SmartLine

Technical Information

STG700 SmartLine Gauge Pressure Specification 34-ST-03-102, December 2024

Introduction

Part of the SmartLine® family of products, the STG700 and STG70L are suitable for monitoring, control and data acquisition featuring piezoresistive sensor technology combining pressure sensing with on chip temperature compensation capabilities providing high accuracy, stability and performance over a wide range of application pressures and temperatures. The SmartLine family is also fully tested and compliant with Experion[®] PKS providing the highest level of compatibility assurance and integration capabilities. SmartLine easily meets the most demanding application needs for pressure measurement applications.

Best in Class Features:

- Accuracies up to 0.055% of span standard & 0.04% of span optional.
- Stability up to 0.02% of URL per year for 10 years.
- Automatic temperature compensation.
- Rangeability up to 100:1.
- Response times as fast as 100ms.
- Multiple local display capabilities.
- External zero, span, & configuration capability.
- Polarity insensitive electrical connections.
- Comprehensive on-board diagnostic capabilities.
- Integral Dual Seal design for safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.0.
- Full compliance to SIL 2/3 requirements as a standard.
- Modular design characteristics.
- Available additional with 4-year warranty.

Span & Range Limits:

Model	URL psi (bar)	LRL psi (bar)	Min Span psi (bar)
STG730/STG73L	50 (3.5)	-14.7 (-1.0)	0.5 (0.035)
STG740/STG74L	500 (35)	-14.7 (-1.0)	5 (.35)
STG770/STG77L	3000 (210)	-14.7 (-1.0)	30 (2.1)
STG78L	6000 (420)	-14.7 (-1.0)	60 (2.06)
STG79L	10000 (690)	-14.7 (-1.0)	100 (6.9)



Figure 1 – STG700 Gauge Pressure Transmitters feature field-proven piezoresistive sensor technology

Communications/Output Options:

- Honeywell Digitally Enhanced (DE)
- HART[®] (version 7.0)

All transmitters are available with the above listed communications protocols.



Honeywell



Description

The SmartLine family pressure transmitters are designed around a high performance piezo-resistive sensor. This one sensor actually integrates multiple sensors linking process pressure measurement with on-board static pressure (DP Models) and temperature compensation measurements. This level of performance allows the ST 700 to replace most competitive transmitters available today.

Unique Indication/Display Option

The ST 700 modular design accommodates a standard alphanumeric LCD display or a unique advanced graphics LCD display with many unparalleled features.

Standard LCD Display Features

- Modular (may be added or removed in the field).
- Supports HART protocol variant.
- 0, 90,180, & 270 degree position adjustments.
- Four configurable screens.
- Standard and custom measurement units available.
- Display calculated flow (square root) value in addition to analog output signal.
- 2 Lines 6 digits PV (9.95H x 4.20W mm) 8 Characters.
- Write protect Indication.
- Built-in Basic Device Configuration through Internal or External Buttons – Range/Engineering Unit/Loop Test /Loop Calibration/Zero /Span Setting.
- Multiple language capabilities (EN, RU).

Advanced Graphics LCD Display Features

- Modular (may be added or removed in the field).
- 0, 90, 180, & 270-degree position adjustments.
- Standard and custom measurement units available.
- Up to eight display screens with 3 formats are possible.
- Large PV with Bar Graph or PV with Trend Graph.
- Configurable screen rotation timing (1 to 30 sec).
- Display Square Root capabilities may be set separately from the 4-20mA output signal.
- Unique "Health Watch" indication provides instant visibility of diagnostics.
- Multiple language capability (EN, DE, FR, IT, ES, RU, TR, CN & JP).

Diagnostics

SmartLine transmitters all offer digitally accessible diagnostics which aid in providing advanced warning of possible failure events minimizing unplanned shutdowns, providing lower overall operational costs.

System Integration

- SmartLine communications protocols all meet the most current published standards for HART/DE.
- Integration with Honeywell's Experion PKS offers the following unique advantages:
 - o Tamper reporting.
 - o FDM Plant Area Views with Health summaries.
 - All ST 700 units are Experion tested to provide the highest level of compatibility assurance.

Configuration Tools

Integral Three Button Configuration Option

Suitable for all electrical and environmental requirements, SmartLine offer the ability to configure the transmitter and display via three externally accessible buttons when either display option is selected. Zero/span capabilities are also optionally available via these buttons with or without selection of a display option.

Handheld Configuration

SmartLine transmitters feature two-way communication and configuration capability between the operator and the transmitter. All Honeywell transmitters are designed and tested for compliance with the offered communication protocols and are designed to operate with any standards compliant handheld configuration device, such as the Honeywell Versatilis Configurator.

Personal Computer Configuration

On a personal computer or laptop, Honeywell Field Device Manager (FDM) Software and FDM Express can be used for managing HART device configuration.

Modular Design

To help contain maintenance & inventory costs, all ST 700 transmitters are modular in design supporting the user's ability to replace meter bodies, add indicators or change electronic modules without affecting overall performance or approval body certifications. Each meter body is uniquely characterized to provide in-tolerance performance over a wide range of application variations in temperature and pressure and due to the Honeywell advanced interface, electronic modules may be swapped with any electronics module without losing in-tolerance performance characteristics.

Modular Features

- Meter body replacement
- Exchange/replace electronics/comms modules*
- Add or remove integral indicator*
- Add or remove lightning protection (terminal connection)*

Performance Specifications

Reference Accuracy: (conformance to +/-3 Sigma)

* Field replaceable in all electrical environments (including IS) except flameproof without violating agency approvals.

With no performance effects, Honeywell's unique modularity results in *lower inventory needs and lower overall operating costs.*

	Table 1									
	Model	URL	LRL	Min Span	Maximum Turndow n Ratio	Stability (% URL/Year for 10 years)	Reference Accuracy ^{1,2} (% Span) Standard/ option			
	STG730	50 psi (3.5 bar)	-14.7 psi (-1.0 bar)	0.5 psi (0.035 bar)						
5	STG73L	50 psi (3.5 bar)	-14.7 psi (-1.0 bar)	0.5 psi (0.035 bar)		0.02	0.055 /			
Accuracy	STG740	500 psi (35 bar)	-14.7 psi (-1.0 bar)	5 psi (0.35 bar)						
Acc	STG74L	500 psi (35 bar)	-14.7 psi (-1.0 bar)	5 psi (0.35 bar)		0.015				
-	STG770	3000 psi (210 bar)	-14.7 psi (-1.0 bar)	30 psi (2.1 bar)	100:1		0.040			
Standard	STG77L	3000 psi (210 bar)	-14.7 psi (-1.0 bar)	30 psi (2.1 bar)						
TS Sta	STG78L	6000 psi (420 bar)	-14.7 psi (-1.0 bar)	60 psi (4.2 bar)		0.02				
	STG79L	10000 psi (690 bar)	-14.7 psi (-1.0 bar)	100 (6.9 bar)						

Zero and span may be set anywhere within the listed (URL/LRL) range limits

Accuracy, Span and Temperature Effect: (Conformance to +/-3 Sigma)

					e 2 uracy ^{1,2} of Span)		Combined Zero & Span temperature Effect (% Span/28°C (50°F))		
	Model	URL	Reference Turndown	Α	В	C (see URL units)	D	E	
	STG730	50 psi (3.5 bar)	25:1			2 (0.14)	0.060	0.005	
C A	STG73L	50 psi (3.5 bar)	12.5:1			4 (0.28)	0.060	0.010	
sura	STG740	500 psi (35 bar)	35:1			14.5 (1.0)		0.007	
Acc	STG74L	500 psi (35 bar)	35:1	0.005	0.050	14.5 (1.0)		0.010	
Id	STG770	3000 psi (210 bar)	10:1			300 (21)	0.050	0.010	
Standard Accuracy	STG77L	3000 psi (210 bar)	8.5:1			350 (24.7)		0.015	
Sta	STG78L	6000 psi (420 bar)	12:1			500 (35)		0.050	
	STG79L	10000 psi (690 bar)	10:1	0.025	0.040	1000 (69)	0.150	0.100	
	STG730	50 psi (3.5 bar)	25:1	-	2 (0.14)	0.060	0.005		
c	STG73L	50 psi (3.5 bar)	12.5:1				4 (0.28)	0.060	0.010
High Accuracy Option	STG740	500 psi (35 bar)	35:1			14.5 (1.0)	0.050	0.007	
Accur Option	STG74L	500 psi (35 bar)	35:1	0.005	0.035	14.5 (1.0)		0.010	
- HB O	STG770	3000 psi (210 bar)	10:1			300 (21)		0.010	
Ξ	STG77L	3000 psi (210 bar)	8.5:1			350 (24.7)		0.015	
	STG78L	6000 psi (420 bar)	12:1			500 (35)		0.050	
			Turn Down Effect				Temp	Effect	
			$\pm [A + B] if \ Span \ge C$ $\pm \left[A + B\left(\frac{C}{Span}\right)\right] if \ Span < C$			± [D + E	$\left(\frac{URL}{Span}\right)$]		

Total Performance (% of Span):

Total Performance Calculation: = +/- $\sqrt{(Accuracy)^2 + (Temperature Effect)^2}$							
Total Performance Examples (for comparison): standard accuracy 5:1 Turndown, +/-50°F (28°C) shift							
STG730 @ 100 psi: 0.101% of sp	an STG73L @ 100 psi: 0.123% of span						
STG740 @ 100 psi: 0.101% of sp	an STG74L @ 100 psi: 0.114% of span						
STG770 @ 600 psi: 0.074% of sp	an STG77L @ 600 psi: 0.137% of span						
STG78L @ 1200 psi: 0.305% of s	pan STG79L @ 2000 psi: 0.653% of span						

Typical Calibration Frequency:

Calibration verification is recommended every two (2) years

Notes:

1. Terminal Based Accuracy - Includes combined effects of linearity, hysteresis, and repeatability. Analog output adds 0 .005% of span. 2. For zero based spans and reference conditions of: 25° C (77°F) for LRV > = 0 psia, 10 to 55% RH, and 316 Stainless Steel barrier diaphragm.

Parameter	Reference Rated Condition Condition		Operative Limits		Transportation and Storage			
	°C	°F	°C	°F	°C	°F	°C	°F
Ambient Temperature ¹	25±1	77±2	-40 to 85	-40 to 185	-40 to 85	-40 to 185	-55 to 120	-67 to 248
Meter Body Temperature ²	25±1	77±2	-40 to 110	-40 to 230	-40 to 125	-40 to 257	-55 to 120	-67 to 248
Humidity %RH	10 1	io 55	0 to	100	0 to	100	0 tc	100
Vac. Region – Min. Pressure mmHg absolute inH ₂ O absolute		spheric spheric	2 1	5 3	2 (short term) 3 1 (short term) 3			
Supply Voltage Load Resistance	DE: 15		42.4 VDC at t /DC at termir gure 2)					
Maximum Allowable Working Pressure (MAWP) ^{4, 5} (ST700 products are rated to Maximum Allowable Working Pressure. MAWP depends on Approval Agency and transmitter materials of construction.)	STG730: 50 psi (3.5 bar) STG740: 500 psi (35 bar) STG770: 3000 psi (210 bar)) STO) STO STO	STG73L: 50 psi (3.5 bar) STG74L: 500 psi (35 bar) STG77L: 3000 psi (210 bar) STG78L: 6000 psi (420 bar) STG79L: 10000 psi (690 bar)			

Operating Conditions – All Models

¹ LCD Display operating temperature -20°C to +70°C Storage temperature -30°C to 80°C.

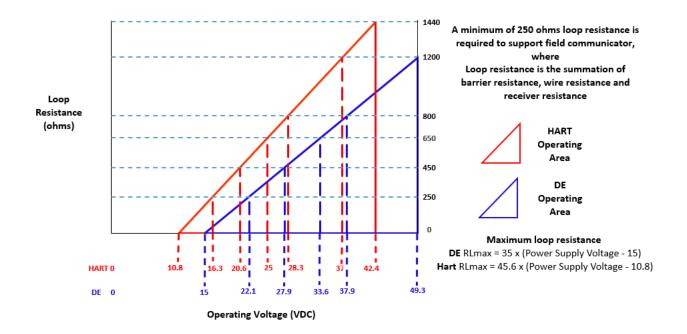
² Silicone 704 minimum temperature rating is 0°C (32°F). CTFE minimum temperature rating is -40°C (-40°F).

NEOBEE® M-20 minimum temperature rating is -15°C (5°F). NEOBEE® is a registered trademark of Stepan Company.

³ Short term equals 2 hours at 70°C (158°F).

⁴ Units can withstand overpressure of 1.5 x MAWP without damage.

⁵ Consult the factory for MAWP of ST 700 transmitters with CRN approval.





Performance Under Rated Conditions – All Models

Parameter	Description					
Analog Output	Two-wire, 4 to 20 r	nA (HART & DE Transmitters of	only)			
Digital Communications:	Honeywell DE, HA	RT 7 protocol				
	All transmitters, irre	espective of protocol have pola	arity insensitive connection.			
HART & DE Output Failure Modes		Honeywell Standard	NAMUR NE 43 Compliance			
(NAMUR for DE Units requires	Normal Limits:	3.8 – 20.8 mA	3.8 – 20.5 mA			
selecting display and configuration buttons or factory configuration)	Failure Mode:	≤ 3.6 mA and ≥ 21.0 mA	≤ 3.6 mA and ≥ 21.0 mA			
Supply Voltage Effect	0.005% span per v	olt.				
Transmitter Turn on Time (includes power up & test algorithms)	HART or DE: 2.5 seconds					
Response Time	DE/HART Proto	ocol				
(delay + time constant)	100ms					
Damping Time Constant	HART: Adjustable seconds	from 0 to 32 seconds in 0.1 inc	crements. Default Value: 0.5			
	DE: Discrete values 0, 0.16, 0.32, 0.48, 1, 2, 4, 8, 16, 32 seconds. Default Value: 0.48 seconds					
Vibration Effect:	Less than +/- 0.1%	of URL w/o damping				
	Per IEC60770-1 field or pipeline, high vibration level (10-2000Hz: 0.21 displacement/3g max acceleration)					
Electromagnetic Compatibility	IEC 61326-3-1					
Lightning Protection Option	Impulse rating:	10uA max @ 42.4VDC 93C				
	8/20us 10/1000	5000A (>10 strikes) us 200A (> 300 strikes)	10000A (1 strike min.)			

Materials Specifications (see model selection guide for availability/restrictions with various models)

Parameter	Description
Barrier Diaphragms Material	STG700: 316L SS, Hastelloy [®] C-276 ² , Monel [®] 400 ³ , Tantalum
	STG70L: 316L SS, Hastelloy C-276
Process Head Material	STG700: Carbon Steel (Zinc Plated) ⁵ , 316 SS ⁴ , Hastelloy [®] C-276 ⁶ , Monel [®] 400 ⁷
	STG70L: 316L SS, Hastelloy [®] C-276 ⁶
Vent/Drain Valves & Plugs ¹	STG700: 316 SS ⁴ , Hastelloy C-276 ² , Monel 400 ⁷
	STG70L: N/A
Head Gaskets	STG700: Glass-filled PTFE standard. Viton® and graphite are optional. STG70L: N/A
Meter Body Bolting	STG700: Carbon Steel (Zinc plated) standard. Options include 316 SS, NACE A286 SS bolts and nuts or NACE A286 SS bolts and 304 SS nuts STG70L: N/A
Mounting Bracket	Carbon Steel (Zinc-plated) or 304 Stainless Steel or 316 Stainless Steel. See Figure 3 and Figure 5
Fill Fluid	Silicone, CTFE, NEOBEE M-20, Silicone 704.
	Pure Polyester Powder Coated Low Copper (<0.4%) – Aluminum.
Electronic Housing	Meets Type 4X / IP66 / IP67. All stainless-steel housing is optional.
	Cover O ring material: Silicone.
Process Connections	STG700: 1/2 -inch NPT(female), DIN 19213 (standard)
	STG70L: ½ -inch NPT(female), ½ -inch NPT male, 9/16-18 high-pressure Cone and Thread female ⁸ , DIN19213 (except STG79L), G½ -B Male Thread
Wiring	Accepts up to 16 AWG (1.5 mm diameter).
Dimensions	See Figure 4 and
	Figure 6
Net Weight	STG700: 8.3 pounds (3.8 Kg). STG70L: 3.6 pounds (1.6 Kg) with Aluminum Housing
Vent/Drains are sealed with Teflon®	² Hastelloy [®] C-276 or UNS N10276.

³ Monel[®] 400 or UNS N04400.

or UNS N04400. ⁴ Supplied as 316 SS or as Grade CF8M, the casting equivalent of 316 SS.

⁵ Carbon Steel heads are zinc-plated and not recommended for water service due to hydrogen migration. For that service, use 316 stainless steel wetted

Process Heads.

⁶ Hastelloy[®] C-276 or UNS N10276. Supplied as indicated or as Grade CW12MW, the casting equivalent of Hastelloy[®] C-276.

⁷ Monel[®] 400 or UNS N04400. Supplied as indicated or as Grade M30C, the casting equivalent of Monel[®] 400.

⁸ 9/16 Aminco

Communications Protocols & Diagnostics

HART Protocol

Version: HART 7

Honeywell Digitally Enhanced (DE)

DE is a Honeywell proprietary protocol which provides digital communications between Honeywell DE enabled field devices and Hosts.

Standard Diagnostics

ST 700 top level diagnostics are reported as either critical or non-critical and are readable via the DD/DTM/FDI tools or integral display. All critical diagnostics will appear on the Advanced and Standard integral displays, and some non-critical diagnostics will also appear on the Advanced integral display. Some of the diagnostics are listed below.

Critical Diagnostics

- Electronics Module Fault.
- Meter body Memory Corruption.
- Config Data Corruption.
- Electronics Module Diagnostics Failure.
- Meter body Critical Failure.
- Sensor Communication Timeout.

Non-Critical Diagnostics

- Display Failure.
- Electronics Module Comm Failure.
- Meter body Excess Correct.
- Sensor Over Temperature.
- Fixed Current Mode.
- PV Out of Range.
- No DAC Compensation.
- Tamper Attempt Alarm.

Refer to the product user manual for comprehensive list of diagnostics and details.

Hazardous Area Certifications

MSG CODE	AGENCY	TYPE OF PROTECTION	COMM. OPTION	ELECTRICAL PARAMETERS	AMBIENT TEMP (Ta)			
		Explosionproof: Class I, Division 1, Groups A, B, C, D; Dust Ignition Proof: Class II, III, Division 1, Groups E, F, G; T6T5 Class I, Zone 0/1, AEx db IIC T6T5 Ga/Gb Class II, Zone 21, AEx tb IIIC T95° Db	All	Note 1	T5: -50 ºC to 85ºC T6: -50 ºC to 65ºC			
		Intrinsically Safe: Class I, II, III, Division 1, Groups A, B, C, D, E, F, G: T4	4-20 mA / DE/ HART	Note 2a	-50 ºC to 70ºC			
А	FM Approvals™ USA	Class I, Zone O, AEx ia IIC T4 Ga FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	Foundation Fieldbus	Note 2b	-50 ºC to 70ºC			
		Nonincendive: Class I, Division 2, Groups A, B, C, D locations, T4 Class I, Zone 2, AEx nA IIC T4 Gc	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 1	-50 ºC to 85ºC			
		Enclosure: Type 4X/ IP66/ IP67	All	All	-			
		STANDARDS: FM Class 3600:2011; FM Class 3610: 2010; FM Class 3611: 2004; FM Class 3615: 2006; FM Class 3616: 2011; FM Class 3810: 2005; ANSI/ISA 60079-0: 2013; ANSI/UL 60079-1: 2015; ANSI/UL 60079-11: 2014; ANSI/ISA 60079-15: 2012; ANSI/UL 60079-26: 2017; ANSI/UL 60079-31: 2015; ANSI/NEMA 250: 2003; ANSI/ IEC 60529: 2004						
		Explosion Proof: Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1, T6T5 Class I Zone 1 AEx db IIC T6T5 Ga/Gb Ex db IIC T6T5 Ga/Gb Zone 22 AEx tb IIIC T95° Db Ex tb IIIC T95° Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C			
	Canadian	Intrinsically Safe: Class I, II, III, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1, T4	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C			
В	Standards Association (CSA) USA and Canada	Class I, Division 1, 14 Class I Zone 0, AEx ia IIC T4 Ga Class I Zone 2, AEx ic IIC T4 Gc Ex ia IIC T4 Ga Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	Foundation Fieldbus	Note 2	-50°C TO 70°C			
		Nonincendive: Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 2, T4 Class I Zone 2 AEx nA IIC T4 Gc Ex nA IIC T4 Gc	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 1	-50°C to 85°C			
		Enclosure: Type 4X/ IP66/ IP67	All	All	-			

MSG CODE	AGENCY	TYPE OF PROTECTION	COMM. OPTION	ELECTRICAL PARAMETERS	AMBIENT TEMP (Ta)			
		STANDARDS: CSA C22.2 No. 0-10; CSA C22.2 No. 94-M91; CSA C22.2 No. 25-1966; CSA C22.2 No. 30-M1986; CSA C22.2 No. 142-M1987; CSA C22.2 No. 157-92; CSA C22.2 No. 213-M1987; CSA-C22.2 No. 60529:05; CSA-C22.2 No. 60079-0:11; CSA-C22.2 No. 60079-1:11; CSA-C22.2 No. 60079-11:11; CSA-C22.2 No. 60079-11:11; CSA-C22.2 No. 60079-15:12; CSA-C22.2 No. 60079-31:12; ISA 12.12.01-2010; ISA 60079-0: 2009; ISA 60079-11: 2011; ISA 60079-15: 2009; ISA 60079-26: 2008; ISA-60079-27:2007 (12.02.04)-2006 (R2011); UL 913 Ed. 6; UL 916:1998; ANSI/ISA-12.27.01-201						
		Flameproof: SIRA 12ATEX2233X	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C			
		Intrinsically Safe: SIRA 12ATEX2233X	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C			
		FISCO Field Device (Only for FF Option) II 1 G Ex ia IIC T4 Ga	Foundation Fieldbus	Note 2	-50°C TO 70°C			
	ΑΤΕΧ	Zone 2, Increase Safety: SIRA 12ATEX4234X	4-20 mA / DE/ HART/	Note 1	-50°C TO 85°C			
		Zone 2, Intrinsically Safe: SIRA 12ATEX4234X II 3 G Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option) II 3 G Ex ic IIC T4 Gc	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 2	-50°C TO 85°C			
		Enclosure: IP66/ IP67	All	All	-			
С		STANDARDS: EN 60079-0: 2018; EN 60079-1: 2014; EN 60079-7: 2015+A1: 2018; EN 60079-11: 2012; EN 60079-26: 2015; EN 60079-31: 2014						
		Flameproof: CSAE 22UKEX1021X	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C			
		Intrinsically Safe: CSAE 22UKEX1021X	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C			
	UKEx	 II 1 G Ex ia IIC T4 Ga II 2 D Ex ia IIIC T125°C Db FISCO Field Device (Only for FF Option) II 1 G Ex ia IIC T4 Ga 	Foundation Fieldbus	Note 2	-50°C TO 70°C			
		Zone 2, Increase Safety: CSAE 22UKEX1008X	4-20 mA / DE/ HART/	Note 1	-50°C TO 85°C			
		Zone 2, Intrinsically Safe: CSAE 22UKEX1008X II 3 G Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option)	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 2	-50°C TO 85°C			

MSG CODE	AGENCY	TYPE OF PROTECTION	COMM. OPTION	ELECTRICAL PARAMETERS	AMBIENT TEMP (Ta)
		II 3 G Ex ic IIC T4 Gc			
		Enclosure: IP66/ IP67	All	All	-
		STANDARDS: EN 60079-0: 2018; EN 60079- 2012; EN 60079-26: 2015; EN 60079-31: 20	,	79-7: 2015+A1: 2	2018; EN 60079-11:
		Flameproof: IECEx SIR 12.0100X Ex db IIC T6T5 Ga/Gb Ex tb IIIC T95°CT120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
	IECEx World	Intrinsically Safe: IECEx SIR 12.0100X Ex ia IIC T4 Ga	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
		Ex ia IIIC T125°C Db FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	Foundation Fieldbus	Note 2	-50°C TO 70°C
D		Zone 2, Increase Safety: IECEx SIR 12.0100X Ex ec IIC T4 Gc	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 1	-50°C TO 85°C
		Zone 2, Intrinsically Safe: IECEx SIR 12.0100X Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option) Ex ic IIC T4 Gc	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 2	-50°C TO 85°C
		Enclosure: IP66/ IP67	All	All	-
		STANDARDS: I EC 60079-0: 2017; IEC 6007 IEC 60079-26: 2014; IEC 60079-31: 2013	9-1: 2014; IEC 6	0079-7: 2017; IE	C 60079-11: 2011;

Finameprof: Ex.tb IIIC 75.5G/Cb All Note 1 T5:-50°C TO 85°C T6:-50°C TO 70°C Intrinsically Safe: Ex.tb IIIC 74 G2 -420 mA / DE/ HART/ FISCO Field Device (Only for FP Option) Ex.ia IIC 74 G2 Note 2 -50°C TO 70°C Safe: South Africio Intrinsically Safe: Ex.ta IIC 74 G2 -420 mA / DE/ HART/ Foundation Fieldbas Note 2 -50°C TO 70°C Ex.ta IIC 74 G2 -100°C -200°C 70 -200°C 70 -200°C -200°C Ex.ta IIC 74 G2 -100°C -200°C 70 -200°C 70 -200°C 70 -200°C 70 Ex.ta IIC 74 G2 -100°C -200°C 70 -200°C 70 -200°C 70 -50°C 70 Ex.ta IIC 74 G2 -100°C -200°C 70 -200°C 70 -50°C 70 -50°C 70 Ex.ta IIC 74 G2 -100°C -200°C 70 -200°C 70 -50°C 70 -50°C 70 Ex.ta IIC 74 G2 -100°C -200°C 70 -200°C 70 -200°C 70 -50°C 70 Fisco Field Device (Only for FP Option) Ex.ta IIC 74 G2 -100°C 70 -410°C 70 -410°C 70 -50°C 70 70°C Fisco Field Device (Only for FP Option) Ex.ta IIC 74 G2 -100°C 70 -20°C 70 70°C						
F South Africa Harrof Ex is III CG a Ta HART Note 2 -50°C TO 70°C E South Africa Zone 2, Increase Safety: II 3 G Ex ec IIC T4 GC 4-20 mA / DE/ HART/ Foundation Fieldbus Note 1 -50°C TO 85°C Zone 2, Intrinsically Safe: Ex ic IIC T4 GC 4-20 mA / DE/ HART/ Foundation Fieldbus Note 1 -50°C TO 85°C Zone 2, Intrinsically Safe: Ex ic IIC T4 GC 4-20 mA / DE/ HART/ Foundation Fieldbus Note 2 -50°C T0 85°C Enclosure: IP66/IP67 All All All - INMETRO Flameproof: Ex do IIC T4 GG All Note 1 T5: -50°C TO 85°C T6: -50°C TO 70°C F Brazil Flameproof: Ex do IIC T4 GG All Note 1 T5: -50°C TO 70°C F Brazil Zone 2, Intrinsically Safe: Ex is IIC T4 GG 4-20 mA / DE/ HART Note 2 -50°C TO 70°C Ex is IIC T4 GG Fieldbus Note 2 -50°C TO 85°C 50°C TO 85°C Ex is IIC T4 GG Fieldbus Note 2 -50°C TO 85°C 50°C TO 85°C Ex is IIC T4 GG Fieldbus Note 1 -50°C TO 85°C 50°C TO 85°C			Ex d IIC T6T5 Ga/Gb	All	Note 1	
F Exia IIC T4 G3; Exic IIC T4 GC Fieldbus Note 2 -50°C T0 70°C South Africa Zone 2, Increase Safety: II 3 G Ex e IIC T4 GC 4-20 mA / DE/ HART/ Foundation Exic IIC T4 GC Note 1 -50°C T0 85°C Zone 2, Intrinsically Safe: Exic IIC T4 GC Exic IIC T4 GC 4-20 mA / DE/ HART/ Foundation Exic IIC T4 GC Note 1 -50°C T0 85°C Exic IIC T4 GC Enclosure: IP66/IP67 All All Note 2 -50°C T0 85°C Exit IIC T4 GC Enclosure: IP66/IP67 All All Note 1 T5: -50°C T0 85°C T6: -50°C T0 85°C INMETRO Exit Di CT-6: T5 Ga/Cb Exit Di IC 75: CD Edd Device (Only for FF Option) Exit IIC T4 Ga 4-20 mA / DE/ HART Note 1 T5: -50°C T0 70°C F Brazili TG: GField Device (Only for FF Option) Exit IIC T4 Ga Foundation Fieldbus Note 2a -50°C T0 70°C F Brazili TG: GField Device (Only for FF Option) Exit IIC T4 GC Foundation Fieldbus Note 1 -50°C T0 85°C T6: -50°C T0 85°C Exit IIC T4 GC Exit IIC T4 GC HART/ Foundation Fieldbus Note 1 -50°C T0 85°C T6: -50°C T0 85°C G NEFSI Exit IIC T4 GC Falmeprof: Exit IIC T4 GC All All Note 1 -50°C T0 85°C T6: -50°C T0 85°C G NEFSI Fisco Field Device (Only for FF Option) Fisco Field Device (Only for FF Option) Fis IIIC T4 GC					Note 2	-50°C TO 70°C
F South Africa Link Cap. Junctical States, Junctical States					Note 2	-50°C TO 70°C
F:: Ex:: CIC T4 GC HART/ FISCO Field Device (Only for FF Option) Fundation Fieldbase Note 2 -50°C T0 85°C Ex:: Introscen: iP66/IP67 All All All Image: Second Secon	E			HART/ Foundation	Note 1	-50°C TO 85°C
F Filameproof: Ex db IIC T6TS Ga/Gb Ex tb IIIC T9S°CT120°C Db All Note 1 T5: -50°C T0 85°C T6: -50°C T0 65°C Intrinsically Safe: Ex ia IIC T4 Ga 4-20 mA / DE/ HART Note 2a -50°C T0 70°C Fisco Field Device (Only for FF Option) Ex ia IIC T4 Ga Foundation Fieldbus Note 2b -50°C T0 70°C Zone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc 4-20 mA / DE/ HART Note 1 -50°C T0 85°C Zone 2, Intrinsically Safe: Ex ic IIC T4 Gc 4-20 mA / DE/ HART Note 1 -50°C T0 85°C Enclosure : IP 66/67 All All Note 2 -50°C T0 85°C Fisco Field Device (Only for FF Option) Ex ic IIC T4 Gc 4-20 mA / DE/ HART Note 1 -50°C T0 85°C Fisco Field Device (Only for FF Option) Ex ic IIC T4 Gc All All Note 2 -50°C T0 85°C Fisco Field Device (Only for FF Option) Ex is IIC T4 Ga Foundation Fieldbus Note 1 75: -50°C T0 85°C Intrinsically Safe: Ex db IIC T6TS Ga/Gb Ex tb IIIC T95°C Db All Note 1 75: -50°C T0 70°C Is ia IIC T4 Ga Fisco Field Device (Only for FF Option) Ex ia IIC T4 Ga 4-20 mA / DE/ HART Note 2 -50°C T0 70°C Fisco Field Device			Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option)	HART/ Foundation	Note 2	-50°C TO 85°C
F Ex db IIC T6. T5 Ga/Gb Ex tb IIIC T95°CT120°C Db All Note 1 15:-50°C T0 85°C T6:-50°C T0 65°C Intrinsically Safe: Ex la IIC T4 Ga HART Note 2a -50°C T0 70°C F Brazil FISCO Field Device (Only for FF Option) Ex la IIC T4 Ga; Ex ic IIC T4 Gc Foundation Fieldbus Note 2a -50°C T0 70°C F Brazil FISCO Field Device (Only for FF Option) Ex la IIC T4 Ga; Ex ic IIC T4 Gc 4-20 mA / DE/ HART Note 1 -50°C T0 85°C Zone 2, Intrinsically Safe: Ex lc IIC T4 Gc 4-20 mA / DE/ HART/ FISCO Field Device (Only for FF Option) Ex ic IIC T4 Gc 4-20 mA / DE/ HART/ Foundation Fieldbus Note 1 -50°C T0 85°C F Flameproof: Ex db IIC T6. T5 Ga/Gb Ex db IIC T6. T5 Ga/Gb Ex db IIC T6. T5 Ga/Gb Ex db IIC T4 Ga; Ex ic IIC T4 Gc All All Note 1 50°C T0 85°C T6: -50°C T0 70°C G NEPSI CHINA Flameproof: Ex db IIC T4 Ga; Ex ic IIC T4 Gc All Note 2 -50°C T0 70°C Ex la IIC T4 Ga; Ex ic IIC T4 Ga FisCO Field Device (Only for FF Option) Ex la IIC T4 Ga; Ex ic IIC T4 Gc All Note 2 -50°C T0 70°C Fieldbus Foundation Fieldbus Note 2 -50°C T0 70°C Foundation Fieldbus Note 1			Enclosure: IP66/ IP67	All	All	-
FEx ia IIC T4 GaHARTNote 2a-50°C T0 70°CFBrazilFISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 GcFoundation FieldbusNote 2b-50°C T0 70°CBrazilZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C T0 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C T0 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C T0 85°CFinal Same Ex is IIC T4 GcFieldbusNote 1-50°C T0 85°CFisco Field Device (Only for FF Option) Ex ic IIC T4 GcAllAll-Fileneproof: Ex db IIC T6.TS Ga/Gb Ex tb IIIC T95°C DbAllNote 1T5: -50°C T0 85°CFieldbusFileneproof: Ex db IIC T95°C DbAllNote 1T5: -50°C T0 70°CGNEPSI CHINAZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HARTNote 2-50°C T0 70°CGNEPSI CHINAZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HARTNote 2-50°C T0 70°CGNEPSI CHINAZone 2, Intrinsically Safe: Ex is IIC T4 Gc4-20 mA / DE/ HARTNote 1-50°C T0 85°CCHINAZone 2, Intrinsically Safe: Ex is IIC T4 Gc4-20 mA / DE/ HARTNote 1-50°C T0 85°CCHINAZone 2, Intrinsically Safe: Ex is IIC T4 Gc4-20 mA / DE/ HARTNote 1-			Ex db IIC T6T5 Ga/Gb	All	Note 1	
INMETROINCLO FIELD Device (OII) for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 GcFieldbusNote 2b-50°C T0 7/0°CFBrazilZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C T0 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C T0 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C T0 85°CEnclosure : IP 66/67AllAllAll-Intrinsically Safe: Ex to IIC T4 GaEx do IIC 76.75 Ga/Gb Ex to IIIC T6.75 Ga/Gb Ex to IIIC T6.63AllNote 1T5: -50°C TO 85°CFieldbusFlameproof: Ex do IIC 76.75 Ga/Gb Ex to IIIC T4 GaAllNote 1-50°C TO 70°CIntrinsically Safe: Ex ia IIC T4 Ga; Ex ic IIC T4 Gc4-20 mA / DE/ HARTNote 2-50°C TO 70°CFoundation FieldbusZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C TO 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation Fieldb			-		Note 2a	-50°C TO 70°C
GNote 1-50°C TO 85°CFlameproof: Ex to IIC T4 Gc-50°C TO 85°C-50°C TO 85°CFlameproof: Ex to IIC T4 Gc-50°C TO 85°C-50°C TO 85°CFlameproof: Ex to IIC T4 GcAllAll-Flameproof: Ex to IIC T4 GcAllAll-Flameproof: Ex db IIC T5. T5 Ga/Gb Ex to IIC T4 GcAllNote 1T5: -50°C TO 85°CFlameproof: Ex db IIC T6T5 Ga/Gb Ex to IIC T4 GaAllNote 1T5: -50°C TO 85°CFlameproof: Ex db IIC T6T5 Ga/Gb Ex to IIC T4 GaAllNote 1T5: -50°C TO 70°CFlameproof: Ex db IIC T4 Ga-50°C TO 70°C-50°C TO 70°C-50°C TO 70°CFlameproof: Ex db IIC T4 Ga; Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C TO 70°CGNote 2-50°C TO 70°C-50°C TO 70°C-50°C TO 70°C-50°C TO 70°CFlameproof: Ex ia IIC T4 Ga; Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C TO 70°CCHINAZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CCone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C TO 85°CChiNAEx ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C TO 85°C					Note 2b	-50°C TO 70°C
GEx ic IIC T4 Gc FISCO Field Device (Only for FF Option) Ex ic IIC T4 GcHART/ Foundation FieldbusNote 2-50°C TO 85°CInclosure : IP 66/67AllAllAll-Image: A state of the text of the text of the text of the text of text o	F			HART/ Foundation	Note 1	-50°C TO 85°C
GNepsi CHINAFlameproof: Ex db IIC T6T5 Ga/Gb Ex db IIC T95°C DbAllNote 1T5: -50°C TO 85°C 			Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option)	HART/ Foundation	Note 2	-50°C TO 85°C
GNEPSI CHINAEx db IIC T6T5 Ga/Gb Ex tb IIIC T 95°C DbAllNote 115: -50°C 10 85°C T6: -50°C TO 65°CIntrinsically Safe: Ex ia IIC T4 Ga FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc4-20 mA / DE/ 			Enclosure : IP 66/67	All	All	-
GNEPSI CHINAZone 2, Increase Safety: II 3 G Ex ec IIC T4 GcHARTNote 250°C TO 70°CGNepsi FieldbusZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CCHINAZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CChinaZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°C			Ex db IIC T6T5 Ga/Gb	All	Note 1	
GNEPSI CHINAEx ia IIC T4 Ga; Ex ic IIC T4 GcNote 2-50°C TO 70°CGNepsi CHINAZone 2, Increase Safety: II 3 G Ex ec IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 1-50°C TO 85°CZone 2, Intrinsically Safe: Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option) Ex ic IIC T4 Gc4-20 mA / DE/ HART/ Foundation FieldbusNote 2-50°C TO 85°C			-		Note 2	-50°C TO 70°C
G CHINA Long D, minutes construction Harr/ Foundation Fieldbus Note 1 -50°C TO 85°C II 3 G Ex ec IIC T4 Gc HART/ Foundation Fieldbus Note 1 -50°C TO 85°C -50°C TO 85°C Zone 2, Intrinsically Safe: Ex ic IIC T4 Gc 4-20 mA / DE/ HART/ FISCO Field Device (Only for FF Option) Ex ic IIC T4 Gc 4-20 mA / DE/ HART/ Foundation Fieldbus Note 2 -50°C TO 85°C					Note 2	-50°C TO 70°C
Ex ic IIC T4 GcHART/Note 2-50°C TO 85°CFISCO Field Device (Only for FF Option)FoundationFieldbus-50°C TO 85°CEx ic IIC T4 GcFieldbusFieldbus-50°C TO 85°C	G			HART/ Foundation	Note 1	-50°C TO 85°C
Enclosure : IP 66/67 All All -			Ex ic IIC T4 Gc FISCO Field Device (Only for FF Option)	HART/ Foundation	Note 2	-50°C TO 85°C
			Enclosure : IP 66/67	All	All	-

		Flameproof :			T4: -50°C TO 85°C
		Ex d IIC T4, T5, T6 Ex tD A21 IP66/IP67 T95°CT120°C	All	Note 1	T4: -50°C TO 85°C T5: -50°C TO 85°C T6: -50°C TO 65°C
н	KOSHA Korea	Intrinsically Safe:	4-20 mA / DE/ HART	Note 2	Ta= -50 ºC to 70ºC
		Ex ia IIC T4	Foundation Fieldbus	Note 2	Ta= -50 ºC to 70ºC
		Enclosure: IP66/ IP67	All	All	-
		Flameproof: Ga/Gb Ex d IIC T6T5 Ex tb IIIC Db T 85°C	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ga Ex ia IIC T4 X	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
	EAC	FISCO Field Device (Only for FF Option) Ga Ex ia IIC T4 X	Foundation Fieldbus	Note 2	-50°C TO 70°C
I	Russia, Belarus and Kazakhstan	Zone 2, Non Sparking: 2 Ex nA IIC T4 Gc X	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 1	-50°C TO 85°C
		Zone 2, Intrinsically Safe: Ga Ex ic IIC T4 X FISCO Field Device (Only for FF Option) 2 Ex ic IIC T4 Gc X	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 2	-50°C TO 85°C
		Enclosure : IP 66/67	All	All	
		Flameproof: Ex d IIC T6T5 Ga/Gb	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ex ia IIC T4 Ga	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
J	CCoE INDIA	FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	Foundation Fieldbus	Note 2	-50°C TO 70°C
		Non Sparking Ex nA IIC T4 Gc	4-20 mA / DE/ HART/ Foundation Fieldbus	Note 1	-50°C TO 85°C
		Enclosure: IP66/ IP67	All	All	-
		Flameproof: II 1/2 G Ex db IIC T6T5 Ga/Gb II 2 D Ex tb IIIC T95°CT120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
к	UATR UKRAINE	Intrinsically Safe: II 1 G Ex ia IIC T4 Ga	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
		FISCO Field Device (Only for FF Option) II 1 G Ex ia IIC T4 Ga	Foundation Fieldbus	Note 2	-50°C TO 70°C
		Enclosure: IP66/ IP67	All	All	-

Notes:					
1.	Operating Parameters:				
	Voltage = 11 to 42 VDC	Current = 4-20 m	A Normal		
	= 9 to 32 V (FF)	= 30 m/	A (FF)		
2.	Intrinsically Safe Entity Parameters a. Analog/ DE/ HART Entity	y Values			
	Vmax = Ui = 30V	Imax= li = 105mA	Ci = 4.2nF	Li = 984 uH	Pi = 0.9W
	Transmitter with Terminal Bl	ock Revision E or Later			
	Vmax = Ui = 30V	Imax= Ii = 225mA	Ci = 4.2nF	Li = 0	Pi = 0.9W
	Second line has t	at is on the module. There v e Part #: 50049839-001 or 5 the supplier information, along E "X" is production related, T	0049839-002 g with the REVISION:		
	b. Foundation Fieldbus Ent	ity Values			
	Vmax = Ui = 30V	Imax = Ii = 180mA	Ci = 0nF	Li = 984 uH	Pi = 1W
	Transmitter with Terminal Blo	ock Revision F or Later			
	Vmax = Ui = 30V	Imax = Ii = 225mA	Ci = 0nF	Li = 0	Pi = 1 W
	FISCO Field Device				
			0049839-004	Li = 0 n the label:	Pi = 5.32 W

XXXXXXX-EXXXX, THE "X" is production related, THE POSITION of the "E" IS THE REVISION.

Approval Certifications

Marine Certificates	 This certificate defines the certifications covered for the ST 800 Pressure Transmitter family of products, including the SMV 800 Smart Multivariable Transmitter. It represents the compilation of the five certificates Honeywell currently has covering the certification of these products into marine applications. For SmartLine Pressure Transmitter and SMV800 Smart Multivariable Transmitter American Bureau of Shipping (ABS) - 2009 Steel Vessel Rules 1-1-4/3.7, 4-6-2/5.15, 4-8-3/13 & 13.5, 4-8-4/27.5.1, 4-9-7/13. Certificate number: 04-HS417416-PDA Bureau Veritas (BV) - Product Code: 389:1H. Certificate number: 12660/B0 BV Det Norske Veritas (DNV) - Location Classes: Temperature D, Humidity B, Vibration A, EMC B, Enclosure C. For salt spray exposure; enclosure of 316 SST or 2-part epoxy protection with 316 SST bolts to be applied. Certificate number: A-11476 Korean Register of Shipping (KR) - Certificate number: LOX17743-AE001 Lloyd's Register (LR) - Certificate number: 02/60001(E1) & (E2)
SIL 2/3 Certification	IEC 61508 SIL 2 for non-redundant use and SIL 3 for redundant use according to EXIDA and TÜV Nord Sys Tec GmbH & Co. KG under the following standards: IEC61508-1: 2010; IEC 61508-2: 2010; IEC61508-3: 2010.

Other Certification Options

Materials

o NACE MR0175, MR0103, ISO15156

Mounting & Dimensional Drawings)

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

Mounting Configurations: (Dual head design)

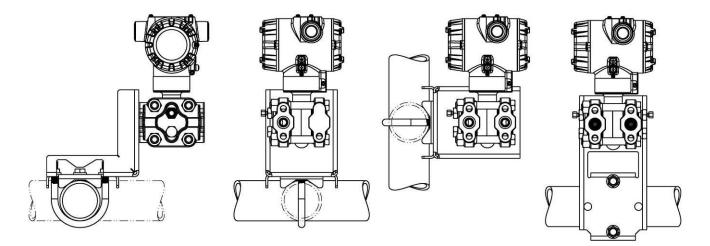


Figure 3 – Mounting options: (Dual head design)

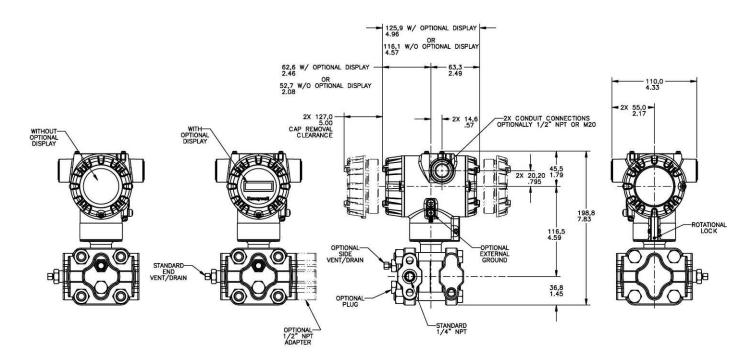
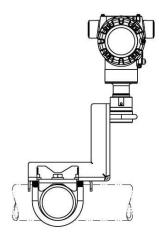
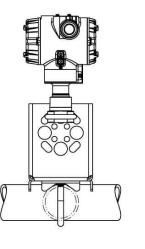


Figure 4 – Typical dimensions of STG740 & STG770 for reference

Reference Dimensions: millimeters inches

Mounting Configurations (Inline Designs)





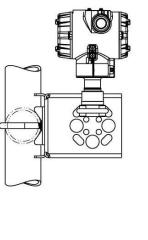




Figure 5 – Mounting Options (Inline Design)

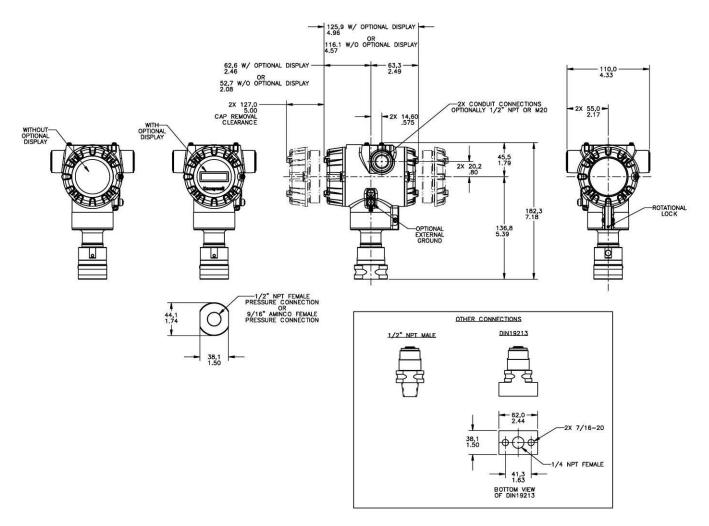


Figure 6 – Typical dimensions of STG74L, STG77L, STG78L, & STG79L for reference

Model Selection Guide

Model Selection Guides are subject to change and are inserted into the specifications as guidance only.

Model STG700 **Gauge Pressure Transmitters** Model Selection Guide

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	STG -	• _ • _ •	- - -] - [] - ['] - [0000					
KEY NUMBER	URL/Max Span	LRL	Min Span	Units	Selection		Ava	ilab	ility
0	50 (3.5)	-14.7 (-1.0)	0.5 (.035)	psi (bar)	STG730	₩			
Gauge Dual Head	500 (35)	-14.7 (-1.0)	5 (.35)	psi (bar)	STG740	↓			
Dual field	3000 (210)	-14.7 (-1.0)	30 (2.1)	psi (bar)	STG770		♦		
	50 (3.5)	-14.7 (-1.0)	0.5 (.035)	psi (bar)	STG73L			¥	
-	500 (35)	-14.7 (-1.0)	5 (.35)	psi (bar)	STG74L			*	
Gauge In-Line	3000 (210)	-14.7 (-1.0)	30(2.1)	psi (bar)	STG77L				¥
III-LIIIe	6000 (420)	-14.7 (-1.0)	60 (4.2)	psi (bar)	STG78L				¥
	10000 (690)	-14.7 (-1.0)	100 (6.9)	psi (bar)	STG79L				
TABLE I		METER	R BODY SELEC	TIONS		_			
	Process Head/Referen			Barrier Diaphragm Material					
			316L SS		A	*	*		
	Plated Carbon Steel /		Hastelloy [®] C - 2	276	B	*	*		
	Plated Carbon Steel		Monel 400 [®]	C					
a. Process			Tantalum 316L SS	D	a *	a *	*	*	
Head & Diaphragm	316 Stainless Steel /		Hastelloy C - 2		*	*	*	*	
Materials	316 Stainless Steel ^{1c}		Monel 400	G	*	*			
	STO Stairliess Steel		Tantalum	В	a	a			
	Hastelloy C - 276 /			Hastelloy C - 276		*	*	*	*
	316 Stainless Steel		Tantalum			a	a		
	Monel 400 /		Monel 400			a	a		
	316 Stainless Steel		Wonei 400		L	a	a		
	Silicone Oil 200				_1	*	*	*	*
b. Fill Fluid	Fluorinated Oil CTFE				_2	*	*	*	*
	Silicone Oil 704				_3	*	*	*	*
	NEOBEE® M-20 Size/T	wpe		Material	4	<u> </u>	*	*	-
	9/16" Aminco	ype	Same as Proces		A	Т		*	*
	1/2" NPT (female)		Same as Proces		G	*	*	*	*
Process Connection			Same as Proces		H			*	*
	DIN 19213 (1/4" female	NPT)	Same as Proces	D	*	*	*	*	
	G 1/2 B Threaded Fittin	,	Same as Proces	ss Head	B			*	*
	M20 (male)	-	Same as Proces	ss Head	N			*	*
	None				0			*	*
	Carbon Steel				C	*	*		
	316 SS				S	*	*		
I. Bolt/Nuts Materials	Grade 660 (NACE A286	,	SS Nuts		N	*	*		
	Grade 660 (NACE A286	b) Bolts & Nuts		K	p	р			
	Monel K500 Super Duplex				M D	p	p		
	B7M				B	р *	р *		
	Head Type	Vent Type	Location	Vent Material					
	None	None	None	None	0_			*	*
· · ·	Single Ended	None	None	None	1_	*	*		
e. Vent/Drain Type/Location	Single Ended	Standard Vent	Side	Matches Head Material ¹	2_	1			
	Single Ended	Center Vent	Side	Stainless Steel Only Matches Head Material ¹	3-	t *	t *		
	Dual Ended	Standard Vent	End	Matches Head Material ¹	4-				
	Dual Ended Dual Ended	Center Vent	End Side/End	Stainless Steel only Matches Head Material ¹	5-	t *	t *		
	None	Std Vent/Plug	Side/Ellu	Indicites fiedu Material	6_	+	\vdash	*	*
	Teflon [®] or PTFE (Glas	s Filled)			0 A	*	*		
f. Gasket Materials	Viton [®]	s i lileu)			B	*	*		
	Graphite				C	1	1 1		

¹ Except Carbon Steel Heads shall use 316SS Vent/Drain & Plugs and or 1/2" adapters

¹⁴ STG730,740,770 supplied via 1/2" (lange adapter same material as process head except carbon steel shall use 316 SS ^{1b} Reference head available with Dual Head Gage models only. In-Line Gage models are supplied with Process Head only.

^{1c} When selected for In-Line Gage models the Process Head / Bonnet is supplied in Dual Certified SS316/316L

					STG79L STG77L, STG78L STG73L, STG74L STG770 STG730, STG740]		
TABLE II	Meter Body & Connection					_				
Head/Connect Orientation	Standard Reversed 90/Standard	High Side Left, Low Low Side Left, High High Side Left, Low	Side Right ² / Std	Head Orientation	1 2 3	* * h	* h	*	*	*
TABLE III		AGE		IS	1					
Approvals	No Approvals Required <fm> Explosion proof, I CSA Explosion proof, In ATEX Explosion proof, I IECEx Explosion proof, I INMETRO Explosion proof, NEPSI Explosion proof, KOSHA Explosion proof EAC Customs Union (R ATEX/IECEx Explosion proof, UATR Flameproof, Intrin</fm>	ntrinsically Safe, Non trinsically Safe & Non ntrinsically Safe & N ntrinsically Safe & N poof, Intrinsically Safe & Intrinsically Safe & Intrinsically Safe & ussia, Belarus, Kazak proof, Intrinsically Safe Intrinsically Safe & Dust	n-incendive, & Du -incendive, & Dus on-incendive Ion-incendive & Non-incendive & Non-incendive Non-incendive Non-incendive hstan)Ex Approva- afe & Non-incendive proof	ustproof tproof al Flame proof, Intrinsically Safe ve	0 A B C D E F G H I 1 J K	* * * * * * * * * *	* * * * * * * * * *	* * * * * * * * * * *	* * * * * * * * * * *	* * p * * * * * * * * *
TABLE IV	Materi									
a. Electronic Housing Material & Connection Type	Polyester Powder C Polyester Powder C Polyester Powder C Polyester Powder C 316 Stainless Steel 316 Stainless Steel 316 Stainless Steel 316 Stainless Steel	oated Aluminum oated Aluminum oated Aluminum oated Aluminum (Grade CF8M) (Grade CF8M) (Grade CF8M) (Grade CF8M)	Connection 1/2 NPT M20 1/2 NPT M20 1/2 NPT M20 1/2 NPT M20	Lightning Protection None Yes Yes None None Yes Yes	A B C D E F G H	* * * * * *	* * * * * * *	* * * * * * *	* * * * * * *	* * * * * * *
	Analog O	•		Digital Protocol						
b. Output/ Protocol	4-20mA			HART Protocol	_H_	*	1	*	*	*
	4-20mA	Ext Zero, Span &	Config Button-	DE Protocol Languages	D	^	Ĺ	ř	-	^
c. Customer Interface Selections	None None Advanced Advanced Advanced Standard (w/internal Zero, Span & Conf Buttons) Standard (w/internal Zero, Span & Conf Buttons)	Yes (Zero/S Yes (Zero/S Non Yes Non Yes Non	e pan Only) e s e s	Eanguages None EN, GE, FR, IT, SP, RU, TU EN, GR, FR, IT, SP, RU, TU EN, CH, JP EN, CH, JP EN, RU EN, RU	0 A D E H J S	* * * u	* * * U	* * * * u	* * * * * U	* * * u

TABLE V		CONFIGU	RATION SELECTIONS		
a. Application			Diagnostics		
Software	Standard Diagnostics			1	* * * * *
	Write Protect	Fail Mode	High & Low Output Limits ³		
b. Output Limit,	Disabled	High> 21.0mAdc	Honeywell Std (3.8 - 20.8 mAdc)	_1_	* * * * *
Failsafe & Write	Disabled	Low< 3.6mAdc	Honeywell Std (3.8 - 20.8 mAdc)	_2_	* * * * *
Protect Settings	Enabled	High> 21.0mAdc	Honeywell Std (3.8 - 20.8 mAdc)	_3_	* * * * *
	Enabled	Low< 3.6mAdc	Honeywell Std (3.8 - 20.8 mAdc)	_4_	* * * * *
		Ger	neral Configuration		
c. General	Factory Standard			S	* * * * *
Configuration	Custom Configuration	(Unit Data Required f	rom customer)	C	* * * * *

² Left side/Right side as viewed from the customer connection perspective
 ³ NAMUR Output Limits are configurable by customer

TABLE VI Accuracy and Calibration TABLE VII	Accuracy Standard Standard High Accuracy High Accuracy Brack	Calibr Factory Standar Custom (Unit Da Factory Standar Custom (Unit Da	ata Required) rd	Calibration Qty Single Calibration Single Calibration Single Calibration Single Calibration	STG STG77L, STG STG73L, STG STG730, STG STG730, STG A B E F	78L 74L 770		* * * * * *	s s
a. Mounting Bracket	None Angle Bracket Angle Bracket Marine Approved Br Marine Approved Br Marine Approved Br Marine Approved Br Flat Bracket Flat Bracket Flat Bracket	acket (In-Line) acket	None Carbon Steel 304 SS 316 SS Carbon Steel 304 SS 304 SS Carbon Steel 304 SS 316 SS		0 1 2 3 8 9 4 5 6 7	* * * * *	* * * * * * *	+ + + + + * + + * + + * + + *	· *
b. Customer Tag	Customer Tag Type No customer tag One Wired Stainless Steel Tag (Up to 4 lines 26 char/line) Two Wired Stainless Steel Tag (Up to 4 lines 26 char/line) Unassembled Conduit Plugs & Adapters				0 1 2	* *	* * *	* 1 * 1	* *
c. Unassembled Conduit Plugs & Adapters	No Conduit Plugs or 1/2 NPT Male to 3/4 1/2 NPT 316 SS Cer M20 316 SS Certified Minifast [®] 4 pin (1/2 N Minifast [®] 4 pin (M20)	Adapters Required NPT Female 316 S tified Conduit Plug d Conduit Plug IPT) (not suitable fo	S Certified Condu	iit Adapter tions)	A0 A2 A6 A7 A8 A9	n	n m n	n r m n n r	n m
TABLE VIII	OTHER Cer	tifications & Options	: (String in sequer	nce comma delimited (XX, XX, XX,)				
Certifications & Warranty	No additional options NACE MR0175; MR0	Additional 2 years Additional 2 years Additional 3 years Additional 3 years Additional 3 years Additional 3 years	C33338) Process C33339) Process (FC33341) Conformance (F3:) 5X MAWP) (F3392	wetted parts only wetted and non-wetted parts 399)	00 FG F7 MT FX F3 F1 F5 FE TP OX PM 01 02 03 04	* * C d * * * j * e * * * *	d * * j * e *	* ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	c b i d i i i j i i i i i i i i i i i i i i i i
TABLE IX	Manufacturing Spe	cials							
Factory	Factory Identification	I			0 0 0 0	*	*	* *	* *

RESTRICTIONS

Restriction Letter	Ava	ilable Only with	Not Availabl	e with
Restriction Letter	Table	Selection(s)	Table	Selection(s)
а			VIII	FG, F7
b		Select Only o	ne option from this group	
С	ld	0,N,K,D,B	la	D,H,K,L
d	IV a	C,D,G,H	VIIa	1,2,3,5,6,7
е	lb	_2		
h			le	4, 5, 6
			VIIa	1,2,3,4,5,6,7,8
j	IV b	_H_	Vb	_ 1,2_
m	IV a	B,D,F,H		
n	IV a	A,C,E,G		
р				B- No CRN number available
S	la	A, E		
t			la	J, K, L
u	IVb	_H_		

¹The PM option is available on all Smartline Pressure Transmitter process wetted parts such as process heads, flanges, bushings and vent plugs except plated carbon steel process heads and flanges. PM option information is also available on diaphragms except STG and STA in-line construction pressure transmitters.

Description	Kit Number	Price
ntegrally Mounted Basic Indicator Kit (Compatible with all Electronic Modules)	50049911-501	Note P
erminal Strip w/Lightning Protection Kit for HART or DE Modules	50075472-532	Note P
erminal Strip w/Lightning Protection Kit for FFB Module	50075472-534	Note P
erminal Strip w/o Lightning Protection for HART or DE Modules	50075472-531	Note P
erminal Strip w/o Lightening Protection FFB-Module	50075472-533	Note P
HART Electronics Module	50049849-501	Note P
HART Electronics Module w/connection for external configuration buttons	50049849-502	Note P
DE Electronics Module	50049849-503	Note P
DE Electronics Module w/connection for external configuration buttons	50049849-504	Note P
FB Electronics Module Kit	50049849-509	Note P
FB Electronics Module w/connection for external configuration buttons	50049849-510	Note P
Standard Display Module	50126003-501	Note P
Note P - For part number pricing please refer to WEB Channel		
PRODUCT MANUALS		
Description	Part Number	
ST 700 Smart Transmitter User Manual - English	34-ST-25-44	
ST 700 Smart Transmitter HART/DE Communications Manual - English	34-ST-25-47	
T 700 Smart Transmitter Safety Manual - English	34-ST-25-37	
3T700 Smart Transmitter Foundation Fieldbus Manual - English	34-ST-25-48	
ST 700 Smart Transmitter Function Block Manual - English	34-ST-25-49	

All product documentation is available at www.process.honeywell.com.

Sales and Service

For application assistance, current specifications, ordering, pricing, and name of the nearest Authorized Distributor, contact one of the offices below.

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Web Knowledge Base search engine <u>http://bit.ly/2N5VIdi</u>

Specifications are subject to change without notice.

For more information To learn more about SmartLine Pressure Transmitters visit www.process.honeywell.com Or contact your Honeywell Account Manager

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