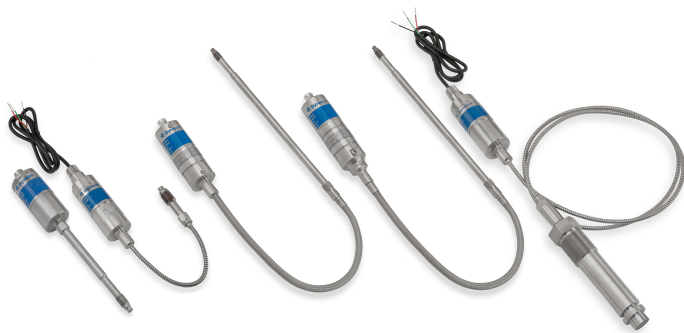


## Dynisco SPX 4-Series

GENERAL PURPOSE SMART PRESSURE SENSORS  
FOR HAZARDOUS LOCATIONS



### Description

The Dynisco SPX 4-Series is a smart 4-20mA pressure transmitter designed for use in hazardous locations and are available with a variety of different process and electrical connections

These amplified transmitters eliminate the need for external signal conditioning. All models can interface directly with distributed control systems, PLC's, computers, and similar high level control devices. Optional thermocouple or RTD configurations are available to provide melt temperature.

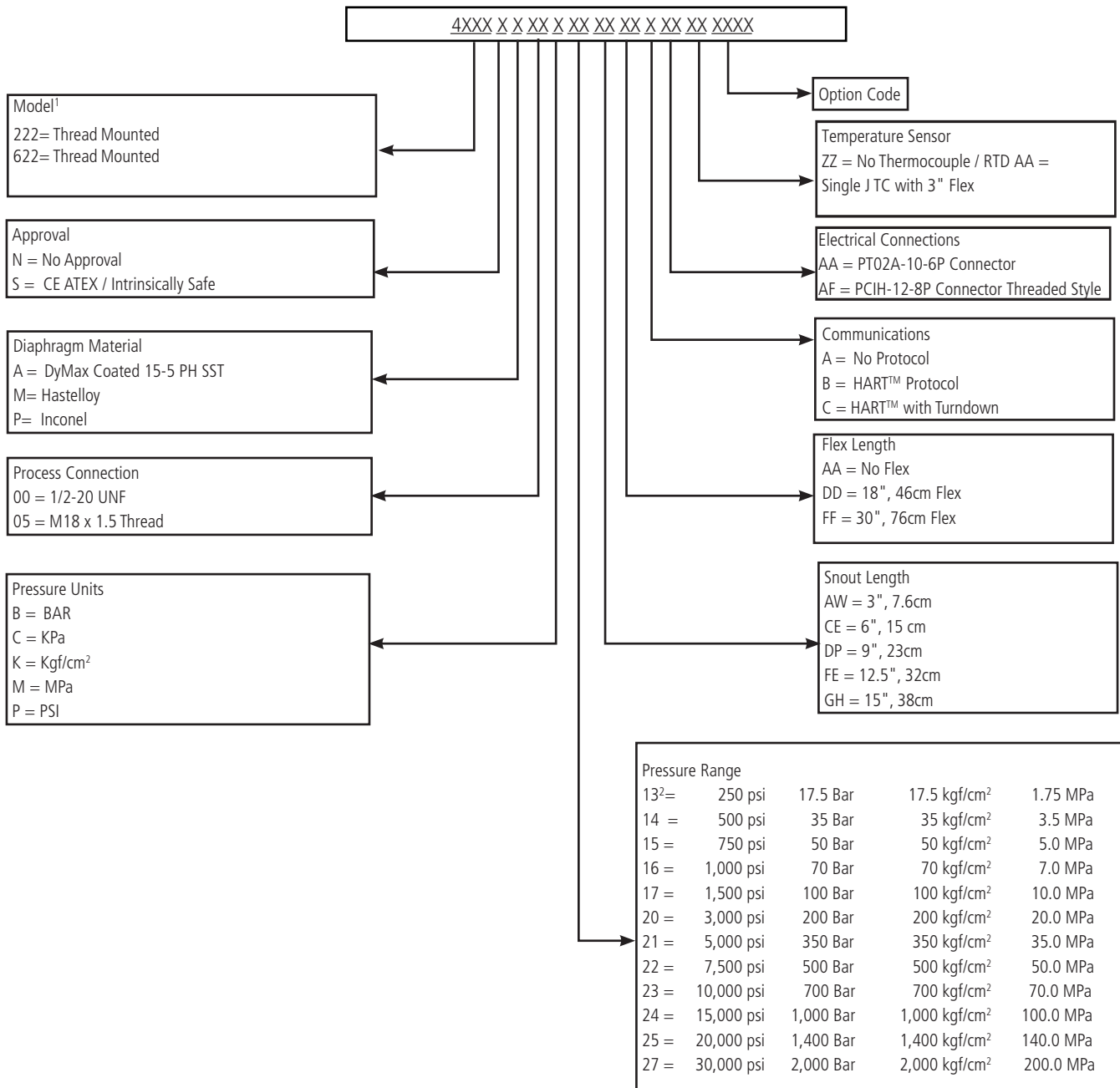
### Features

- 4-20mA loop-powered output
- +/- 0.25% accuracy available
- Wide selection of pressure ranges available
- Turndown 6:1
- Configurations available for use in hazardous locations
- Remotely configurable via HART
- Precise, repeatable pressure measurements
- Output supplied directly to DSC or PLC
- Meets CE requirements
- CE ATEX Intrinsically Safe Approved
- IECEx Intrinsically Safe
- SIL 2 Certified (pressure output)
- PL 'c' Certified (relay output)
- Additional approvals are available

Performance Characteristics	
<b>Output</b>	4 - 20 mA, with optional HART™
<b>Input Voltage</b>	16 - 36 Vdc (Std); 16 - 30 Vdc (ATEX IS)
<b>Accuracy</b> <i>Accuracy is defined as the combined error expressed as a percentage of full scale output with the specifications of: Electronics ambient temperature, capillary of &lt;= 36"; DyMax coated 15-5 SST diaphragm; Best Straight Line (BSL) %FS, per ISA-37.1 Consult Factory for availability and specifications of other configurations.</i>	4222 ± 0.25% for pressure ranges ≥ 1,500 psi; ± 0.50% for pressure ranges < 1,500 psi 4232 ± 0.25% for pressure ranges ≥ 1,500 psi; ± 0.50% for pressure ranges < 1,500 psi 4352 ± 0.25% for pressure ranges ≥ 1,500 psi; ± 0.50% for pressure ranges < 1,500 psi 4502 ± 0.50% 4622 ± 0.50% 4672 ± 0.50%
<b>Repeatability</b>	±0.1%
<b>Rangeability</b>	6:1 Turndown
<b>Over Pressure</b>	2X FSO or 35,000 psi, whichever is less 1.2 X FSO 35,000 - 72,500 psi
<b>Zero Balance Adjustment Range</b>	-40% to +10%; -80% to 20% for FSP < 500 psi
<b>Load Resistance</b>	500 Ω @ 24 Vdc, 1,000 Ω @ 36 Vdc
<b>Electronics Ambient Temperature</b>	70°F (20°C)
<b>Electronics Operating Temperature</b>	-20 to 185°F (-29 to 85°C)
<b>Diaphragm Temperature</b>	750°F (400°C) max [SPX4502 model limited to 600°F (315°C)]
<b>Electronics Compensated Temperature Range</b>	0 to 150°F (-18 to 65°C)
<b>Zero Shift (Electronics Temp Change)</b>	4222: 0.01% F.S./°F max (0.02% F.S./°C max) 4232: 0.01% F.S./°F max (0.02% F.S./°C max) 4352: 0.01% F.S./°F max (0.02% F.S./°C max) 4502: 0.01% F.S./°F max (0.02% F.S./°C max) 4622: 0.05% F.S./°F max (0.10% F.S./°C max) 4672: 0.05% F.S./°F max (0.10% F.S./°C max)
<b>Span Shift (Electronics Temp Change)</b>	4222: 0.01% F.S./°F max (0.02% F.S./°C max) 4232: 0.01% F.S./°F max (0.02% F.S./°C max) 4352: 0.01% F.S./°F max (0.02% F.S./°C max) 4502: 0.01% F.S./°F max (0.02% F.S./°C max) 4622: 0.02% F.S./°F max (0.04% F.S./°C max) 4672: 0.02% F.S./°F max (0.04% F.S./°C max)
<b>Zero Shift (Snout Temp Change)</b>	4222: 15 psi/100°F (27 psi/100°C) typical 4232: 15 psi/100°F (27 psi/100°C) typical 4352: 15 psi/100°F (27 psi/100°C) typical 4502: 1 psi/100°F (from 75-450°F); 2 psi/100°F (from 450-600°F) typical 4622: 25 psi/100°F (45 psi/100°C) typical 4672: 25 psi/100°F (45 psi/100°C) typical

Mechanical Characteristics	
<b>Mounting Torque</b>	4222: 500 inch-lbf max 4232: 50 inch-lbf max 4352: 500 inch-lbf max 4502: 350 inch-lbf max 4622: 500 inch-lbf max 4672: 500 inch-lbf max
<b>Standard Wetted Parts</b>	DyMax coated 15-5 PH SST
Approvals & Certifications	
ATEX/IECEX Intrinsically Safe	
SIL 2 (pressure output) & PL'c' (relay output)	
Additional approvals available (consult factory)	

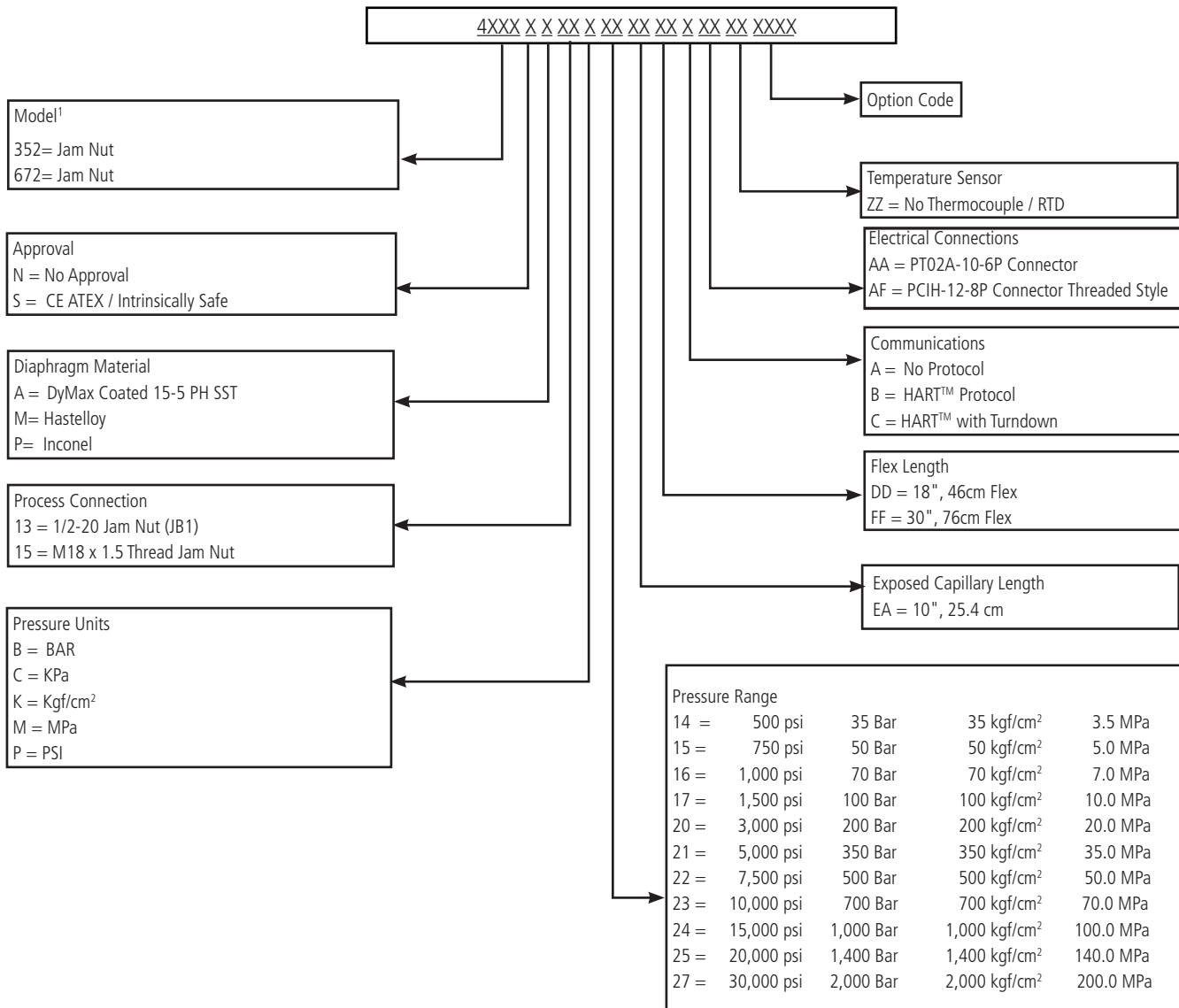
## Ordering Guide for Models SPX4222 & SPX4622



<sup>1</sup>Other configurations are available. Please consult factory.

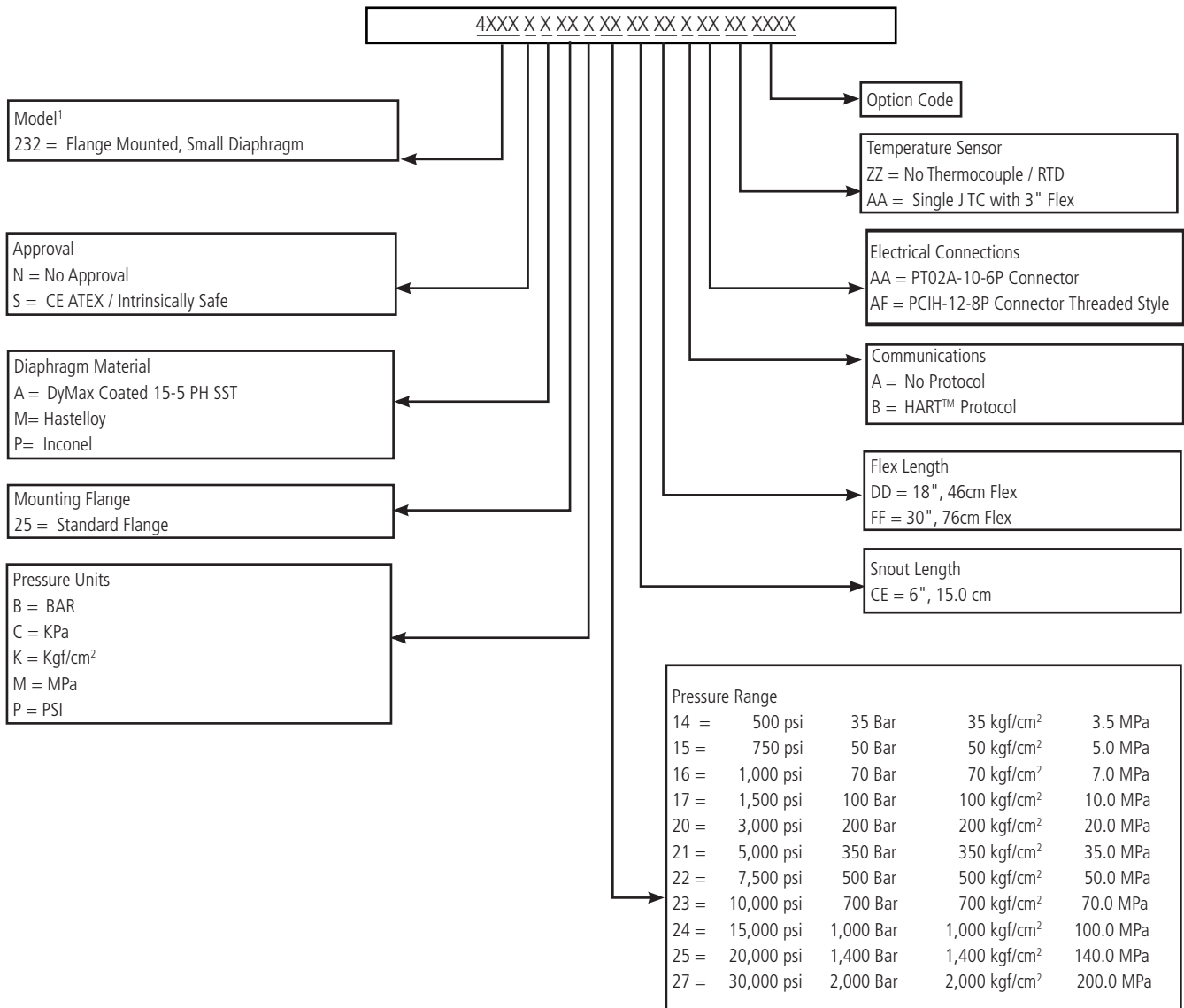
<sup>2</sup>Available in M18 x 1.5 thread only

## Ordering Guide for Models SPX4352 & SPX4672



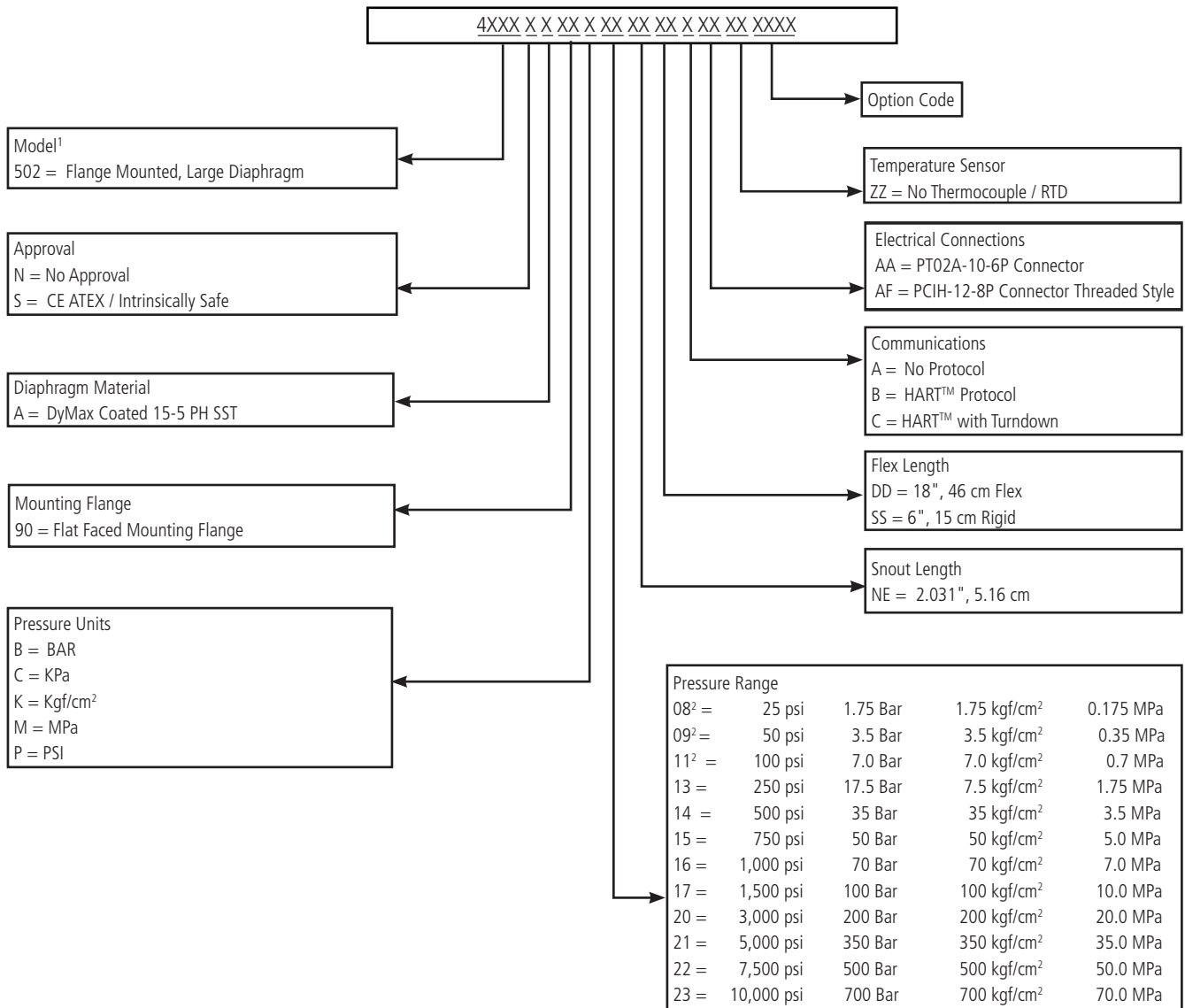
<sup>1</sup>Other configurations are available. Please consult factory.

## Ordering Guide for Model SPX4232



<sup>1</sup>Other configurations are available. Please consult factory.

## Ordering Guide for Model SPX4502

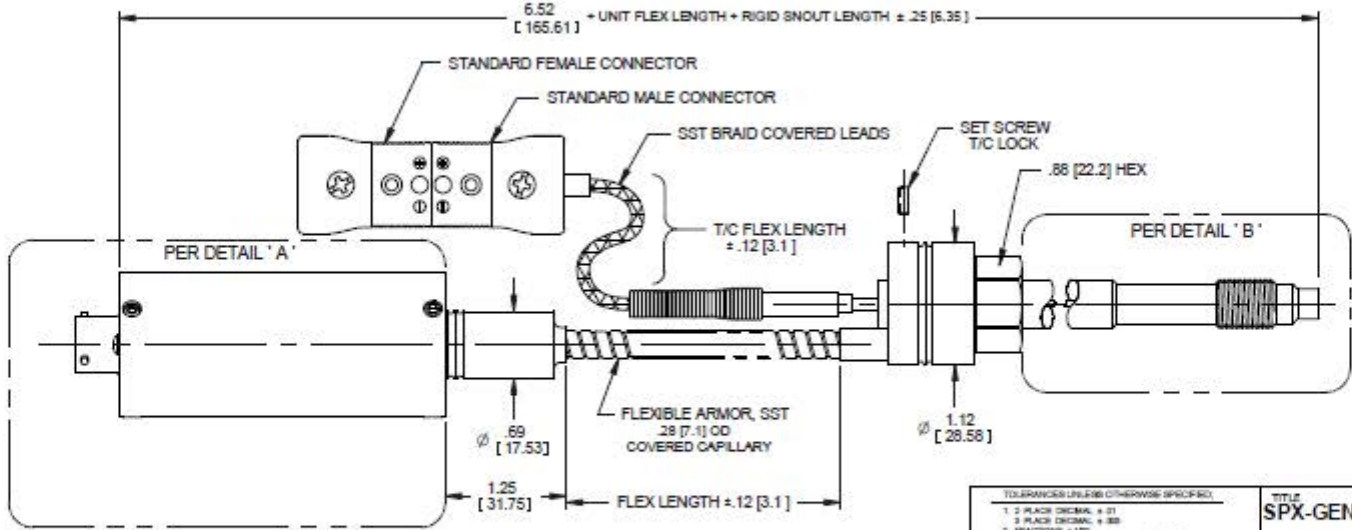
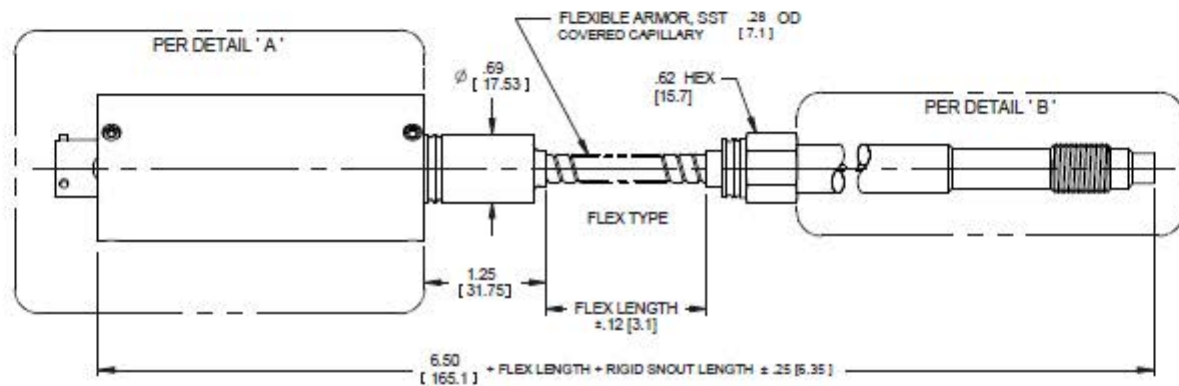
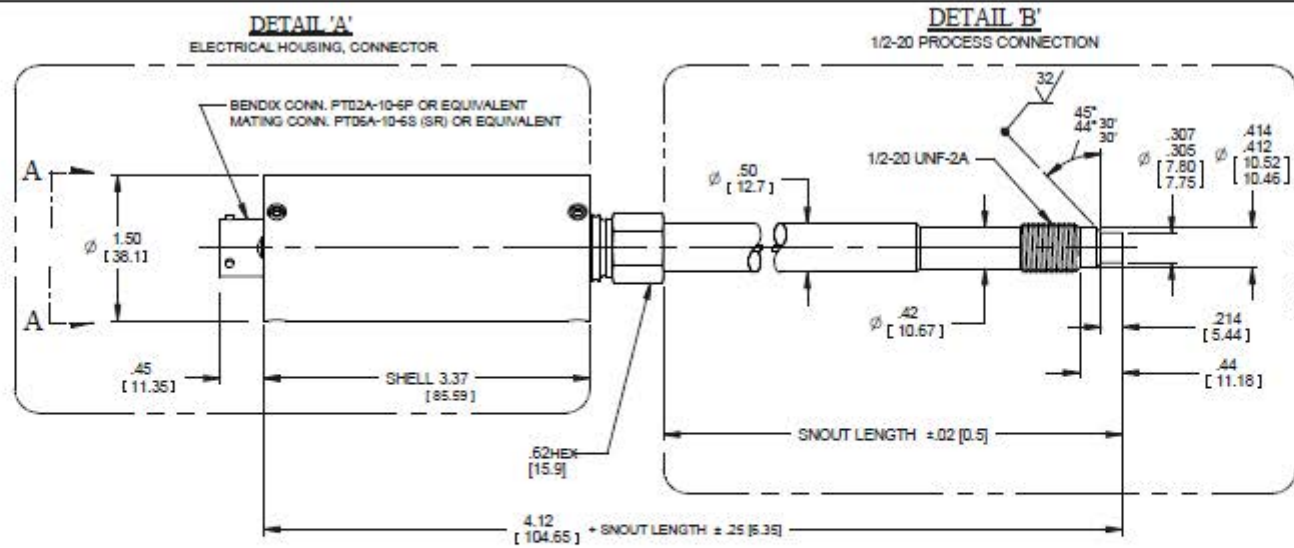


<sup>1</sup>Other configurations are available. Please consult factory.

<sup>2</sup>Pressure ranges below 250 psi are supplied with rigid capillary.

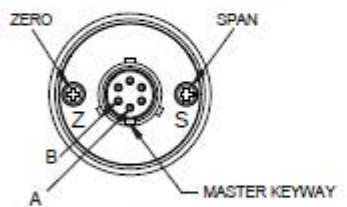
REV	ECO	BY	APP	DATE
C	47068	TP	LEB	11/18/16 R

000405



CONNECTOR WIRING	
PIN	FUNCTION
A	POWER + / SIGNAL +
B	POWER - / SIGNAL -
C	NO
D	CONNECTION
E	Rcal -
F	Rcal +

ZERO AND SPAN ADJUSTS ARE PROTECTED BY SEAL SCREWS



VIEW A-A

NOTES:  
UNLESS OTHERWISE SPECIFIED:  
1. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

TOLERANCES UNLESS OTHERWISE SPECIFIED:	
1. 2 PLACE DECIMAL ± .01	
2. PLACE DECIMAL ± .005	
3. FRACTIONS ± .005	
4. DRILLS ± .0004	
5. ANGLES ± .05°	
6. ROUNDS ± .005 MAX	
7. PART TO BE FREE OF BURRS	
8. ALL DIMENSIONS ARE IN INCHES	
MODEL NO.	X
DO NOT SCALE DRAWING	
MATERIAL	X

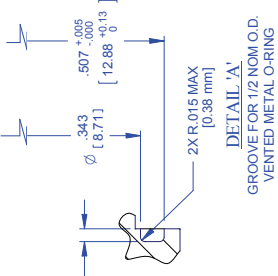
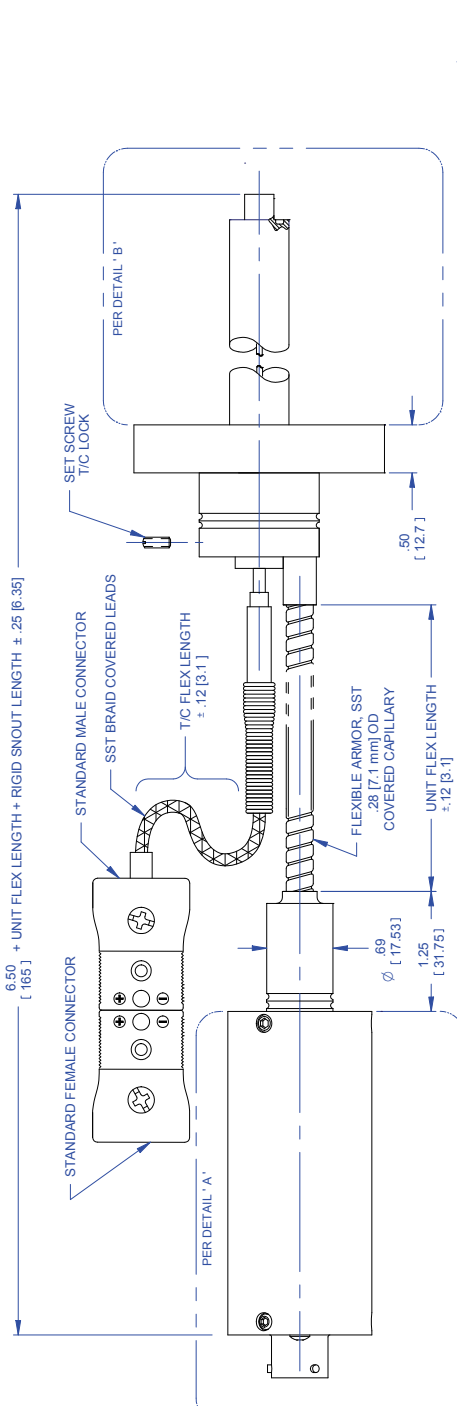
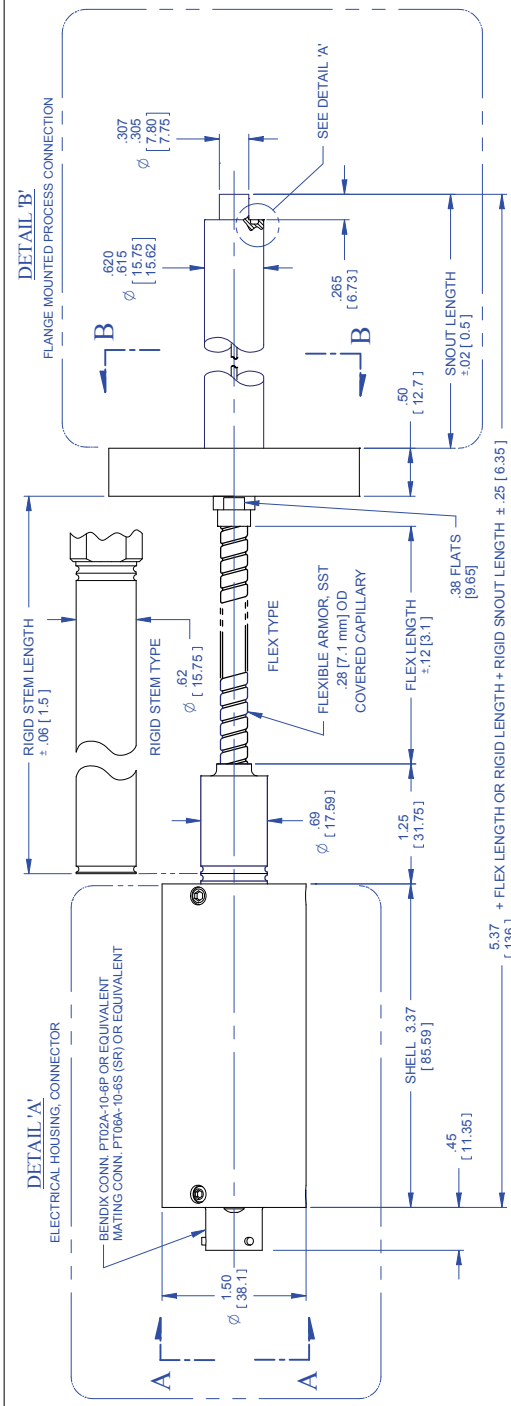
TITLE	
SPX-GEN2 OUTLINE MODELS	
4222, 4622	
FLEX, RIGID & TPT	
DRAWN	DRG
DATE	7/20/10
CHECKED	DATE
APPROVED	MJL DATE 7/20/10
FINISH	63 ✓

<small>SCHEMATIC MAY BE OTHERWISE PROVIDED BY CONTRACT. THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DYNISCO AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN THE MAKING FOR THE MANUFACTURE OR SALE OF APPARATUS WITHOUT PERMISSION.</small>		
SIZE	DWG. NO.	REV
C	000405	C
SCALE NONE SHEET 1 OF 1		



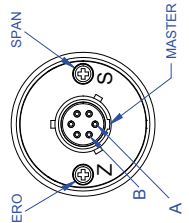
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16 R

000408



CONNECTOR WIRING	
PIN	FUNCTION
A	POWER + / SIGNAL +
B	POWER - / SIGNAL -
C	NO CONNECTION
D	NO CONNECTION
E	Recal -
F	Recal +

ZERO AND SPAN ADJUSTS ARE PROTECTED BY SEAL SCREWS



VIEW A-A

NOTES:  
UNLESS OTHERWISE SPECIFIED:  
1. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

TOLERANCES UNLESS OTHERWISE SPECIFIED:	
1	2 PLACE DECIMAL 1.00
2	3 PLACE DECIMAL 1.00
3	DRILLS -0.0004
4	ANGLES ± 0.5° MAX
5	EDGES R .005 OR CHAMFER MAX
6	ALL DIMENSIONS ARE IN INCHES
TITLE SPX-GEN2 OUTLINES MODEL4232 FLEX, RIGID & TPT	
DRAWN	DATE 07/20/10
CHECKED	DATE
APPROVED	DATE 07/20/10
FINISH	DATE
MATERIAL	X
DO NOT SCALE DRAWING	

SIZE	DWG. NO.	REV.
C	000408	B
SCALE NONE		SHEET 1 OF 1



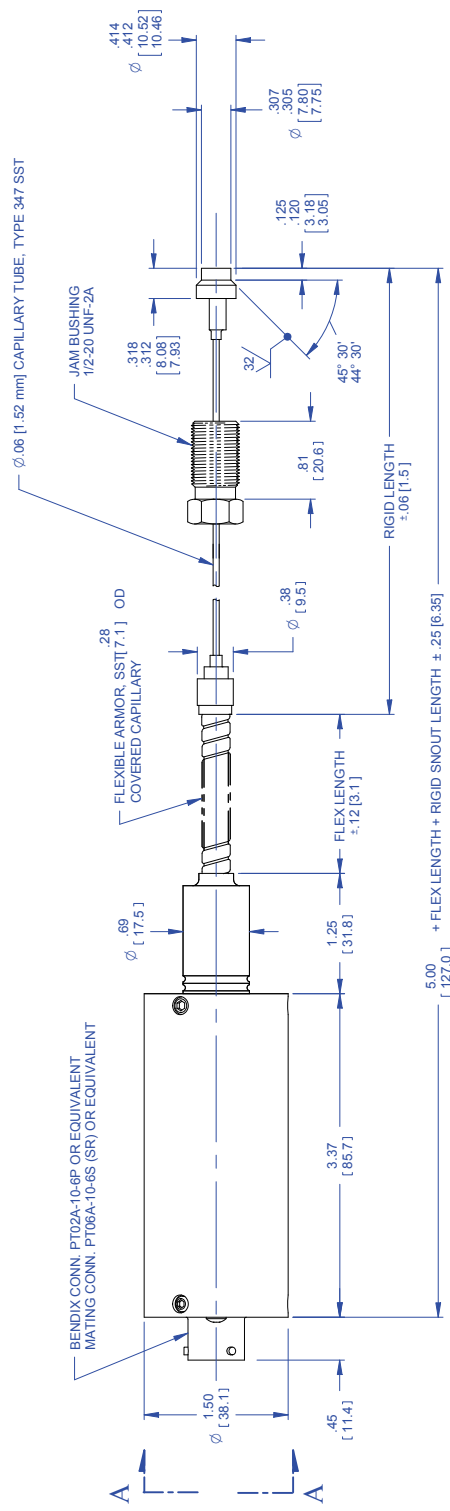
EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED AS THE BASIS FOR STRICT COMPLIANCE AND SHALL NOT BE USED FOR THE MANUFACTURE OR SALE OF APPARATUS WITHOUT PERMISSION.

MODEL NO	SPX-GEN2
DRAWN	DATE 07/20/10
CHECKED	DATE
APPROVED	DATE 07/20/10
FINISH	DATE
MATERIAL	X
DO NOT SCALE DRAWING	



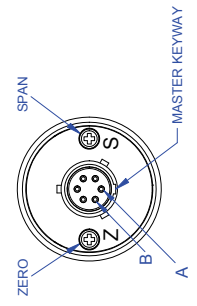
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16 R

000411



CONNECTOR WIRING	
PIN	FUNCTION
A	POWER + / SIGNAL +
B	POWER - / SIGNAL -
C	NO CONNECTION
D	NO CONNECTION
E	Real -
F	Real +

ZERO AND SPAN ADJUSTS ARE PROTECTED BY SEAL SCREWS



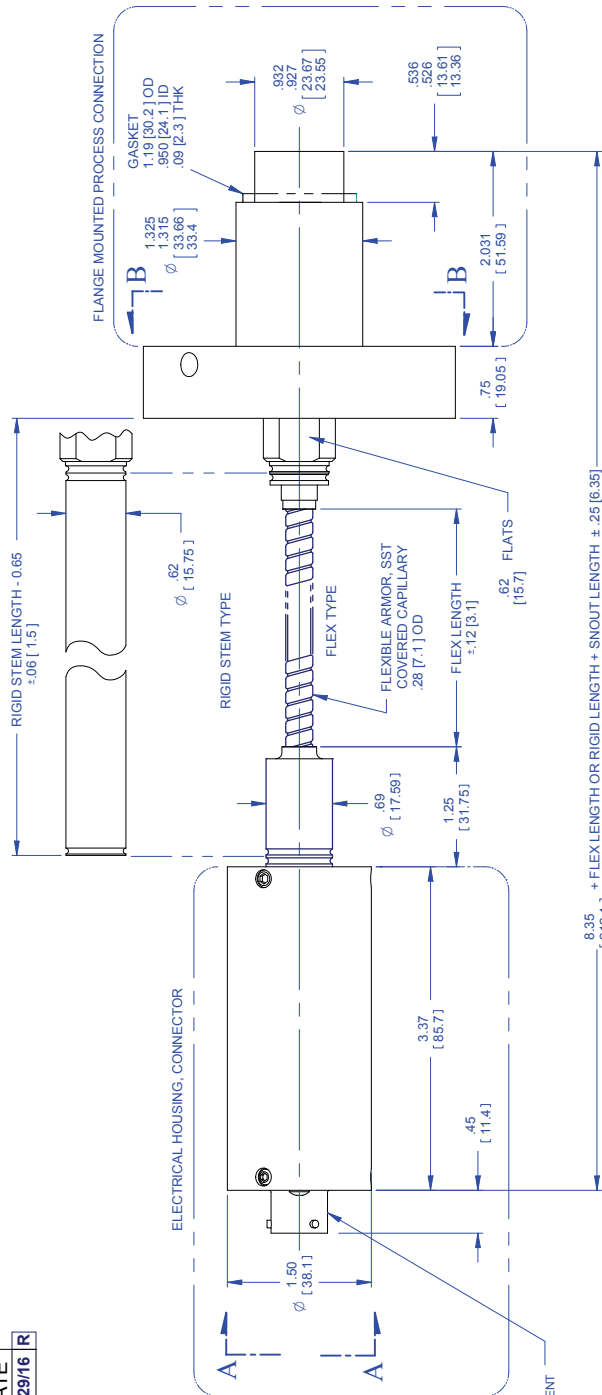
VIEW A-A

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL BE THE PROPERTY OF DYNISCO AND SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, FOR THE MANUFACTURE OR SALE OF APPARATUS WITHOUT PERMISSION.	
COMMERCIAL STREET BAKERSVILLE, SOUTH CAROLINA 29303	
TITLE <b>OUTLINE DRAWING</b> <b>SPX4352-GEN2</b> <b>SPX4672-GEN2</b>	DWG. NO. <b>C 000411</b>
MODEL NO. <b>SPX-GEN2</b>	DATE <b>06/15/10</b>
DRAWN <b>MJL</b>	DATE <b>08/12/10</b>
CHECKED <b>MJL</b>	DATE <b>08/12/10</b>
APPROVED <b>63</b>	FINISH <b>63</b>
DO NOT SCALE DRAWING	MATERIAL <b>X</b>
SCALE <b>NONE</b>	SHEET <b>1</b> OF <b>1</b>

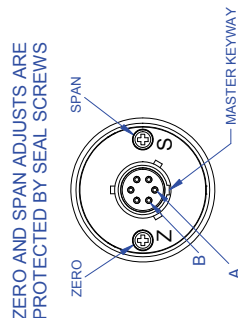
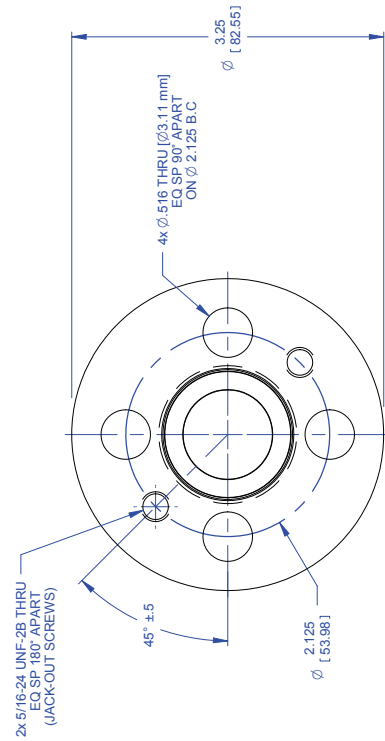
NOTES:  
 UNLESS OTHERWISE SPECIFIED:  
 1. ALL DIMENSIONS ARE IN INCHES [ MILLIMETERS ]

REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16

000412



BENDIX CONN. PT02A-10-6P OR EQUIVALENT  
MATING CONN. PT06A-10-6S (SR) OR EQUIVALENT



ZERO AND SPAN ADJUSTERS ARE PROTECTED BY SEAL SCREWS

CONNECTOR WIRING	
PIN	FUNCTION
A	POWER + / SIGNAL +
B	POWER - / SIGNAL -
C	NO
D	CONNECTION
E	Rcal -
F	Rcal +

1. TO CHANGE UNLESS OTHERWISE SPECIFIED:
- 1.2 PLACE DECIMAL 1.01
  2. PLACE DECIMAL 1.005
  3. DRILLS - 0.050 DIA. ± .005
  4. DRILLS - 0.050 DIA. ± .005
  5. ANGLES ± 0.5°
  6. EDGES R .005 OR CHAMFER MAX
  7. PARTS TO BE DIMENSIONED IN INCHES
  8. ALL DIMENSIONS ARE IN INCHES

TITLE		SPX - GEN2 OUTLINE	
MODEL		MODEL 4502 FLEX / RIGID	
DRAWN	DRG	DATE	07/20/10
CHECKED	MJL	DATE	07/20/10
APPROVED		FINISH	63
MATERIAL	X		

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL BE THE PROPERTY OF DYNISCO AND SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS FOR THE MANUFACTURE OR SALE OF APPARATUS WITHOUT PERMISSION.

**Dynisco**  
COMMERCIAL STREET BUNKERS VA

SIZE DWG. NO. REV

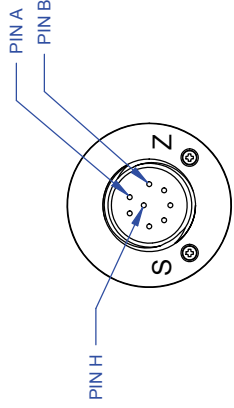
C 000412 B

SCALE NONE SHEET 1 OF 1

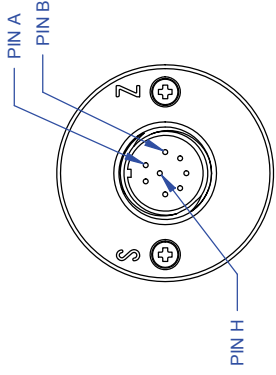
NOTES:  
UNLESS OTHERWISE SPECIFIED: \_\_\_\_\_ INCHES  
1. ALL DIMENSIONS ARE IN \_\_\_\_\_ [ MILLIMETERS ]

REV	ECO	BY	APP	DATE
A	46553	TP	LEB	07/29/16 R

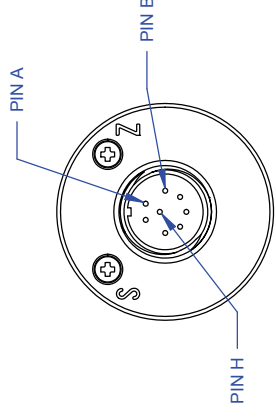
000652



8 - PIN PC  
O-RING WITH PUSH BUTTONS  
PCIH-12-8P



8 - PIN PC  
WELDED WITH PUSH BUTTONS  
PCIH-12-8P



8 - PIN PC  
WELDED WITH HALLS  
PCIH-12-8P

GUARDIAN CONNECTOR WIRING	
PIN	FUNCTION
A	POWER +
B	SIGNAL -
C	POWER -
D	NO CONNECTION
E	Rcal -
F	Rcal +
G	RELAY CONTACT
H	RELAY CONTACT

NOTE:  
1. THESE CONNECTOR OPTIONS ARE AVAILABLE ON MOST OF THE CONFIGURATIONS SHOWN ON THE PREVIOUS SHEETS.

TOLERANCES UNLESS OTHERWISE SPECIFIED: 1. PLACE DECIMAL ± .005 2. FRACTIONS ± 1/32 3. DRILLS < 0.5 DIA. ± .002 > 0.5 DIA. ± .003 4. ANGLES ± 0.5° MAX. 5. EDGES R .006 OR CHAMFER MAX. 6. PART TO BE FREE OF BURRS 7. ALL DIMENSIONS ARE IN INCHES.		TITLE <b>GUARDIAN SERIES CONNECTORS</b>	
MODEL NO. X		DRAWN TP DATE 7/27/16	
DO NOT SCALE DRAWING		CHECKED DATE	
MATERIAL X		APPROVED LEB DATE 7/27/16	
FINISH 63 ✓		SIZE B	
SCALE NONE		DWG. NO. 000652	
SHEET 1 OF 1		REV A	

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DYNISCO. ANY REPRODUCTION, REPRODUCTION OR COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS WITHOUT PERMISSION.



FORGE PROGRESS  
FRANKLIN, MA

©2016. Dynisco reserves the right to make changes without notice.  
Refer to [www.dynisco.com](http://www.dynisco.com) for access to Operator Manual and other support documentation.  
P/N: DSSPX4SERIES  
REV: 1116  
ECO: 47068



[www.dynisco.com](http://www.dynisco.com)



**Dynisco**

38 Forge Parkway  
Franklin, MA 02038  
USA

Hotline 1-800-Dynisco  
[www.dynisco.com](http://www.dynisco.com)  
Phone +1 508 541 9400  
Fax +1 508 541 6206  
Email [infoinst@dynisco.com](mailto:infoinst@dynisco.com)

**Dynisco Europe, GmbH**

Pfaffemstr. 21 Phone +49 7131 297 0  
74078 Hellbronn Fax +49 7131 297 166  
Germany Email [dyniscoeurope@dynisco.com](mailto:dyniscoeurope@dynisco.com)

**Dynisco Shanghai**

Building 7A, No. 568 Phone +86 21 34074072-819  
Longpan Rd Malu Toll Free +86 400 728 9117  
Jiading, 201801 China Fax +86 21 34074025