

STA800 SmartLine Absolute Pressure Specification 34-ST-03-85, December 2025



Introduction

Part of the SmartLine® family of products, the STA800 and STA80L are high performance absolute pressure transmitters 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 0.03% of span standard & 0.025% of span optional.
- Stability up to 0.01% of URL per year for 15 years.
- Automatic temperature compensation.
- Rangeability up to 200:1.
- Response times as fast as 80ms.
- Multiple local display capabilities.
- External zero, span, & configuration capability.
- Polarity insensitive electrical connections.
- Comprehensive on-board diagnostic capabilities.
- Integral Dual Seal design for highest safety based on ANSI/NFPA 70-202 and ANSI/ISA 12.27.2.
- Full compliance to SIL 2/3 requirements.
- Modular design characteristics.
- Available with additional 15-year warranty.
- Plugged Impulse Line Detection Option.
- Supports NAMUR NE-107 Extended Diagnostics (HART, FF).
- Dual/Triple Calibration Option (HART & Fieldbus Only).



Figure 1 – STA800 Absolute Pressure Transmitters feature field-proven piezoresistive sensor technology

Communications/Output Options:

- 4-20mA
- Honeywell Digitally Enhanced (DE)
- HART® (version 7.0)
- FOUNDATION™ Fieldbus

All transmitters are available with the above listed communications protocols.

Span & Range Limits:

Model	URL mmHg (mbara)	LRL mmHg (mbara)	Min Span mmHg (mbara)
STA822/82L	780 (1039.91)	0 (0)	50 (66.66)
Model	Psia (bara)	psi (bara)	psi (bara)
STA840/84L	500 (34.47)	0 (0)	2.5 (0.17)
STA87L	3000 (206.84)	0 (0)	15 (1.03)

Description

The SmartLine family of gauge pressure, differential pressure and absolute pressure transmitters is 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 resulting in the best total performance available. This level of performance allows the ST 800 to replace virtually any competitive transmitter available today. (√)

Unique Indication/Display Options

The ST 800 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, and 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, and UK).

Advanced Graphics LCD Display Features

- Modular (may be added or removed in the field).
- 0, 90, 180, and 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 calculated flow (square root) value in addition to analog output signal.
- Unique “Health Watch” indication provides instant visibility of diagnostics.
- Multiple language capability (EN, DE, FR, IT, ES, RU, UK, TR, CN, and 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.

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 & Fieldbus device configurations.

System Integration

- SmartLine communications protocols all meet the most current published standards for HART/DE/Fieldbus.
- Integration with Honeywell's Experion PKS offers the following unique advantages.
 - Transmitter messaging.
 - Maintenance mode indication.
 - Tamper reporting.
 - FDM Plant Area Views with Health summaries.
 - All ST 800 units are Experion tested to provide the highest level of compatibility assurance.

Modular Design

To help contain maintenance & inventory costs, all ST 800 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 indicators*
- Add or remove lightning protection (terminal connection)*

* 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.**

Plugged Impulse Line Detection

STA800 models are offered with a PILD option which provides indication of a plugged impulse line or process connection. When used in conjunction with an advanced display, a non-critical diagnostic indication appears on the integral display. For units without an integral display, an indication can be seen via the host or handheld device when HART Protocol is utilized.

Dual/Triple Calibration

STA800 models are optionally offered with multiple calibrations. In lieu of a standard factory calibration, units can be supplied with 1, 2, or 3 customer-specified calibrations. These calibrations are stored in the meter body and provide users with factory calibrated performance at up to three different calibrated ranges. This increases application flexibility without requiring any costly recalibration or additional inventory.

Performance Specifications

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

Table 1

Model	URL	LRL	Min Span	Maximum Turndown	Stability (% URL/Yr for 15 years)	Reference Accuracy ^{1,2} (% Span) Std / Opt.
STA822	780 mmHga (1039.91 mbara)	0.0 mmHga (0.0 mbara)	50 mmHga (66.66 mbara)	15.6:1	0.010	0.0375 / 0.025
STA840	500 psia (34.47 bara)	0.0 psia (0.0 mbara)	2.5 psia (0.17 bara)	200:1	0.010	0.030 / 0.025
STA82L	780 mmHga (1039.91 mbara)	0.0 mmHga (0.0 mbara)	50 mmHga (66.66 mbara)	15.6:1	0.015	0.0375
STA84L	500 psia (34.47 bara)	0.0 psia (0.0 mbara)	2.5 psia (0.17 bara)	200:1	0.010	0.030 / 0.025
STA87L	3000 psia (206.84 bara)	0.0 psia (0.0 mbara)	15 psia (1.03 bara)	200:1	0.010	0.030 / 0.025

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

Performance Specifications

Accuracy at Specified Span and Temperature: (Combined Zero & Span, conformance to +/-3 Sigma)

Table 2

			Accuracy ^{1,2} (% of Span)					Combined Zero & Span Temperature Effect (% Span/50°F)	
	Model	URL	Reference Turndown	A	B	C	D	E	F
Standard Accuracy	STA822	780 mmHga (1039.91 mbara)	8.6:1	0.0050	0.0325	0.0325	90 mmHga (119.99 mbara)	0.050	0.040
	STA840	500 psia (34.47 bara)	10:1	0.0050	0.0250	0.0325	20 psia (1.37 bara)	0.025	0.005
	STA82L	780 mmHga (1039.91 mbara)	5.5:1	0.0050	0.0325	0.0325	140 mmHga (186.65 mbara)	0.050	0.080
	STA84L	500 psia (34.47 bara)	10:1	0.0050	0.0250	0.0325	20 psia (1.37 bara)	0.025	0.007
	STA87L	3000 psi (206.84 bara)	10:1	0.0050	0.0250	0.0250	300 psia (20.68 bara)	0.025	0.007
High Accuracy Option	STA822	780 mmHga (1039.91 mbara)	8.6:1	0.0050	0.0200	0.0200	90 mmHga (119.99 mbara)	0.050	0.040
	STA840	500 psia (34.47 bara)	25:1	0.0050	0.0200	0.0200	20 psia (1.37 bara)	0.025	0.005
	STA84L	500 psia (34.47 bara)	25:1	0.0050	0.0200	0.0200	20 psia (1.37 bara)	0.025	0.007
	STA87L	3000 psi (206.84 bara)	10:1	0.0050	0.0200	0.0200	300 psia (20.68 bara)	0.025	0.007
Turn Down Effect								Temp Effect	
$\pm [A + B]$ if Span $\geq$ reference turndown $\pm [A + C]$ if Span $\geq D$ and $<$ reference turndown $\pm \left[A + C \left(\frac{D}{\text{Span}} \right) \right]$ if Span $< D$								$\pm \left[E + F \left(\frac{\text{URL}}{\text{Span}} \right) \right]$	

Total Performance (% of Span):

$$\text{Total Performance Calculation: } = \pm \sqrt{(\text{Accuracy})^2 + (\text{Temperature Effect})^2}$$

Total Performance Examples (for comparison): standard accuracy 5:1 Turndown, +/-50°F (28°C) shift.

STA822 @ 156 mmHgA	0.253% of span	STA82L @ 156 mmHgA	0.452% of span
STA840 @ 100 psia	0.058% of span	STA84L @ 100 psia	0.067% of span
STA87L @ 600 psia	0.067% of span		

Typical Calibration Frequency:

Calibration verification is recommended every four (4) 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), 10 to 55% RH, and 316 Stainless Steel barrier diaphragm.

Operating Conditions – All Models

Parameter	Reference Condition		Rated 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														
STA822/STA82L	25±1	77±2	See Figure 2		See Figure 2		-55 to 125	-67 to 257						
STA840, 84L, 87L	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							
Vacuum Region - Minimum Pressure STA822, 82L, 840,84L, 87L	See Figure 2. Operate within specifications above 25 mmHgA (33 mbarA). Short term ³ exposure to full vacuum will not result in damage.													
Supply VoltageLoad Resistance	HART: 10.8 to 42.4 VDC at terminals (IS versions limited to 30 VDC), 0 to 1,440 ohms DE: 15 to 49.3VDC at terminals (IS versions limited to 30VDC), 0 to 1,200 ohms (as shown in Figure 3) FOUNDATION Fieldbus: 9.0 to 32.0 VDC at terminals, steady state current: 17.6mA, software download current: 27.4mA													
Maximum Allowable Working Pressure (MAWP) ⁴	STA822, 82L = 780 mmHgA, 1,040 mbarA STA840, 84L = 500 psia, 35 barA STA87L = 3,000 psia, 210 barA													
Over Pressure	1.5 x MAWP of respective model													
No-Burst Pressure	<table><tr><td>Transmitter MAWP (psi)</td><td>Minimum ‘no-burst pressure’</td></tr><tr><td>MAWP <= 2,000 psi</td><td>3x MAWP</td></tr><tr><td>MAWP > 2,000 psi</td><td>2.5x MAWP + 1000 psi</td></tr></table>								Transmitter MAWP (psi)	Minimum ‘no-burst pressure’	MAWP <= 2,000 psi	3x MAWP	MAWP > 2,000 psi	2.5x MAWP + 1000 psi
Transmitter MAWP (psi)	Minimum ‘no-burst pressure’													
MAWP <= 2,000 psi	3x MAWP													
MAWP > 2,000 psi	2.5x MAWP + 1000 psi													

¹ LCD display ambient temperature: -30°C to +70°C. LCD display storage temperature: -30°C to 80°C. The display will be slower and may become unreadable as the ambient temperature drops below -20°C to -30°C. It will return to normal functionality once the ambient temperature rises above -20°C.

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

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

⁴ Consult factory for MAWP of ST 700 transmitters with CRN approval.

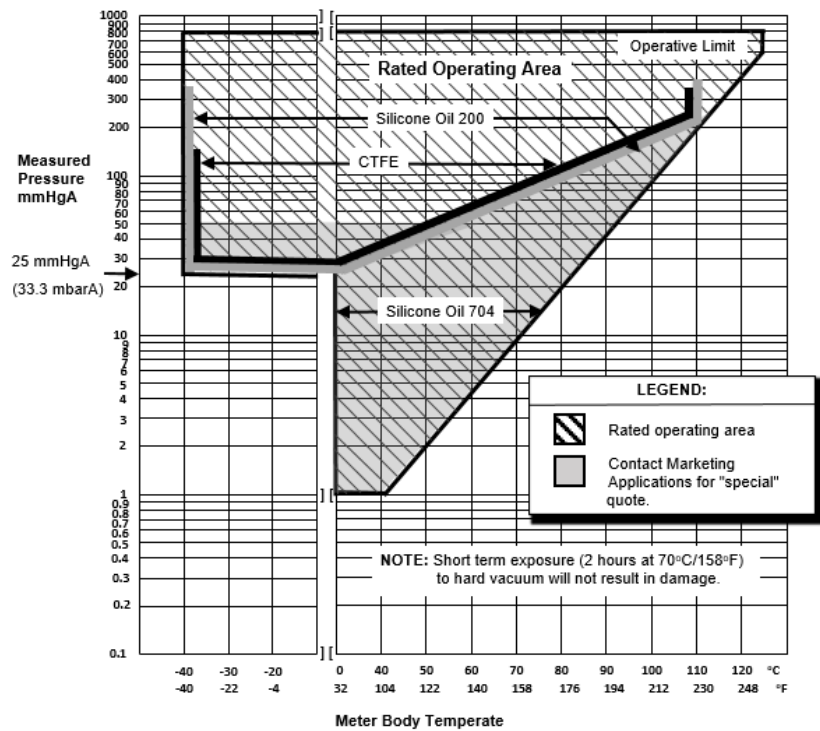


Figure 2 - Measured pressure versus meter body temperature chart for STA722, 72L

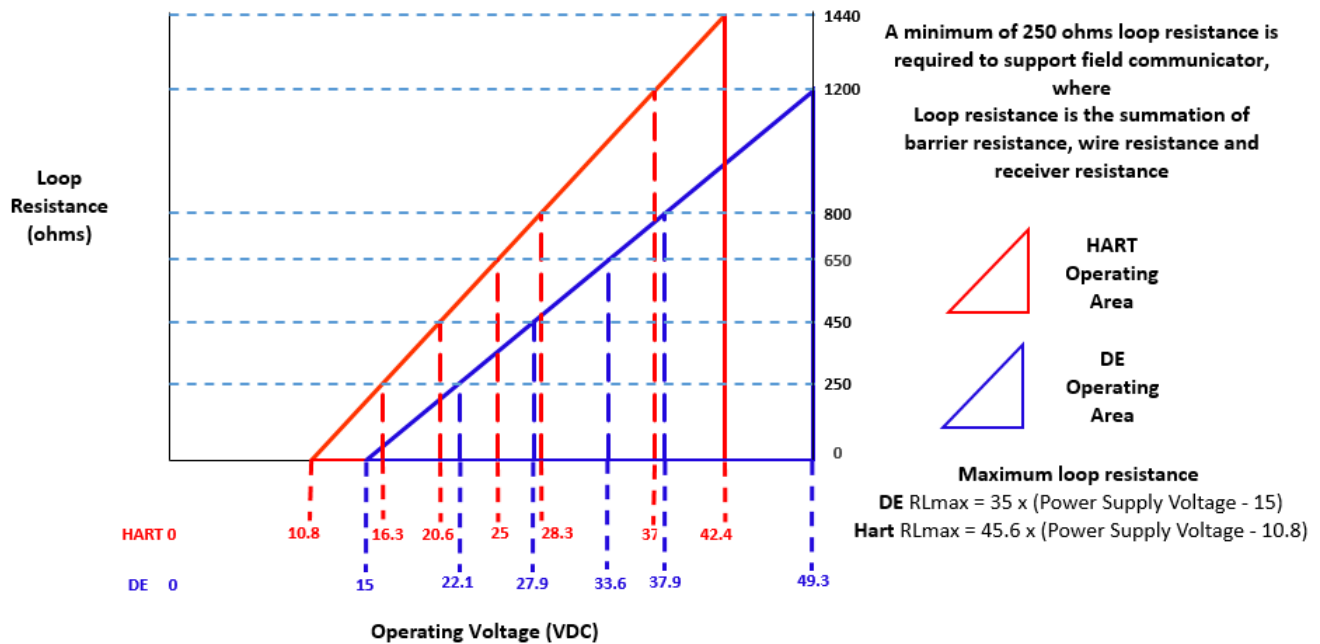


Figure 3 - Supply voltage and loop resistance chart & calculations

Performance Under Rated Conditions – All Models

Parameter	Description									
Analog Output Digital Communications:	Two-wire, 4 to 20 mA (HART & DE Transmitters only) Honeywell DE, HART protocol or FOUNDATION Fieldbus ITK 6.0.1 compliant All transmitters, irrespective of protocol have polarity insensitive connection.									
HART & DE Output Failure Modes (NAMUR for DE Units requires selecting display and configuration buttons or factory configuration)	<table><tr><td></td><td>Honeywell Standard</td><td>NAMUR NE 43 Compliance</td></tr><tr><td>Normal Limits:</td><td>3.8 – 20.8 mA</td><td>3.8 – 20.5 mA</td></tr><tr><td>Failure Mode:</td><td>≤ 3.6 mA and ≥ 21.0 mA</td><td>≤ 3.6 mA and ≥ 21.0 mA</td></tr></table>		Honeywell Standard	NAMUR NE 43 Compliance	Normal Limits:	3.8 – 20.8 mA	3.8 – 20.5 mA	Failure Mode:	≤ 3.6 mA and ≥ 21.0 mA	≤ 3.6 mA and ≥ 21.0 mA
	Honeywell Standard	NAMUR NE 43 Compliance								
Normal Limits:	3.8 – 20.8 mA	3.8 – 20.5 mA								
Failure Mode:	≤ 3.6 mA and ≥ 21.0 mA	≤ 3.6 mA and ≥ 21.0 mA								
Supply Voltage Effect	0.005% of span per volt.									
Transmitter Turn on Time (includes power up & test algorithms)	HART or DE: 2.5 seconds Foundation Fieldbus: host dependent									
Response Time (delay + time constant)	<table><tr><td><u>DE/HART Protocol</u></td><td><u>FOUNDATION Fieldbus</u></td></tr><tr><td>80ms</td><td>150ms (Host Dependent)</td></tr></table>	<u>DE/HART Protocol</u>	<u>FOUNDATION Fieldbus</u>	80ms	150ms (Host Dependent)					
<u>DE/HART Protocol</u>	<u>FOUNDATION Fieldbus</u>									
80ms	150ms (Host Dependent)									
Damping Time Constant	HART: Adjustable from 0 to 32 seconds in 0.1 increments. Default Value: 0.5 seconds DE: Discrete values 0, .16, .32, .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	Meets IEC61326									
Lightning Protection Option	Leakage Current: 10uA max @ 42.4VDC 93C Impulse rating: <table><tr><td>8/20us</td><td>5000A (>10 strikes)</td><td>10000A (1 strike min.)</td></tr><tr><td>10/1000us</td><td>200A (> 300 strikes)</td><td></td></tr></table>	8/20us	5000A (>10 strikes)	10000A (1 strike min.)	10/1000us	200A (> 300 strikes)				
8/20us	5000A (>10 strikes)	10000A (1 strike min.)								
10/1000us	200A (> 300 strikes)									

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

Parameter	Description
Barrier Diaphragms Material	STA800: 316L SS, Hastelloy® C-276 ² , Monel® 400 ³ , Tantalum, Gold-plated 316L SS, Gold-plated Hastelloy® C-276, Gold-plated Monel® 400 STA80L: 316L SS, Hastelloy C-276
Process Head Material	STA800: Carbon Steel (Zinc Plated) ⁵ , 316 SS ⁴ , Hastelloy® C-276 ⁶ , Monel® 400 ⁷ STG80L: 316L SS, Hastelloy C-276 ⁶
Vent/Drain Valves & Plugs ¹	STA800: 316 SS ⁴ , Hastelloy C-276 ² , Monel 400 ⁷ STA80L: N/A
Head Gaskets	STA800: Glass-filled PTFE standard. Viton® and graphite are optional. STA80L: N/A
Meter Body Bolting	STA800: Carbon Steel (Zinc plated) standard. Options include 316 SS, NACE A286 SS bolts and nuts or NACE A286 SS bolts and 304 SS nuts STA80L: N/A
Mounting Bracket	Carbon Steel (Zinc-plated) or 304 Stainless Steel or 316 Stainless Steel. See Figure 4 & Figure 5
Fill Fluid	Silicone 200, CTFE or Silicone 704
Electronic Housing	Pure Polyester Powder Coated Low Copper (<0.4%) – Aluminum. Meets Type 4X / IP66 / IP67. All stainless-steel housing is optional. Cover O ring material: Silicone.
Process Connections	STA800: ½ -inch NPT(female), DIN 19213 (standard) STA80L: ½ -inch NPT(female), ½ -inch NPT male, 9/16 Aminco, DIN19213, G ½ -B Male threaded
Wiring	Accepts up to 16 AWG (1.5 mm diameter).
Dimensions	See Figure 4 & Figure 5
Net Weight	STA800: 8.3 pounds (3.8 Kg). STA80L: 3.6 pounds (1.6 Kg) with Aluminum Housing

¹ Vent/Drains are sealed with Teflon®² Hastelloy® C-276 or UNS N10276³ Monel® 400 or UNS N04400⁴ 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-276⁷ Monel® 400 or UNS N04400. Supplied as indicated or as Grade M30C, the casting equivalent of Monel® 400

Communications Protocols & Diagnostics

HART Protocol

Version: HART 7

Foundation Fieldbus (FF)

Available Function Blocks

Block Type	Qty	Execution Time
Resource	1	n/a
Transducer	1	n/a
Diagnostic	1	n/a
Analog Input	1*	30 ms
PID w/Autotune	1	45 ms
Integrator	1	30 ms
Signal Char (SC)	1	30 ms
LCD Display	1	n/a
Flow Block	1	30 ms
Input Selector	1	30 ms
Arithmetic	1	30 ms

* AI block may have two (2) additional instantiations.

All available function blocks adhere to FOUNDATION Fieldbus standards. PID blocks support ideal & robust PID algorithms with full implementation of Auto-tuning.

Link Active Scheduler

Transmitters can perform as a backup Link Active Scheduler and take over when the host is disconnected. Acting as a LAS, the device ensures scheduled data transfers typically used for the regular, cyclic transfer of control loop data between devices on the Fieldbus.

Number of Devices/Segment

Entity IS model: 6 devices/segment

Schedule Entries

18 maximum schedule entries

Number of VCR's: 24 max

Compliance Testing: Tested according to ITK 6.0.1

Software Download

Utilizes Class-3 of the Common Software Download procedure as per FF-883 which allows the field devices of any manufacturer to receive software upgrades from any host.

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 800 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

- Electronics Module Fault.
- 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.

Other Certification Options

Materials

- NACE MRO175, MRO103, ISO15156

Hazardous Areal Certifications

MSG CODE	AGENCY	TYPE OF PROTECTION	COMM. OPTION	ELECTRICAL PARAMETERS	AMBIENT TEMP (Ta)
A	FM Approvals™ USA	Explosionproof: Class I, Division 1, Groups A, B, C, D; Dust Ignition Proof: Class II, III, Division 1, Groups E, F, G; T6..T5 Class I, Zone 0/1, AEx db IIC T6..T5 Ga/Gb Class II, Zone 21, AEx tb IIIC T95° Db	All	Note 1	T5: -50 °C to 85°C T6: -50 °C to 65°C
		Intrinsically Safe: Class I, II, III, Division 1, Groups A, B, C, D, E, F, G: T4 Class I, Zone 0, AEx ia IIC T4 Ga FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	4-20 mA / DE/ HART	Note 2a	-50 °C to 70°C
			Foundation Fieldbus	Note 2b	-50 °C to 70°C
		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 °C to 85°C
		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			
B	Canadian Standards Association (CSA) USA and Canada	Explosion Proof: Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1, T6..T5 Class I Zone 1 AEx db IIC T6..T5 Ga/Gb Ex db IIC T6..T5 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
		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 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	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			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	-
		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;			

MSG CODE	AGENCY	TYPE OF PROTECTION	COMM. OPTION	ELECTRICAL PARAMETERS	AMBIENT TEMP (Ta)
		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. 60079-15:12; 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-12.27.01-2011			
C	ATEX	Flameproof: SIRA 12ATEX2233X  II 1/2 G Ex db IIC T6..T5 Ga/Gb II 2 D Ex tb IIIC T95°C...T120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: SIRA 12ATEX2233X  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	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		Zone 2, Increase Safety: SIRA 12ATEX4234X  II 3 G Ex ec IIC T4 Gc	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	-
	STANDARDS: EN 60079-0: 2018; EN 60079-1: 2014; EN 60079-7: 2015; EN 60079-11: 2012; EN 60079-26: 2015; EN 60079-31: 2014				
	UKEX	Flameproof: CSAE 22UKEX1021X  II 1/2 G Ex db IIC T6..T5 Ga/Gb II 2 D Ex tb IIIC T95°C...T120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: CSAE 22UKEX1021X  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	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		Zone 2, Increase Safety: CSAE 22UKEX1008X  II 3 G Ex ec IIC T4 Gc	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) 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	-

MSG CODE	AGENCY	TYPE OF PROTECTION	COMM. OPTION	ELECTRICAL PARAMETERS	AMBIENT TEMP (Ta)
		STANDARDS: EN 60079-0: 2018; EN 60079-1: 2014; EN 60079-7: 2015; EN 60079-11: 2012; EN 60079-26: 2015; EN 60079-31: 2014			
D	IECEX World	Flameproof: IECEx SIR 12.0100X Ex db IIC T6..T5 Ga/Gb Ex tb IIIC T95°C...T120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: IECEx SIR 12.0100X Ex ia IIC T4 Ga Ex ia IIIC T125°C Db FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		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: IEC 60079-0: 2017; IEC 60079-1: 2014; IEC 60079-7: 2017; IEC 60079-11: 2011; IEC 60079-26: 2014; IEC 60079-31: 2013			

E	SAEx South Africa	Flameproof : Ex d IIC T6...T5 Ga/Gb Ex tb IIIC T95°C...T120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ex ia IIC Ga T4 FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		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 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	-
F	INMETRO Brazil	Flameproof: Ex db IIC T6..T5 Ga/Gb Ex tb IIIC T95°C...T120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ex ia IIC T4 Ga FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	4-20 mA / DE/ HART	Note 2a	-50°C TO 70°C
			Foundation Fieldbus	Note 2b	-50°C TO 70°C
		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 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 : IP 66/67	All	All	-
G	NEPSI CHINA	Flameproof: Ex db IIC T6..T5 Ga/Gb Ex tb IIIC T 95°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ex ia IIC T4 Ga FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		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 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 : IP 66/67	All	All	-

H	KOSHA Korea	Flameproof : Ex d IIC T4, T5, T6 Ex td A21 IP66/IP67 T95°C...T120 °C	All	Note 1	T4: -50°C TO 85°C T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ex ia IIC T4	4-20 mA / DE/ HART	Note 2	Ta= -50 °C to 70°C
			Foundation Fieldbus	Note 2	Ta= -50 °C to 70°C
		Enclosure: IP66/ IP67	All	All	-
I	EAC Russia, Belarus and Kazakhstan	Flameproof: Ga/Gb Ex d IIC T6..T5 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 FISCO Field Device (Only for FF Option) Ga Ex ia IIC T4 X	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		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	
J	CCoE INDIA	Flameproof: Ex d IIC T6..T5 Ga/Gb	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: Ex ia IIC T4 Ga FISCO Field Device (Only for FF Option) Ex ia IIC T4 Ga; Ex ic IIC T4 Gc	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			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	-
K	UATR UKRAINE	Flameproof: II 1/2 G Ex db IIC T6..T5 Ga/Gb II 2 D Ex tb IIIC T95°C...T120°C Db	All	Note 1	T5: -50°C TO 85°C T6: -50°C TO 65°C
		Intrinsically Safe: II 1 G Ex ia IIC T4 Ga FISCO Field Device (Only for FF Option) II 1 G Ex ia IIC T4 Ga	4-20 mA / DE/ HART	Note 2	-50°C TO 70°C
			Foundation Fieldbus	Note 2	-50°C TO 70°C
		Enclosure: IP66/ IP67	All	All	-

Notes:

1. Operating Parameters:

Voltage = 11 to 42 VDC
= 9 to 32 V (FF)

Current = 4-20 mA Normal
= 30 mA (FF)

2. Intrinsically Safe Entity Parameters

a. Analog/ DE/ HART Entity Values:

V_{max} = U_i = 30V I_{max} = I_i = 105mA C_i = 4.2nF L_i = 984 uH P_i = 0.9W

Transmitter with Terminal Block revision E or Later

V_{max} = U_i = 30V I_{max} = I_i = 225mA C_i = 4.2nF L_i = 0 P_i = 0.9W

Note : Transmitter with Terminal Block revision E or later

The revision is on the label that is on the module. There will be two lines of text on the label:

- First is the Module Part #: 50049839-001 or 50049839-002
- Second line has the supplier information, along with the REVISION:

XXXXXX-EXXX, THE "X" is production related, THE POSITION of the "E" IS THE REVISION.

b. Foundation Fieldbus - Entity Values

V_{max} = U_i = 30V I_{max} = I_i = 180mA C_i = 0nF L_i = 984 uH P_i = 1W

Transmitter with Terminal Block revision F or Later

V_{max} = U_i = 30V I_{max} = I_i = 225mA C_i = 0nF L_i = 0 P_i = 1 W

FISCO Field Device I_{max} = I_i = 380 mA C_i = 0nF L_i = 0 P_i = 5.32 W

V_{max} = U_i = 17.5V

Note : Transmitter with Terminal Block revision F or later

The revision is on the label that is on the module. There will be two lines of text on the label:

- First is the Module Part #: 50049839-003 or 50049839-004
- Second line has the supplier information, along with the REVISION:

XXXXXX-EXXX, THE "X" is production related, THE POSITION of the "E" IS THE REVISION.

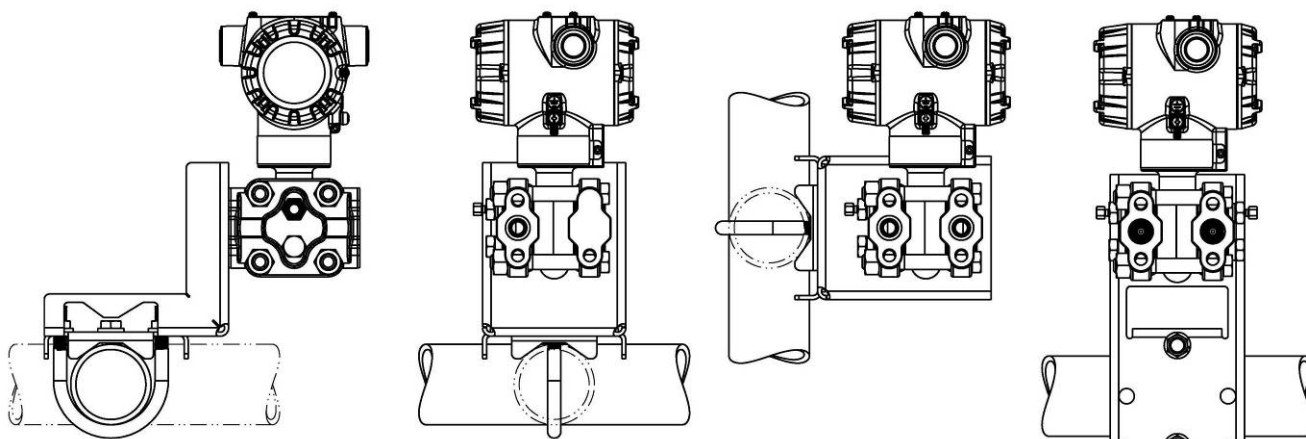
Approval Certifications

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 ST 800 Smart 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.	
MEASUREMENT INTRUMENTS DIRECTIVE (MID) 2004/ 22/ EC	Certificate Issued by NMI Certin B.V. Mechanical Class: M3 Electromagnetic Environment: E3 Ambient Temperature Range: -25 °C to + 55 °C	
	Unit	Custom Calibration
	STD820	0 to 1000 mBar
	STD830	0 to 7 Bar
	STA84L	0 to 35 Bar A
	STG84L	0 to 35 Bar
	STD870	0 to 100 Bar
	STA87L	0 to 100 Bar A
	STG87L	0 to 100 Bar

Mounting & Dimensional Drawings

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

Mounting Configurations (Dual head design)



Dimensions (Dual head design)

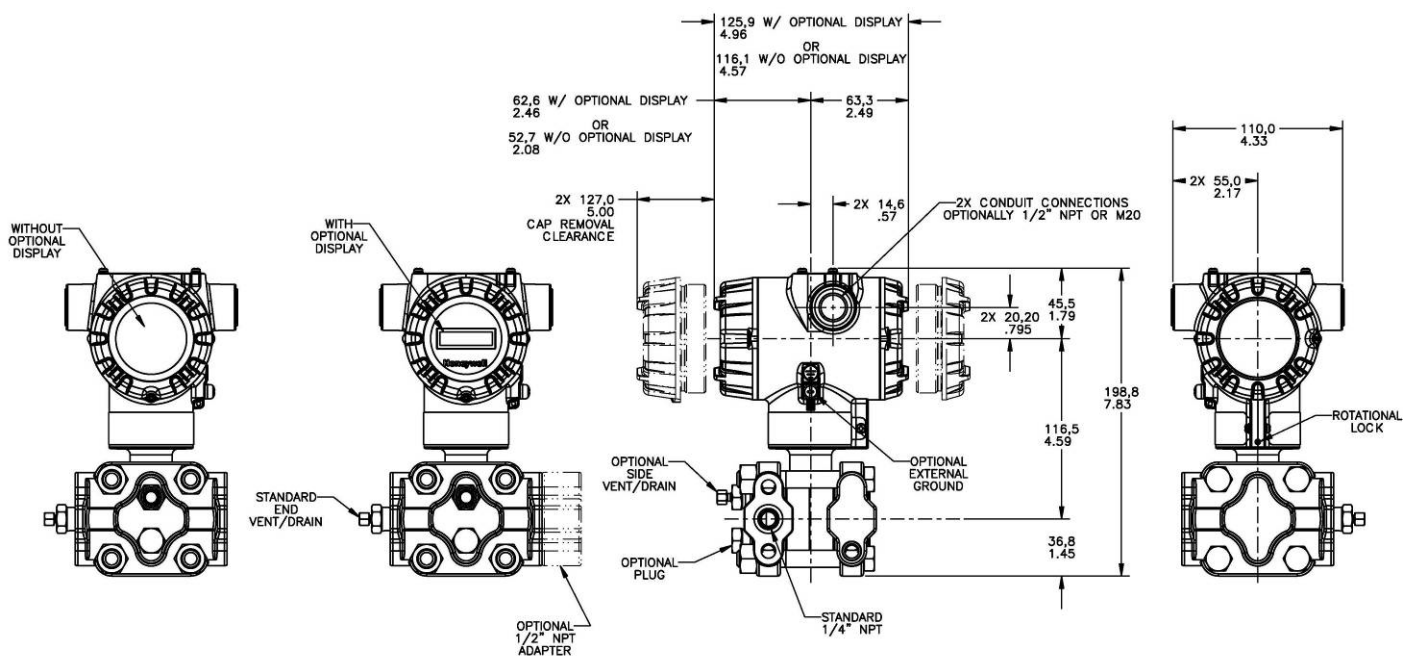
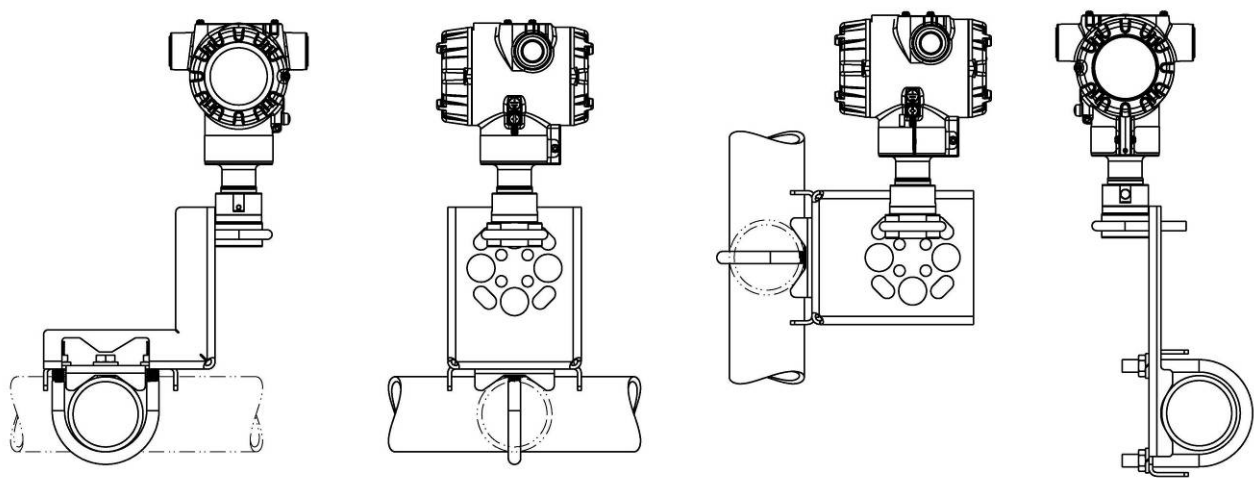


Figure 4 – Typical mounting dimensions of STA822 & STA840 for reference

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

Mounting Configurations (Inline Designs)



Dimension (Inline Design)

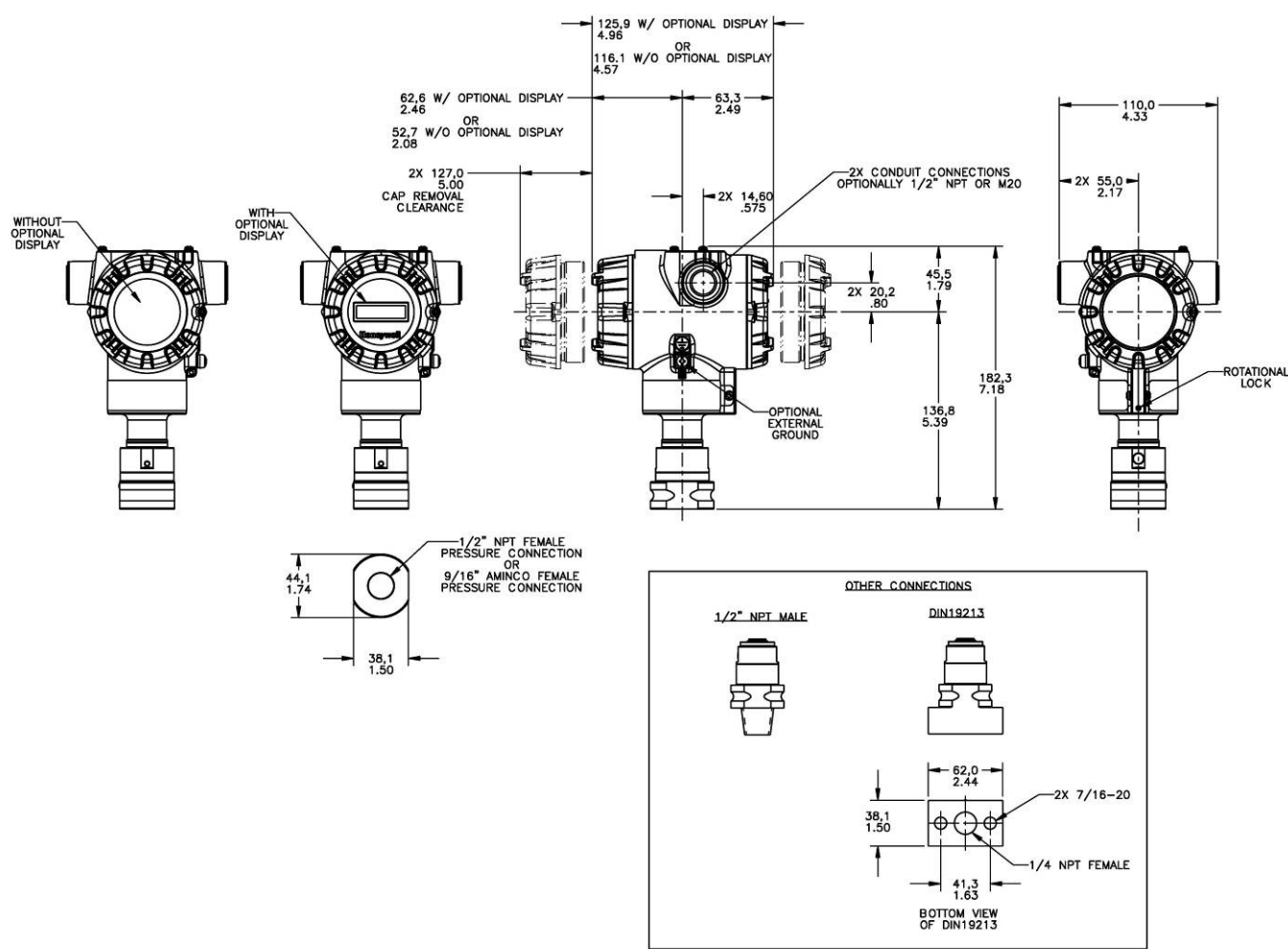


Figure 5 – Typical mounting dimensions of STA82L, STA84L, & STA87L for reference

Model Selection Guide

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

Model STA800 & STA80L Absolute Pressure Transmitters

Model Selection Guide
34-ST-16-85

Issue
37

Instructions: Make selections from all Tables using column below the proper arrow. Asterisk indicates availability. Letter (a) refers to restrictions highlighted in the restrictions table. Tables delimited with dashes.
List Price: Price equals the sum of prices for all selections made.

Key
[STA] - [I] - [II] - [III] - [IV] - [V] - [VI] - [VII] - [VIII (Optional)] - [IX]

KEY NUMBER	URL/Max Span	LRL	Min Span	Units
Absolute	780 (1040)	0 (0)	50 (65.0)	mm HgA (mbarA)
Dual Head	500 (35)	0 (0)	5 (.35)	psia (barA)
Absolute	780 (1040)	0 (0)	50 (65.0)	mm HgA (mbarA)
In-Line	500 (35)	0 (0)	5 (.35)	psia (barA)
	3000 (210)	0 (0)	30 (2.1)	psia (barA)

Selection			
STA822	↓		
STA840	↓		
STA82L		↓	
STA84L			↓
STA87L			↓

TABLE I		METER BODY SELECTIONS		
a. Process Head & Diaphragm Materials	Process Head/Reference Head Mat ^{1b}		Barrier Diaphragm Material	
	Plated Carbon Steel / Carbon Steel	Plated	316L SS Hastelloy [®] C - 276 Monel 400 [®] Tantalum Gold Plated 316L SS Gold Plated Hastelloy C-276 Gold Plated Monel 400	
			316L SS Hastelloy C - 276 Monel 400 Tantalum Gold Plated 316L SS Gold Plated Hastelloy C-276 Gold Plated Monel 400	
	316 Stainless Steel / 316 Stainless Steel ^{1c}		316L SS Hastelloy C - 276 Monel 400 Tantalum Gold Plated 316L SS Gold Plated Hastelloy C-276 Gold Plated Monel 400	
	Hastelloy C - 276 / Stainless Steel	316	Hastelloy C - 276 Tantalum Gold Plated Hastelloy C-276	
	Monel 400 / Stainless Steel	316	Monel 400 Gold Plated Monel 400	
b. Fill Fluid	Silicone Oil 200 Fluorinated Oil CTFE Silicone Oil 704			
c. Process Connection	Size/Type		Material	
	9/16" Aminco 1/2" NPT (female) 1/2" NPT (male) DIN 19213 (1/4" female NPT) G1/2 B Threaded Fitting M20		Same as Process Head Same as Process Head ^{1a} Same as Process Head Same as Process Head Same as Process Head Same as Process Head	
d. Bolt/Nuts Materials	None Carbon Steel 316 SS Grade 660 (NACE A286) with NACE 304 SS Nuts Grade 660 (NACE A286) Bolts & Nuts Monel K500 Super Duplex B7M			
e. Vent/Drain Type/Location	Head Type	Vent Type	Location	Vent Material
	None	None	None	None
	Single Ended	None	None	None
	Single Ended	Standard	Side	Matches Head Material ¹
	Single Ended	Center Vent	Side	Stainless Steel Only
	Dual Ended	Standard Vent	End	Matches Head Material ¹
	Dual Ended	Center Vent	End	Stainless Steel Only
Dual Ended	Standard/Plug	Side/End	Matches Head Material ¹	
f. Gasket Materials	None Teflon [®] or PTFE (Glass Filled) Viton [®] Graphite			

A	*		
B	*		
C	*		
D	a		
1	*		
2	*		
3	*		
E	*	*	*
F	*	*	*
G	*		
H	a		
4	*	*	*
5	*	*	*
6	*		
J	*	*	*
K	a		
7	*	*	*
L	a		
8	a		
1	*	*	*
2	*	*	*
3	*	*	*

A	*	*	*
G	*	*	*
H	*	*	*
D	*	*	*
B	*	*	*
N	*	*	*
0	*	*	*
C	*		
S	*		
N	*		
K	p		
M	p		
D	p		
B	*		

0	*	*	*
1	*		
2	*		
3	t		
4	*		
5	t		
6	*		
0	*	*	*
A	*		
B	*		
C	*		

¹ Except Carbon Steel Heads shall use 316SS Vent/Drain & Plugs

^{1a} STA822,840 supplied via 1/2" flange adapter same material as process head except carbon steel shall use 316 SS

^{1b} Reference head available only with Dual head models. In-line models supplied with process head only

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



TABLE II	Meter Body & Connection Orientation	
Head/Connect Orientation	Standard	High Side Left, Low Side Right ² / Std Head Orientation
	Reversed	Low Side Left, High Side Right ² / Std Head Orientation
	90/Standard	High Side Left, Low Side Right ² / 90° Head Rotation

1	*	*	*
2	*		
3	h		

TABLE III	AGENCY APPROVALS
Approvals	No Approvals Required
	<FM> Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof
	CSA Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof
	ATEX Explosion proof, Intrinsically Safe & Non-incendive
	IECEX Explosion proof, Intrinsically Safe & Non-incendive
	SAEx Explosion proof, Intrinsically Safe & Non-incendive
	INMETRO Explosion proof, Intrinsically Safe & Non-incendive
	NEPSI Explosion proof, Intrinsically Safe & Non-incendive
	KOSHA Explosion proof, Intrinsically Safe & Non-incendive
	EAC Customs Union(Russia,Belarus,Kazakhstan)Ex Approval, Flame proof, Intrinsically Safe
	CCoE Explosion proof, Intrinsically Safe & Non-incendive
	UATR Flameproof, Intrinsically Safe & Dustproof

0	*	*	*
A	*	*	*
B	*	*	*
C	*	*	*
D	*	*	*
E	*	*	*
F	*	*	*
G	*	*	*
H	*	*	*
I	*	*	*
J	*	*	*
K	*	*	*

TABLE IV	TRANSMITTER ELECTRONICS SELECTIONS		
a. Electronic Housing Material & Connection Type	Material	Connection	Lightning Protection
	Polyester Powder Coated Aluminum	1/2 NPT	None
	Polyester Powder Coated Aluminum	M20	None
	Polyester Powder Coated Aluminum	1/2 NPT	Yes
	Polyester Powder Coated Aluminum	M20	Yes
	Dual Certified SS 316/316L (CF8M/CF3M)	1/2 NPT	None
	Dual Certified SS 316/316L (CF8M/CF3M)	M20	None
	Dual Certified SS 316/316L (CF8M/CF3M)	1/2 NPT	Yes
	Dual Certified SS 316/316L (CF8M/CF3M)	M20	Yes
b. Output/ Protocol	Analog Output		Digital Protocol
	4-20mA dc		HART Protocol
	4-20mA dc none		DE Protocol Foundation Fieldbus
c. Customer Interface Selections	Indicator	Ext Zero, Span & Config Buttons	Languages
	None	None	None
	None	Yes (Zero/Span Only)	None
	Advanced	None	EN, GE, FR, IT, SP, RU, TU
	Advanced	Yes	EN, GE, FR, IT, SP, RU, TU
	Advanced	None	EN, CH, JP
	Advanced	Yes	EN, CH, JP
	Standard (w/internal Zero, Span & Conf Buttons)	None	EN, RU
	Standard (w/internal Zero, Span & Conf Buttons)	Yes	EN, RU

A __	*	*	*
B __	*	*	*
C __	*	*	*
D __	*	*	*
E __	*	*	*
F __	*	*	*
G __	*	*	*
H __	*	*	*

_H _	*	*	*
_D _	u	u	u
_F _	*	*	*

__0	*	*	*
__A	f	f	f
__D	*	*	*
__E	*	*	*
__H	*	*	*
__J	*	*	*
__S	q	q	q
__T	q	q	q

TABLE V	CONFIGURATION SELECTIONS		
a. App S/W	Diagnostics		
	Standard Diagnostics		
	Advanced Diagnostics (Above with Plugged Impulse Detection PILD)		
b. Output Limit, Failsafe & Write Protect Settings	Write Protect	Fail Mode	High & Low Output Limits ³
	Disabled	High> 21.0mAdc	Honeywell Std (3.8 - 20.8 mAdc)
	Disabled	Low< 3.6mAdc	Honeywell Std (3.8 - 20.8 mAdc)
	Enabled	High> 21.0mAdc	Honeywell Std (3.8 - 20.8 mAdc)
	Enabled	Low< 3.6mAdc	Honeywell Std (3.8 - 20.8 mAdc)
	Enabled	N/A	N/A Fieldbus or Profibus
	Disabled	N/A	N/A Fieldbus or Profibus
c. General Configuration	General Configuration		
	Factory Standard Customer Configuration (Unit Data Required)		

1 __	*	*	*
2 __	*	*	*

_1 _	f	f	f
_2 _	f	f	f
_3 _	f	f	f
_4 _	f	f	f
_5 _	g	g	g
_6 _	g	g	g

__S	*	*	*
__C	*	*	*

² Left side/Right side as viewed from the customer connection perspective

³ NAMUR Output Limits 3.8 - 20.5mAdc can be configured by the custom

STA84L, 87L
STA82L
STA822
STA840

TABLE VI	CALIBRATION & ACCURACY SELECTIONS		
Accuracy and Calibration	Accuracy	Calibrated Range	Calibration Qty
	Standard	Factory Std	Single Calibration
	Standard	Custom (Unit Data Required)	Single Calibration
	Standard	Custom (Unit Data Required)	Dual Calibration
	Standard	Custom (Unit Data Required)	Triple Calibration
	High Accuracy	Factory Std	Single Calibration
	High Accuracy	Custom (Unit Data Required)	Single Calibration
	High Accuracy	Custom (Unit Data Required)	Dual Calibration
	High Accuracy	Custom (Unit Data Required)	Triple Calibration

A	*	*	*
B	*	*	*
C	*	*	*
D	*	*	*
E	s	s	s
F	s	s	s
G	s	s	s
H	s	s	s

TABLE VII	ACCESSORY SELECTIONS	
a. Mounting Bracket	Bracket Type	Material
	None	None
	Angle Bracket	Carbon Steel
	Angle Bracket	304 SS
	Angle Bracket	316 SS
	Marine Approved Bracket	Carbon Steel
	Marine Approved Bracket (In-Line)	Carbon Steel
	Marine Approved Bracket	304 SS
	Marine Approved Bracket (In-Line)	304 SS
	Flat Bracket	Carbon Steel
	Flat Bracket	304 SS
	Flat Bracket	316 SS
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)	
c. Unassembled Conduit Plugs & Adapters	Unassembled Conduit Plugs & Adapters	
	No Conduit Plugs or Adapters Required	
	1/2 NPT Male to 3/4 NPT Female 316 SS Certified Conduit Adapter	
	1/2 NPT 316 SS Certified Conduit Plug	
	M20 316 SS Certified Conduit Plug	
	Minifast® 4 pin (1/2 NPT) (not suitable for X-Proof applications)	
	Minifast® 4 pin (M20) (not suitable for X-Proof applications)	

0 _ _ _	*	*	*
1 _ _ _	*	*	*
2 _ _ _	*	*	*
3 _ _ _	*	*	*
8 _ _ _	*		
9 _ _ _		*	*
4 _ _ _	*		
A _ _ _		*	*
5 _ _ _	*	*	*
6 _ _ _	*	*	*
7 _ _ _	*	*	*

_ 0 _ _	*	*	*
_ 1 _ _	*	*	*
_ 2 _ _	*	*	*

_ _ A0	*	*	*
_ _ A2	n	n	n
_ _ A6	n	n	n
_ _ A7	m	m	m
_ _ A8	n	n	n
_ _ A9	m	m	m

TABLE VIII	OTHER Certifications & Options: (String in sequence comma delimited (XX, XX, XX,...))	
Certifications & Warranty	None - No additional options required	
	Low Temperature Rating (-50 deg C min. ambient operative temperature limit)	
	NACE MR0175; MR0103; ISO15156 (FC33338) Process wetted parts only	
	NACE MR0175; MR0103; ISO15156 (FC33339) Process wetted and non-wetted parts	
	Marine (DNV, ABS, BV, KR, LR)	
	EN10204 Type 3.1 Material Traceability (FC33341)	
	MID Approved Transmitter - Contact Tech Support for specific MID approved ranges	
	Certificate of Conformance (F3391)	
	Calibration Test Report & Certificate of Conformance (F3399)	
	Certificate of Origin (F0195)	
	FMEDA (SIL 2/3) Certification (FC33337)	
	Over-Pressure Leak Test Certificate (1.5X MAWP) (F3392) for Transmitter Only	
	Helium Leak Test for Transmitter Only	
	Cert Clean for O ₂ or CL ₂ service per ASTM G93	
	PMI Certification ¹	
	Extended Warranty Additional 1 year for Transmitter Only	
	Extended Warranty Additional 2 years for Transmitter Only	
	Extended Warranty Additional 3 years for Transmitter Only	
	Extended Warranty Additional 4 years for Transmitter Only	
	Extended Warranty Additional 15 years for Transmitter Only	
	Integrate Manifold with combined TP test for assembly	
	Detailed Manifold configuration required	
	Integrate Manifold with combined Helium leak test for assembly	
	Detailed Manifold configuration required	

*: TP combined test is carried out at 1.5 times of lowest pressure rating of any of the transmitter or the manifold

00	*	*	*
LT	w	w	w
FG	*	*	*
F7	c	c	c
MT	d	d	d
FX	*	*	*
MD		v	
F3	*	*	*
F1	*	*	*
F5	*	*	*
FE	j	j	j
TP	*	*	*
HT	*	*	*
OX	e	e	e
PM	*	*	*
01	*	*	*
02	*	*	*
03	*	*	*
04	*	*	*
15	*	*	*
MI	1	1	1
MH	1	1	1

TABLE IX	Manufacturing Specials	
Factory	Factory Identification	

0000	*	*	*
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RESTRICTIONS

Restriction Letter	Available Only with		Not Available with	
	Table	Selection(s)	Table	Selection(s)
a			VIII	FG, F7
c	I d	0,N,K,D,B	I a	D,H,K,L,8,
d	IV a	C,D,G,H	VIIa	1,2,3,5,6,7
e	Ib	2		
f			IV b	F
g			IVb	H, D
h			Ie	4,5,6
			VIIa	1,2,3,4,5,6,7,8
j	IV b	H	Vb	1,2,6
m	IV a	B,D, F, H		
n	IV a	A,C, E, G		
p			III	B - No CRN number available
q	IV b	H		
s	Ia	A,E		
t			1a	J, K, 7, L, 8
u			Va	2
			Vla	C,D,G,H
v	IV a	C,D,G,H	IVb	D,F
w	Ib	1	VIII	FE
1			VIII	TP,HT
b	Select Only one option from this group			

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 Gold plated and STG and STA in-line construction pressure transmitters.

FIELD INSTALLABLE ACCESSORY KITS

Description	Kit Number
Integrally Mounted Advanced Indicator Kit (compatible with all Electronic Modules)	50049846-501
Standard Display Module	50126003-501
Terminal Strip w/o Lightning Protection for HART or DE Modules	50075472-531
Terminal Strip w/ Lightning Protection Kit for HART or DE Modules	50075472-532
Terminal Strip w/o Lightning Protection FFB Module	50075472-533
Terminal Strip w/ Lightning Protection Kit for FFB Module	50075472-534
HART Electronics Module	50049849-501
HART Electronics Module w/ connection for external configuration buttons	50049849-502
DE Electronics Module	50049849-503
DE Electronics Module w/ connection for external configuration buttons	50049849-504
FFB Electronics Module Kit	50049849-507
FFB Electronics Module w/ connection for external configuration buttons	50049849-508

Note P - For part number pricing please refer to E-Commerce portal.

PRODUCT MANUALS

Description	Part Number
ST 800 Smart Transmitter User Manual - English	34-ST-25-35
ST 800 Smart Transmitter HART/DE Communications Manual - English	34-ST-25-38
ST 800 Smart Transmitter Safety Manual - English	34-ST-25-37
ST 800 Smart Transmitter Foundation Fieldbus Manual - English	34-ST-25-39
ST 800 Smart Transmitter Function Block Manual - English	34-ST-25-42

All product documentation is available at www.honeywellprocess.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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engine <http://bit.ly/2N5Vldi>

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Web

Knowledge Base search
engine <http://bit.ly/2N5Vldi>

Specifications are subject to change without notice.

For more information

To learn more about SmartLine Pressure
Transmitters
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Or contact your Honeywell Account Manager

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