Honeywell

ST 3000 Smart Transmitter
Series 100 Gauge Pressure Models

STG140	0 to 500 psi	0 to 35 bar	/	STG17L	0 to 3000 psi	0 to 210 bar
STG14L	0 to 500 psi	0 to 35 bar	/	STG180	0 to 6000 psi	0 to 415 bar
STG170	0 to 3000 psi	0 to 210 bar	/	STG18L	0 to 6000 psi	0 to 415 bar

34-ST-03-62
11/98

Specification and Model Selection Guide

Function

Honeywell's ST 3000® Series 100 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. A protocol option will let you use these transmitters in FOUNDATION™ Fieldbus[1] networks.

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.

Features

- Choice of single-head or in-line model to match process interface requirements.
- Direct digital integration with TDC 3000X system provides local measurement accuracy to the system level without adding typical A/D and D/A converter inaccuracies.

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

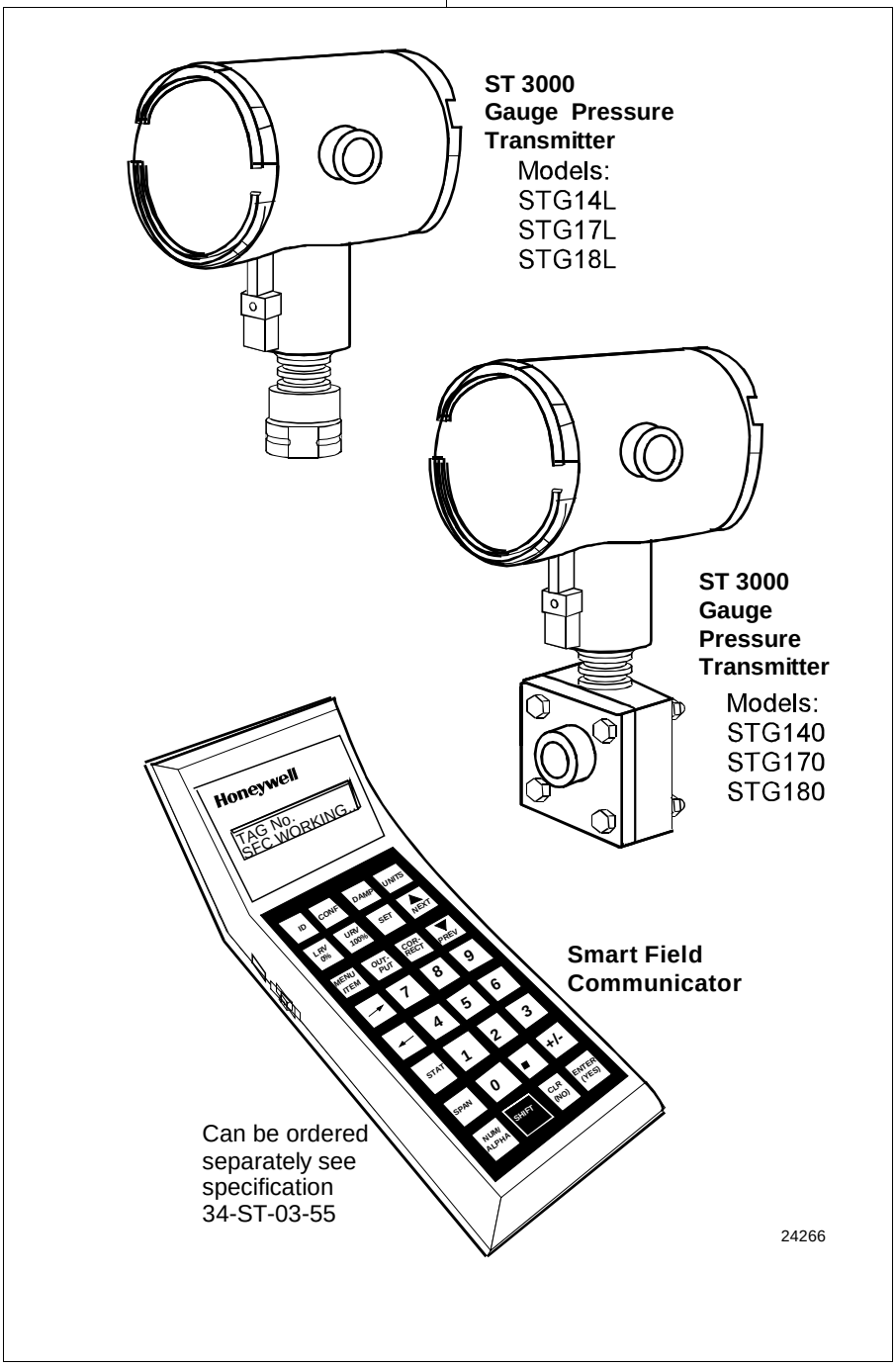


Figure 1—Series 100 Gauge Pressure Transmitters feature proven "smart" technology and come in single-head and in-line models to meet varying application needs.

- 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 100 or Series 900 model transmitter.

Specifications

Operating Conditions – All Models

Parameter	Reference Condition		Rated Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F	°C	°F
Ambient Temperature	25±1	77±2	-40 to 85	-40 to 185	-40 to 93	-40 to 200	-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								
STG140, 14L **psi**	0		750		750			
bar	0		50		50			
STG170, 17L **psi**	0		4500		4500			
bar	0		310		310			
STG180, 18L **psi**	0		9000		9000			
bar	0		620		620			
Vacuum Region - Minimum Pressure								
mmHg absolute	atmospheric		25		2 (short term**)			
inH$_2$O 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 CTFE fill fluid the rating is –15 to 110 °C (5 to 230°F)

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

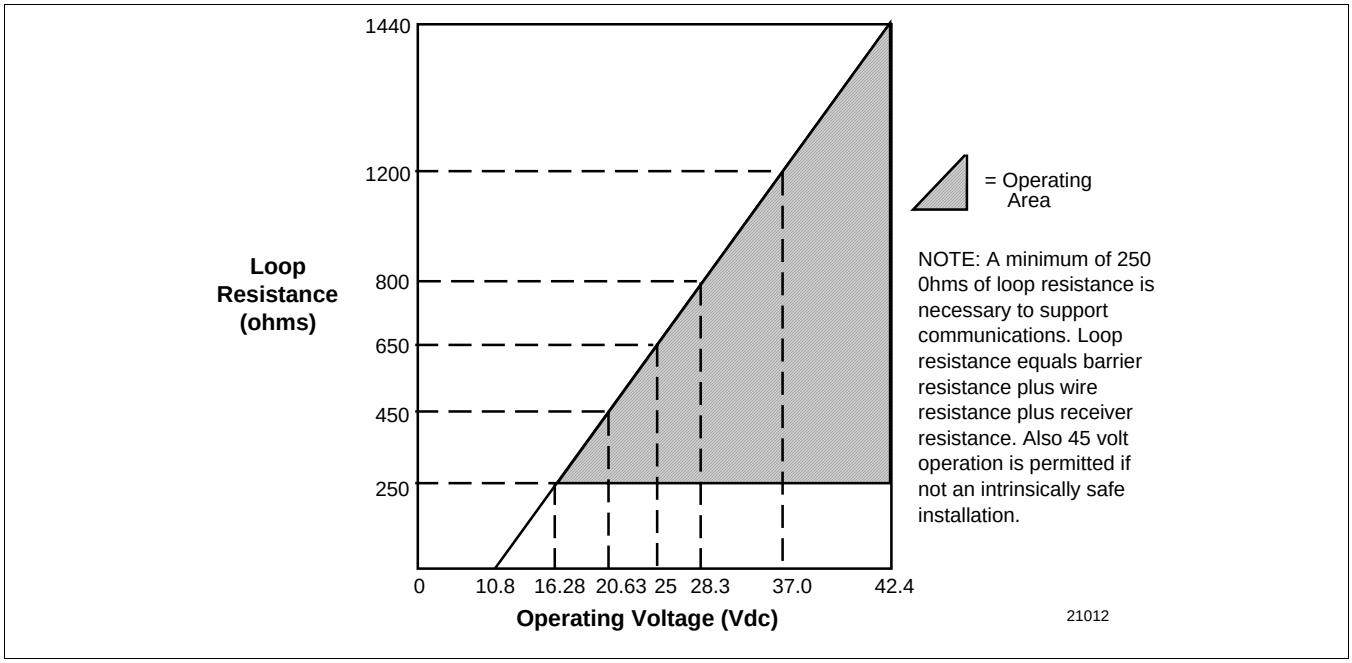


Figure 2 - Supply voltage and loop resistance chart.

Performance Under Rated Conditions* - Models STG140 & 14L (0 to 500 psi)

Parameter	Description
Upper Range Limit	**psi:** 500 **bar:** 35
Minimum Span	**psi:** 5 **bar:** 0.35
Turndown Ratio	100 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:** ±0.075% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated 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 **In Digital Mode:** ±0.0625% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (20 psi), accuracy equals: $\pm 0.0125 + 0.05 \left(\frac{20\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.05 \left(\frac{1.4\ \text{bar}}{\text{span bar}}\right)$ in % span
Zero Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.0625% of span. For URV below reference point of 50 psi for model STG140 or 75 psi for model STG14L, effect equals: $\pm 0.0125 + 0.05 \left(\frac{50\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.05 \left(\frac{3.5\ \text{bar}}{\text{span bar}}\right)$ in % span ***OR*** $\pm 0.0125 + 0.05 \left(\frac{75\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.05 \left(\frac{5.25\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.05% of span. For URV below reference point of 50 psi for model STG140 or 75 psi for model STG14L, effect equals: $\pm 0.05 \left(\frac{50\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 \left(\frac{3.5\ \text{bar}}{\text{span bar}}\right)$ in % span ***OR*** $\pm 0.05 \left(\frac{75\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 \left(\frac{5.25\ \text{bar}}{\text{span bar}}\right)$ in % span
Combined Zero and Span Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.10% of span. For URV below reference point of 50 psi for model STG140 or 75 psi for model STG14L, effect equals: $\pm 0.05 + 0.05 \left(\frac{50\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.05 \left(\frac{3.5\ \text{bar}}{\text{span bar}}\right)$ in % span ***OR*** $\pm 0.05 + 0.05 \left(\frac{75\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.05 \left(\frac{5.25\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.075% of span. For URV below reference point of 50 psi for model STG140 or 75 psi for model STG14L, effect equals: $\pm 0.025 + 0.05 \left(\frac{50\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.05 \left(\frac{3.5\ \text{bar}}{\text{span bar}}\right)$ in % span ***OR*** $\pm 0.025 + 0.05 \left(\frac{75\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.05 \left(\frac{5.25\ \text{bar}}{\text{span bar}}\right)$ in % span

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

Performance Under Rated Conditions* - Models STG170 & 17L (0 to 3000 psi)

Parameter	Description
Upper Range Limit	**psi:** 3000 **bar:** 210
Minimum Span	**psi:** 100 **bar:** 7
Turndown Ratio	30 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:** ±0.15% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (300 psi), accuracy equals: $\pm 0.05 + 0.10 \left(\frac{300\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.10 \left(\frac{21\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.125% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (300 psi), accuracy equals: $\pm 0.025 + 0.10 \left(\frac{300\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.10 \left(\frac{21\ \text{bar}}{\text{span bar}}\right)$ in % span
Zero Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.1125% of span. For URV below reference point (500 psi), effect equals: $\pm 0.0125 + 0.10 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.10 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.10% of span. For URV below reference point (500 psi), effect equals: $\pm 0.10 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.10 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span
Combined Zero and Span Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.175% of span. For URV below reference point (500 psi), effect equals: $\pm 0.075 + 0.10 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.075 + 0.10 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.15% of span. For URV below reference point (500 psi), effect equals: $\pm 0.05 + 0.10 \left(\frac{500\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.10 \left(\frac{35\ \text{bar}}{\text{span bar}}\right)$ in % span

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

Performance Under Rated Conditions* - Models STG180 & 18L (0 to 6000 psi)

Parameter	Description
Upper Range Limit	**psi:** 6000 **bar:** 415
Minimum Span	**psi:** 100 **bar:** 7
Turndown Ratio	60 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:** ±0.15% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (1000 psi), accuracy equals: $\pm 0.05 + 0.10 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.10 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.125% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV calibrated below reference point (1000 psi), accuracy equals: $\pm 0.025 + 0.10 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.025 + 0.10 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span
Zero Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.1125% of span. For URV below reference point (1000 psi), effect equals: $\pm 0.0125 + 0.10 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.0125 + 0.10 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.10% of span. . For URV below reference point (1000 psi), effect equals: $\pm 0.10 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.10 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span
Combined Zero and Span Temperature Effect per 28°C (50°F)	**In Analog Mode:** ±0.175% of span. For URV below reference point (1000 psi), effect equals: $\pm 0.075 + 0.10 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.075 + 0.10 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span **In Digital Mode:** ±0.15% of span. . For URV below reference point (1000 psi), effect equals: $\pm 0.05 + 0.10 \left(\frac{1000\ \text{psi}}{\text{span psi}}\right)$ or $\pm 0.05 + 0.10 \left(\frac{70\ \text{bar}}{\text{span bar}}\right)$ in % span

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

Performance Under Rated Conditions - General for all Models

Parameter	Description
Output (two-wire)	Analog 4 to 20 mA or digital communications DE mode.
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	**Single-Head Meter Body:** 316L SS, Hastelloy C-276, Monel **In-Line Meter Body:** 316L SS, Hastelloy C-276
Process Head Material	**Single-Head Meter Body:** 316 SS, Carbon Steel (Zinc-plated), Hastelloy, Monel **In-Line Meter Body:** 316L SS
Head Gaskets	Teflon is standard. Viton is available with 316L SS and Monel barrier diaphragms.
Meter Body Bolting	Carbon Steel (Zinc plated, standard) or A286 SS (NACE) bolts and 302/304 SS (NACE) nuts for heads.
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	**Single-Head Meter Body:** 1/2-inch NPT, 9/16-18 Aminco, 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 single-head models and Figure 4 for in-line models.
Dimensions	See Figures 5 and 6.
Net Weight	**With Single-Head Meter Body:** 10 pounds (4.5 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.

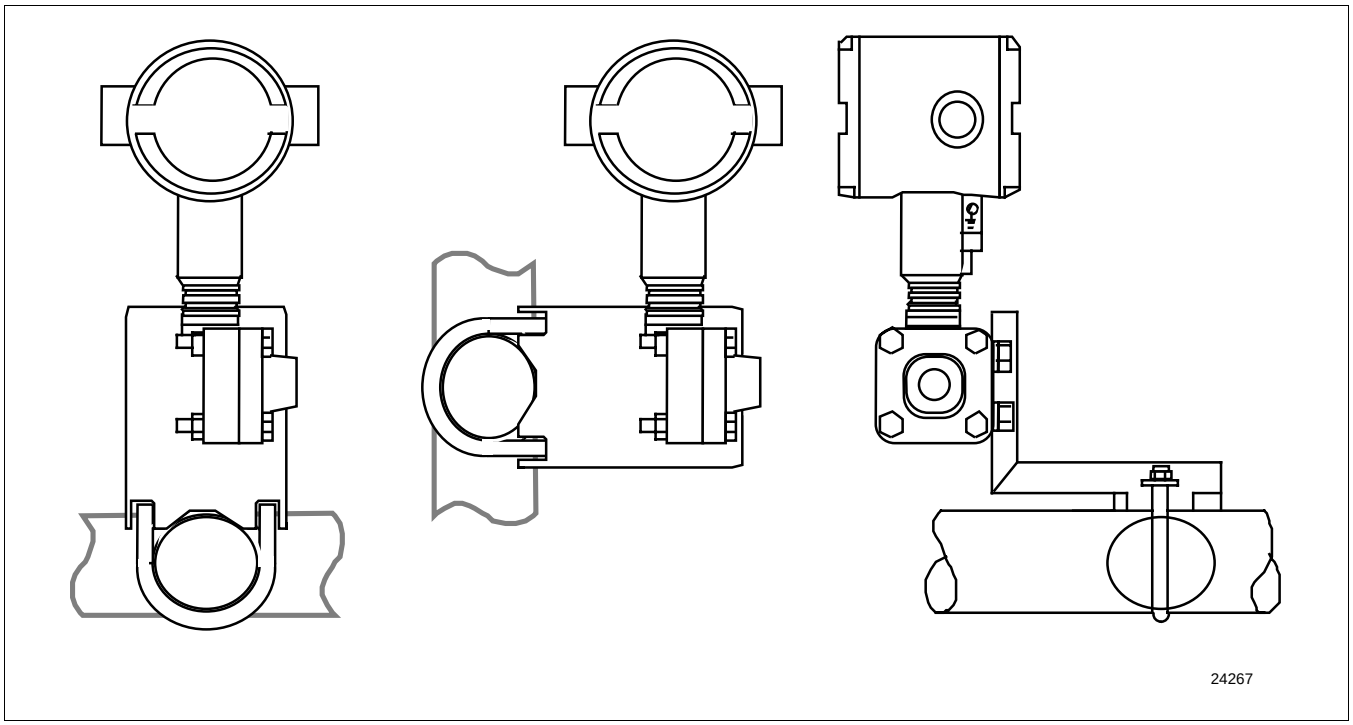


Figure 3 - Examples of typical mounting positions for single-head models STG140, STG170, and STG180.

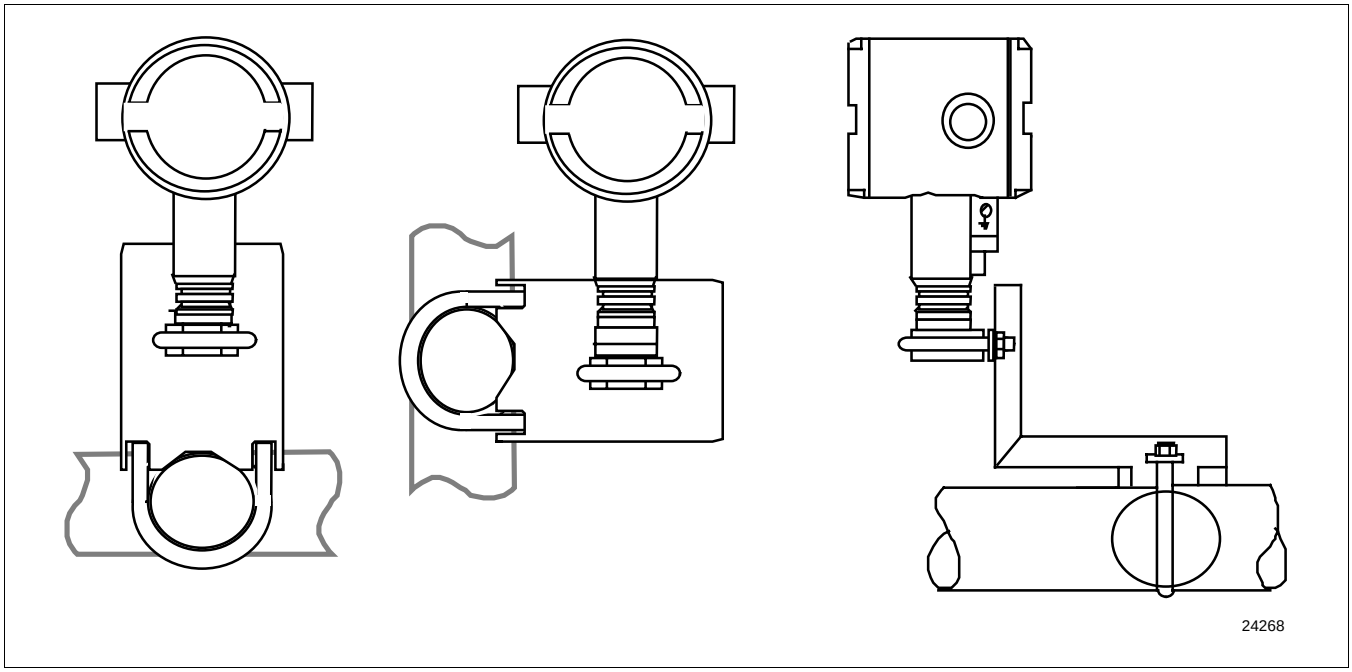
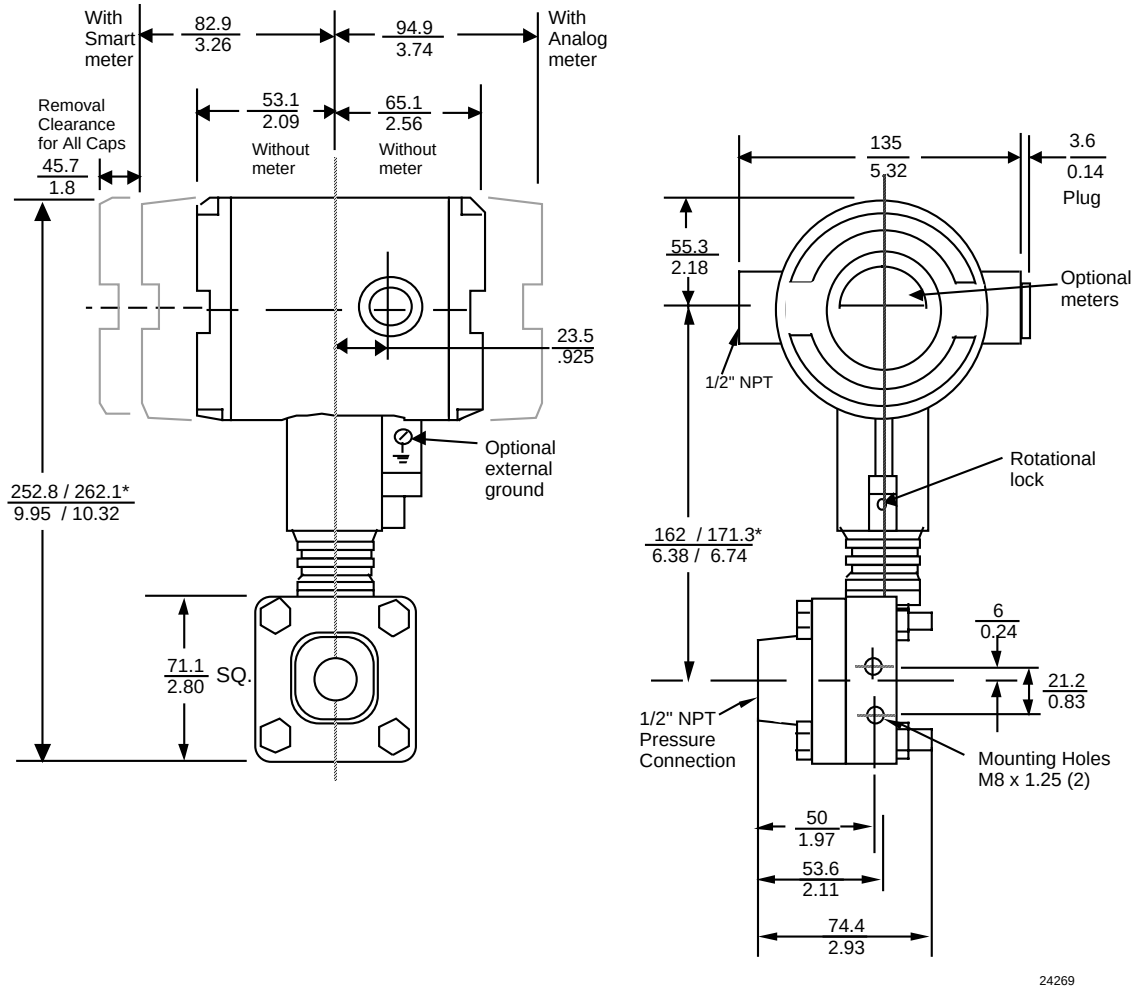


Figure 4 - Examples of typical mounting positions for in-line models STG14L, STG17L, and STG18L. Note that a mounting bracket is not required for in-line models.

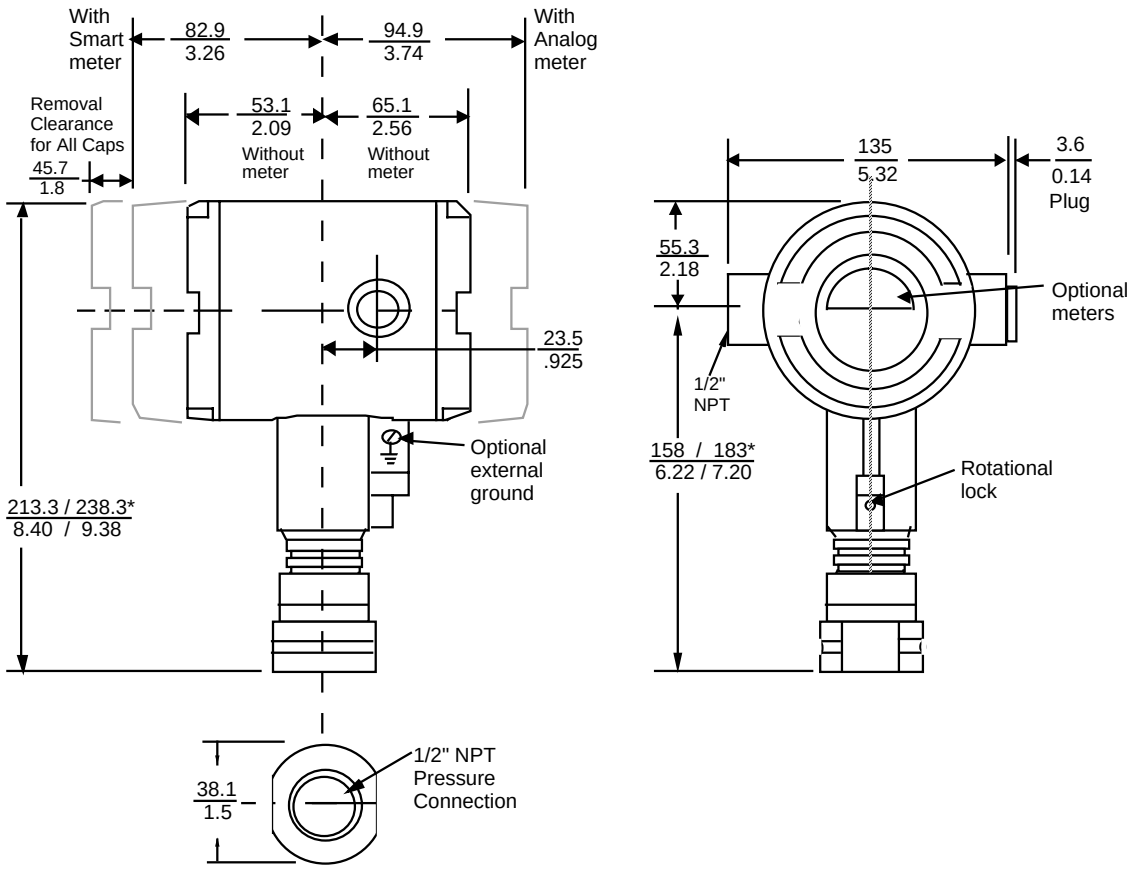
Reference Dimensions: millimeters / inches



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

Figure 5 - Typical mounting dimensions for single-head models STG140, STG170, and STG180 for reference.

Reference Dimensions: millimeters / inches



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

Figure 6 - Typical mounting dimensions for in-line models STG14L, STG17L, and STG18L 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.

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 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

Specifications are subject to change without notice.

Model Selection Guide

34-ST-16-03

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

	Design	Span	Selection			Availability
Gage Pressure	Single 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			↓

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 Configuration	9/16" - 18 Aminco			_ _ A	•	•	
	1/2 NPT (female)			_ _ G	•	•	•

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

****** 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.

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

Model Selection Guide, continued

TABLE II	Selection	STG140	STG170, STG180	STG14L, STG17L, STG18L	STG18L
No Selection	00000	•	•	•	•

TABLE III - OPTIONS

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

Model Selection Guide, continued

Approval Body	Approval Type	Location or Classification	Selection	STG170, STG180, STG140		STG14L	STG17L, STG18L
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					
	Explosion Proof	Class I, Div. 1, Groups B,C,D	F1C3				
	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)					
LCIE	Flame Proof/ CENELEC	EEx d IIC T6	E1D8	•	•	•	•
	Intrinsically Safe/ CENELEC	EEx ia IIC T5					
	Flame Proof/ CENELEC	EEx d IIC T6	E1D3	•	•	•	•
PTB	Intrinsically Safe	EEx ia IIC T6	P0D2				
VNIIVE	Intrinsically Safe	OEx ia IIC T6 X	V0D2				
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**	**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

Model Selection Guide, continued

TABLE IV

Factory Identification	XXXX	•	•	•	•

RESTRICTIONS

Restriction Letter	Table	Available Only With Selection	Table	Not Available With Selection
a	Pending			
b	Select only one option from this group			
e			III	F1D3
f			III	A0CA, H2D5, F1D3
h		_ 2 _		
k	Available with SA approval, Intrinsically safe, EEx ia IIC T6 Non-incendive, Ex n IIC T6			
m	III	1C, 2J, 3N, 4G, 3A, 9X	III	ME, FF
n			III	F1D3, F1C3, C1C3, 1C, 2J
o	III	CR		
r	III	1C, 2J, 3N, 9X	III	SH, TC, ME
s			III	F1D3, P0D2, V0D2
u	III	F1D3, C1C3, 1C, 2J		
w	I	E _ G, F _ G, G _ G		
x	III	FF, SM		
y	III	P0D2, V0D2		
z			I	B _ _, F _ _, J _ _

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.

Honeywell

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