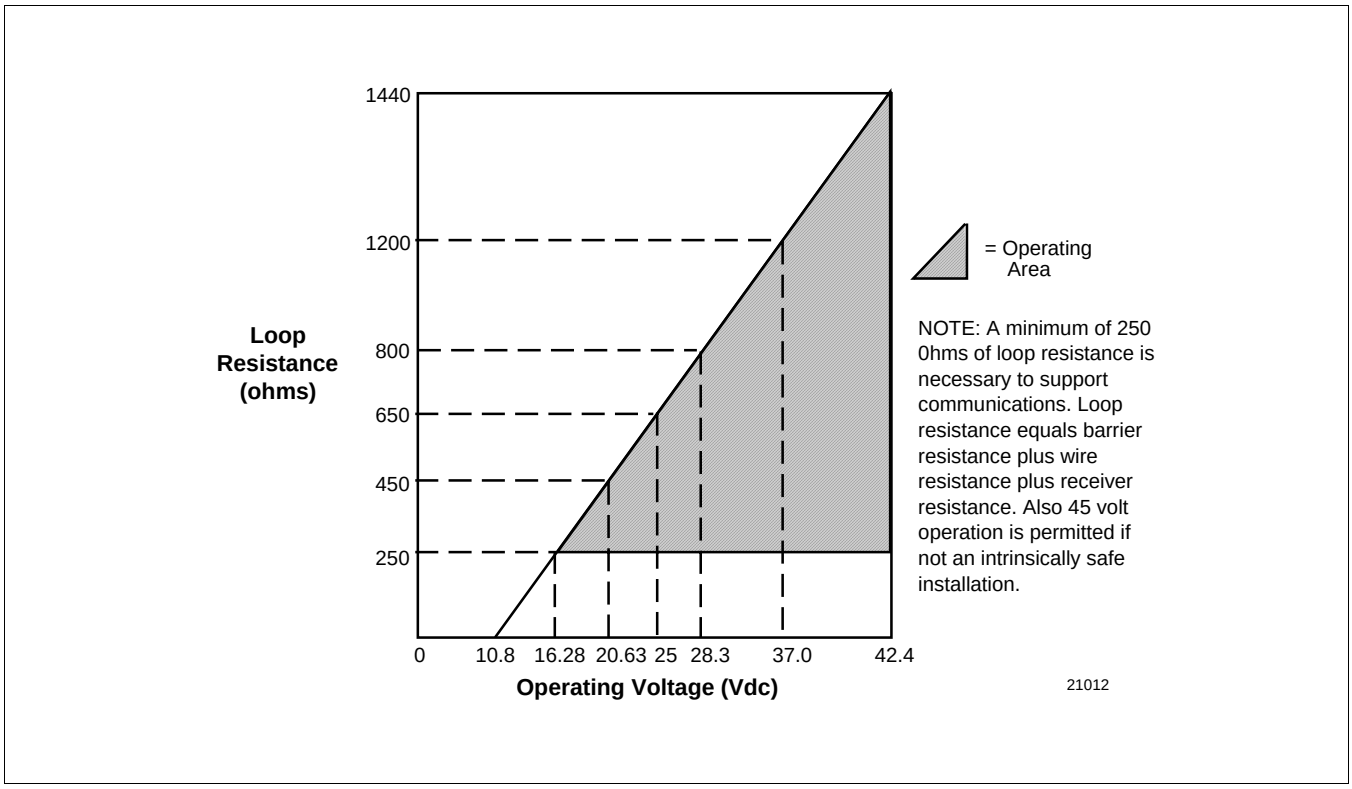

Figure 2—Supply voltage and loop resistance chart.

Performance Under Rated Conditions* - Models STG944 & 94L (0 to 500 psi/35 bar)

Parameter	Description
Upper Range Limit **psi** **bar**	500 35
Minimum Span **psi** **bar**	20 1.4
Turndown Ratio	25 to 1
Zero Elevation and Suppression	No limit except minimum span from absolute 0 (zero) to +100% URL. Specifications valid over this range.
Accuracy (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • *Accuracy includes residual error after averaging successive readings.*	**In Analog Mode:** ±0.10% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (20 psi), accuracy equals: $\pm 0.05 + 0.05 \left(\frac{20 \text{ psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.05 \left(\frac{1.4 \text{ bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.075% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (20 psi), accuracy equals: $\pm 0.025 + 0.05 \left(\frac{20 \text{ psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.05 \left(\frac{1.4 \text{ bar}}{\text{span bar}}\right)$ in % span
Zero Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.1625% of span. For URV below reference point (50 psi), effect equals: $\pm 0.0125 + 0.15 \left(\frac{50 \text{ psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.15 \left(\frac{3.5 \text{ bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.15% of span. For URV below reference point (50 psi), effect equals: $\pm 0.15 \left(\frac{50 \text{ psi}}{\text{span psi}}\right)$ or $\pm 0.15 \left(\frac{3.5 \text{ bar}}{\text{span bar}}\right)$ in % span
Combined Zero and Span Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.25% of span. For URV below reference point (50 psi), effect equals: $\pm 0.10 + 0.15 \left(\frac{50 \text{ psi}}{\text{span psi}}\right)$ or $\pm 0.10 + 0.15 \left(\frac{3.5 \text{ bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.225% of span. For URV below reference point (50 psi), effect equals: $\pm 0.075 + 0.15 \left(\frac{50 \text{ psi}}{\text{span psi}}\right)$ or $\pm 0.075 + 0.15 \left(\frac{3.5 \text{ bar}}{\text{span bar}}\right)$ 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* - Models STG974 & 97L (0 to 3000 psi/210 bar)

Parameter	Description
Upper Range Limit **psi** **bar**	3000 210
Minimum Span **psi** **bar**	300 21
Turndown Ratio	10 to 1
Zero Elevation and Suppression	No limit except minimum span from absolute 0 (zero) to +100% URL. Specifications valid over this range.
Accuracy (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • *Accuracy includes residual error after averaging successive readings.*	**In Analog Mode:** ±0.2% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (300 psi), accuracy equals: $\pm 0.05 + 0.15 \left(\frac{300\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.15 \left(\frac{21\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.175% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (300 psi), accuracy equals: $\pm 0.025 + 0.15 \left(\frac{300\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.15 \left(\frac{21\ \text{bar}}{\text{span bar}}\right)$ in % span
Zero Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.2125% of span. For URV below reference point (500 psi), effect equals: $\pm 0.0125 + 0.20 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.20 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.20% of span. For URV below reference point (500 psi), effect equals: $\pm 0.20 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.20 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span
Combined Zero and Span Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.325% of span. For URV below reference point (500 psi), effect equals: $\pm 0.125 + 0.20 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.125 + 0.20 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.30% of span. For URV below reference point (500 psi), effect equals: $\pm 0.10 + 0.20 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.10 + 0.20 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ 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 STG98L (0 to 6000 psi/415 bar)

Parameter	Description
Upper Range Limit **psi** **bar**	6000 415
Minimum Span **psi** **bar**	500 35
Turndown Ratio	12 to 1
Zero Elevation and Suppression	No limit except minimum span from absolute 0 (zero) to +100% URL. Specifications valid over this range.
Accuracy (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • *Accuracy includes residual error after averaging successive readings.*	**In Analog Mode:** ±0.2% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (1000 psi), accuracy equals: $\pm 0.05 + 0.15 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.15 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.175% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (1000 psi), accuracy equals: $\pm 0.025 + 0.15 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.15 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span
Zero Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.2125% of span. For URV below reference point (1000 psi), effect equals: $\pm 0.0125 + 0.20 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.20 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.20% of span. For URV below reference point (1000 psi), effect equals: $\pm 0.20 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.20 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span
Combined Zero and Span Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.325% of span. For URV below reference point (1000 psi), effect equals: $\pm 0.125 + 0.20 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.125 + 0.20 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.30% of span. For URV below reference point (1000 psi), effect equals: $\pm 0.10 + 0.20 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.10 + 0.20 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ 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 - General for all Models

Parameter	Description
Output (two-wire)	Analog 4 to 20 mA or DE digital communications mode. Optional HART electronics module available.
Supply Voltage Effect	0.005% span per volt.
Damping Time Constant	Adjustable from 0 to 32 seconds digital damping.
CE Conformity (Europe)	89/336/EEC, Electromagnetic Compatibility (EMC) Directive.

Physical and Approval Bodies

Parameter	Description
Barrier Diaphragms Material	**Dual-Head Meter Body:** 316L SS, Hastelloy C-276 **In-Line Meter Body:** 316L SS, Hastelloy C-276
Process Head Material	**Dual-Head Meter Body:** 316 SS, Carbon Steel (zinc-plated), Hastelloy. [Reference head is Carbon Steel (zinc-plated).] **In-Line Meter Body:** 316 SS process interface.
Head Gaskets	Teflon is standard. Viton is available.
Meter Body Bolting	Carbon Steel (Zinc plated, standard) or A286 SS (NACE) bolts and 302/304 SS (NACE) nuts for heads and 316 SS (NACE) bolts for adapters (standard option).
Mounting Bracket	Carbon Steel (Zinc-plated) or Stainless Steel angle bracket or Carbon Steel flat bracket available.
Fill Fluid	Silicone oil or CTFE (Chlorotrifluoroethylene)
Electronic Housing	Epoxy-Polyester hybrid paint. Low Copper-Aluminum. Meets NEMA 4X (watertight) and NEMA 7 (explosion proof). Stainless steel optional.
Process Connections	**Dual-Head Meter Body:** 1/4-inch NPT; 1/2-inch NPT with adapter or DIN, standard option. **In-Line Meter Body:** 1/2-inch NPT
Wiring	Accepts up to 16 AWG (1.5 mm diameter).
Mounting	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 3 for dual-head models, and Figure 4 for in-line models.
Dimensions	See Figures 5 and 6.
Net Weight	**With Dual-Head Meter Body:** 9 pounds (4.1 Kg) **With In-Line Meter Body:** 3.8 pounds (1.7 Kg)
Approval Bodies	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. Series 900 with HC (HART) Compatibility is self certified for Zone 2, T5, maximum 42V/22 mA.

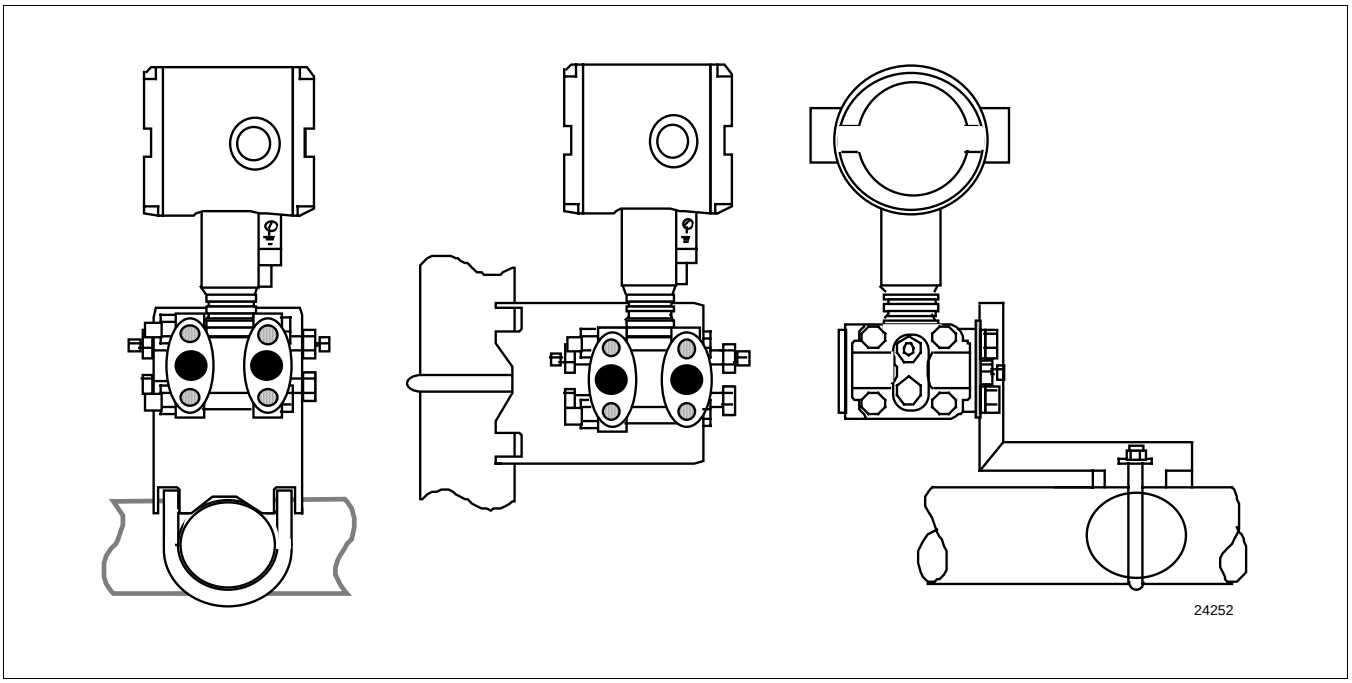

Figure 3—Examples of typical mounting positions for dual-head models STG944 and STG974

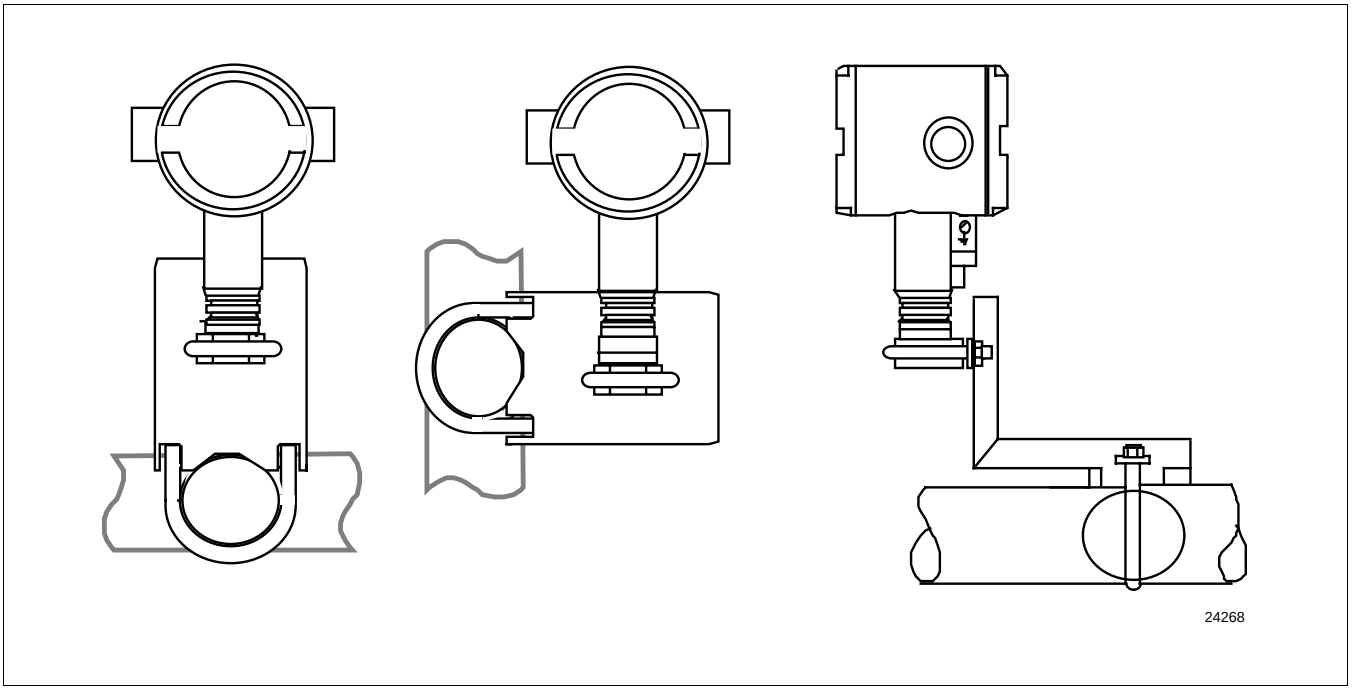

Figure 4—Examples of typical mounting positions for in-line models STG94L, STG97L, and STG98L. Note that a mounting bracket is not required for in-line models.

Reference Dimensions: millimeters / inches

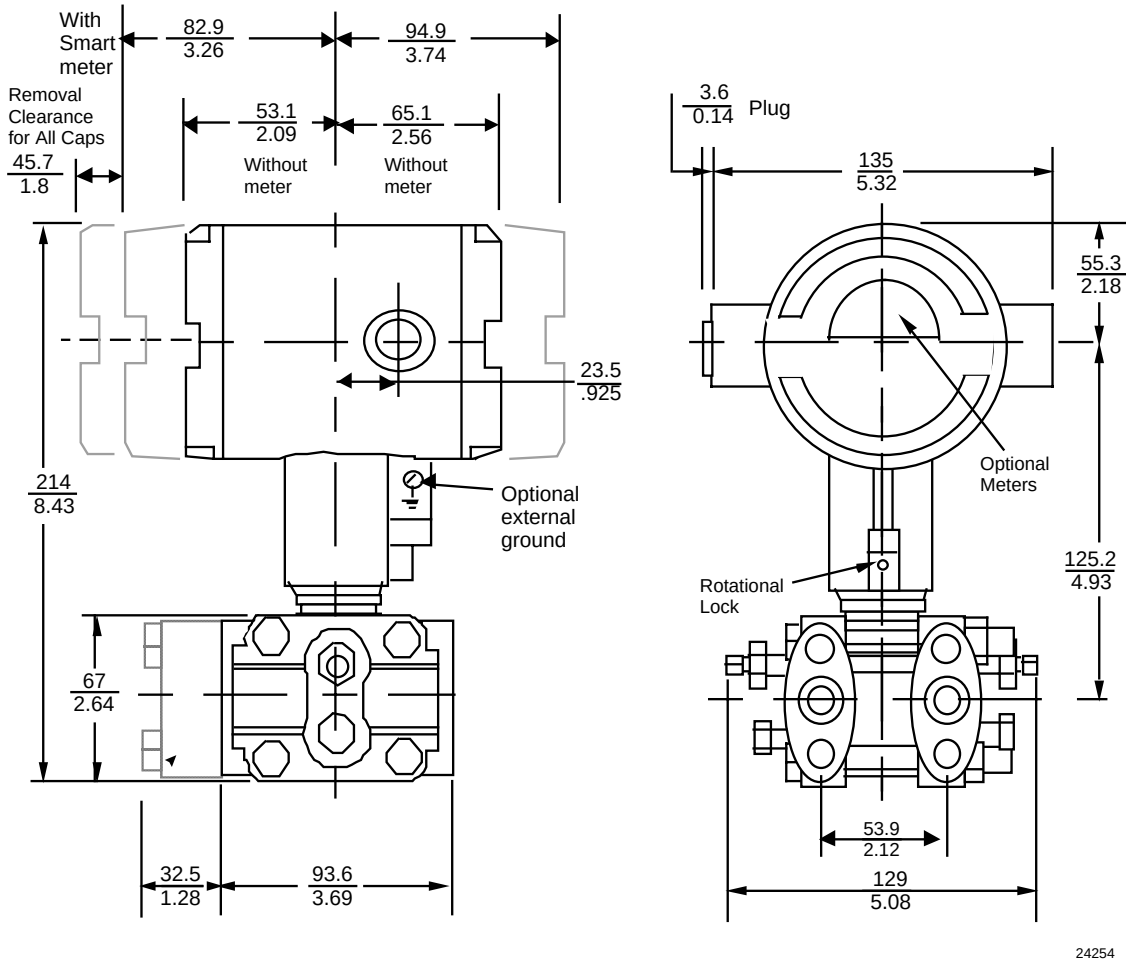

Figure 5—Typical mounting dimensions for dual-head models STG944 and STG974 for reference

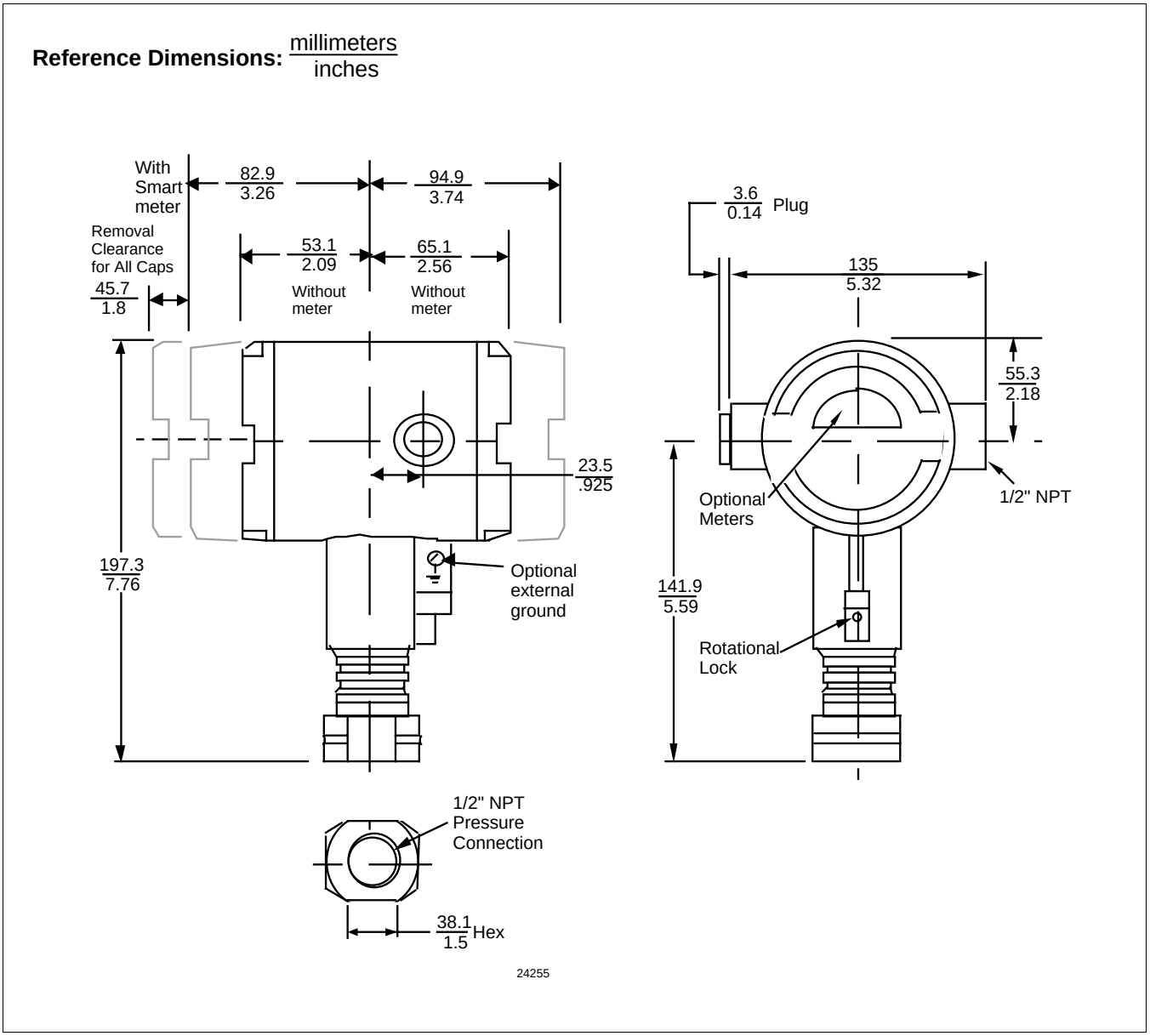

Figure 6—Typical mounting dimensions for in-line models STG94L, STG97L, and STG98L for reference

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. *

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

HART Protocol Compatibility (Option HC)
An optional electronics module is available for the Series 900 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.)

Configuration of the HART Option transmitter is accomplished using a Universal HART Communicator. For full functionality the communicator must contain the Honeywell Device Description (DD). Contact your nearest Honeywell office or distributor for further information regarding this option.

*NOTE: When used in conjunction with the HC Option the Smart Meter will display only 0 to 100%.

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 (Future 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.

Specifications are subject to change without notice.
(Note that specifications may differ slightly for transmitters manufactured before October 30, 1995.)

Ordering Information

Contact your nearest Honeywell sales office, or

In the U.S.:
Honeywell
Industrial Automation & Control
16404 N. Black Canyon Highway
Phoenix, AZ 85023
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:
Honeywell PACE
1, Avenue du Bourget
B-1140 Brussels, Belgium
[32-2] 728-2111

In Asia:
Honeywell Asia Pacific Inc.
Room 3213-25
Sun Hung Kai Centre
No. 30 Harbour Road
Wanchai, Hong Kong
2829-8298

In the Pacific:
Honeywell Limited
5 Thomas Holt Drive
North Ryde NSW 2113
Australia
(61 2) 9353 7000

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

Model Selection Guide

34-ST-16-26, 28

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 are desired, specify 00). A dot denotes unrestricted availability. A letter denotes restricted availability. Restrictions follow Table IV.

Key Number		I		II		III (Optional)		IV
_ _ _ _ _ _	-	_ _ _	-	_ _ _ _ _	-	_ _, _ _ _ _	+	XXXX

KEY NUMBER		Selection	Availability	
Span				
Gage	0-20 to 0-500 psi/0-1.4 to 0-35 bar	STG944	↓	
	0-300 to 0-3000 psi/0-21 to 0-210 bar	STG974	↓	
Pressure	0-20 to 0-500 psi/0-1.4 to 0-35 bar	STG94L		↓
	0-300 to 0-3000 psi/0-21 to 0-210 bar	STG97L		↓
	0-500 to 0-6000 psi/0-35 to 0-415 bar	STG98L		↓

TABLE I - METER BODY

	Wetted Process Head * *	Vent/Drain Valve	Barrier Diaphragms			
Material of Construction	Carbon Steel *	316 St. St.	316 LSS	A _ _	•	
	Carbon Steel *	316 St. St.	Hastelloy C	B _ _	•	
	316 St. St.	316 St. St.	316 LSS	E _ _	•	•
	316 St. St.	316 St. St.	Hastelloy C	F _ _	•	•
	Hastelloy C	Hastelloy C	Hastelloy C	J _ _	•	
Fill Fluid	Silicone DC200			_ 1 _	•	•
	CTFE			_ 2 _	•	•
Process Head Configuration	1/4" NPT			_ _ A	•	
	1/2" NPT with Adapter			_ _ G	t	
	1/2" NPT			_ _ G		•

TABLE II

No Selection	00000	•	•

***** Carbon Steel heads are zinc-plated.

****** The standard reference head for the STG9XX is carbon steel (zinc-plated). See Table III for a stainless steel reference (HR) head option.

Note: End vent drain valve standard for STG9XX.
Vent drain valves are not available on STG9XL models.

Model Selection Guide, continued

TABLE III - OPTIONS	Selection	Availability STG9 _ L / STG9 44 74	4 7 8	
None	00	•	•	
Viton Process Head Gaskets (teflon is standard)	VT	•		
Teflon Process Head Gaskets (viton is standard)	TF			
A286SS (NACE) Bolts and 302/304SS (NACE) Nuts for Heads	CR	•		
Analog Meter (0-100 Even 0-10 Square Root)	ME	•	•	b
Smart Meter	SM	•	•	
Stainless Steel Customer Wired-On Tag (4 lines, 28 characters per line, customer supplied information)	TG	•	•	
Stainless Steel Customer Wired-On Tag (blank)	TB	•	•	
Adapter Flange - 1/2" NPT St. Steel	S1	c		
Adapter Flange - 1/2" NPT Hastelloy-C	T1	c		
Modified DIN Process Heads - 316SS	DN	w		
Mounting Bracket - Carbon Steel	MB	•	•	
Mounting Bracket - ST. ST.	SB	•	•	b
Flat Mounting Bracket - Carbon Steel	FB	•	•	
316 ST.ST. Electronics Housing with M20 Conduit Connections	SH	m	m	
1/2" NPT to M20 316SS Conduit Adapter (BASEEFA EEx d IIC)	A1	n	n	b
1/2" NPT to 3/4" NPT 316 SS Conduit Adapter	A2	u	u	
Side Vent/Drain	SV	d		
Custom Calibration and I.D. in Memory	CC	•	•	
Transmitter Configuration	TC	•	•	
Write Protection	WP	•	•	
Local Zero and Span	ZS	•	•	b
HART® Protocol Compatible Electronics	HC	x	x	
Lightning Protection	LP	•	•	
St. St. Reference Head (Carbon Steel standard)	HR	•		
Clean Transmitter for Oxygen or Chlorine Service with Certificate	0X	h	h	
Over-Pressure Leak Test with F3392 Certificate	TP	•	•	
Additional Warranty - 1 year	W1	•	•	
Additional Warranty - 2 years	W2	•	•	b
Additional Warranty - 3 years	W3	•	•	
Additional Warranty - 4 years	W4	•	•	
Blind DIN SS Flanges Mounted with NACE Bolts	B1	y		
Low Temperature - -50°C Ambient Limit	LT	z	•	
Calibration Test Report and Certificate of Conformance (F3399)	F1	•	•	b
Certificate of Conformance (F3391)	F3	•	•	
Certificate of Origin (F0195)	F5	•	•	
NACE Certificate (F0198)	F7	o	o	

Table III continued next page

Model Selection Guide, continued

TABLE III - OPTIONS (continued)

Approval Body	Approval Type	Location or Classification	Selection	Availability STG_L 44 74	Availability STG9 4 7 8
Factory Mutual	Explosion Proof	Class I, Div. 1, Groups A,B,C,D	F1D3	•	•
	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	C1C3	•	•
	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 (1) X (1) T4 at Tamb. 93°C, T5 at Tamb. 80°C, T6 at Tamb. 65°C	H2D5	•	•
SA	Intrinsically Safe	Ex ia IIC T4	A0CA	•	•
	Non-Incendive	Ex n IIC T6 (T4 with SM option)			
CENELEC	Flame Proof/ CENELEC	EEx d IIC T6	E1D9	•	•
	Intrinsically Safe/ CENELEC	EEx ia IIC T5			
	Flame Proof/ CENELEC	EEx d IIC T6	E1D8	f	f
	Intrinsically Safe/ CENELEC	EEx ia IIC T5			
	Flame Proof/ CENELEC	EEx d IIC T6	E1D3	•	•
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 (1) 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	4H	a	a
	Non-Incendive	Ex n IIC T6 (T4 with SM option)			
	Flame Proof	Ex d IIC T6			
LCIE	Flame Proof/ CENELEC	EEx d IIC T6	3A	•	•
	Intrinsically Safe/ CENELEC	EEx ia IIC T5			
	Flame Proof/ CENELEC	EEx d IIC T6	3D	•	•

b

TABLE IV

Factory Identification	XXXX	•	•

Model Selection Guide, continued

RESTRICTIONS

Restriction		Available Only With		Not Available With
Letter	**Table**	**Selection**	**Table**	**Selection**
b	Select only one option from this group			
c	I	_ _ G		
d			III	DN, B1
f	III	HC		
h	I	_ 2 _		
m			III	F1D3, C1C3, ZS
n			III	F1D3, C1C3
o	III	CR or B1		
t	Select adapter from Table III S1, T1			
u	III	F1D3, C1C3		
v	I	E _ G, F _ G		
w	I	E _ A, F _ A	III	SV
x			III	A0CA, E1D9
y	I III	E _ A, F _ A DN	III	SV
z			III	STG974

Note: See 13:ST-27 for Published Specials with pricing.
See 13:ST-29 and User's Manual for part numbers.
See 13:ST-OE-9 for OMS Order Entry Information including TC, manuals, certificates, drawings and SPINS.
See 13: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.

Industrial Automation and Control
Honeywell Inc.
16404 North Black Canyon Highway
Phoenix, Arizona 85023-3099