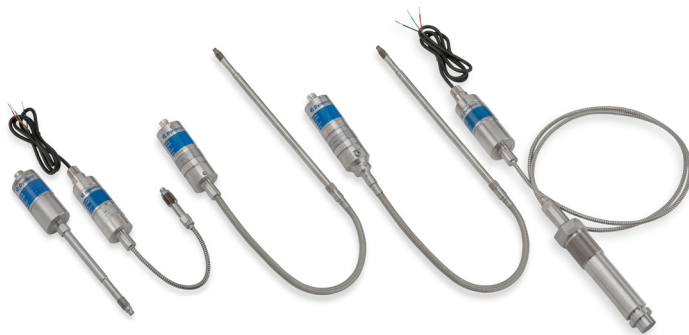


Dynisco SPX 2-Series

GENERAL PURPOSE SMART PRESSURE SENSORS
FOR HAZARDOUS LOCATIONS



Description

The Dynisco SPX 2-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. The SPX 2-Series is an all welded construction.

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.

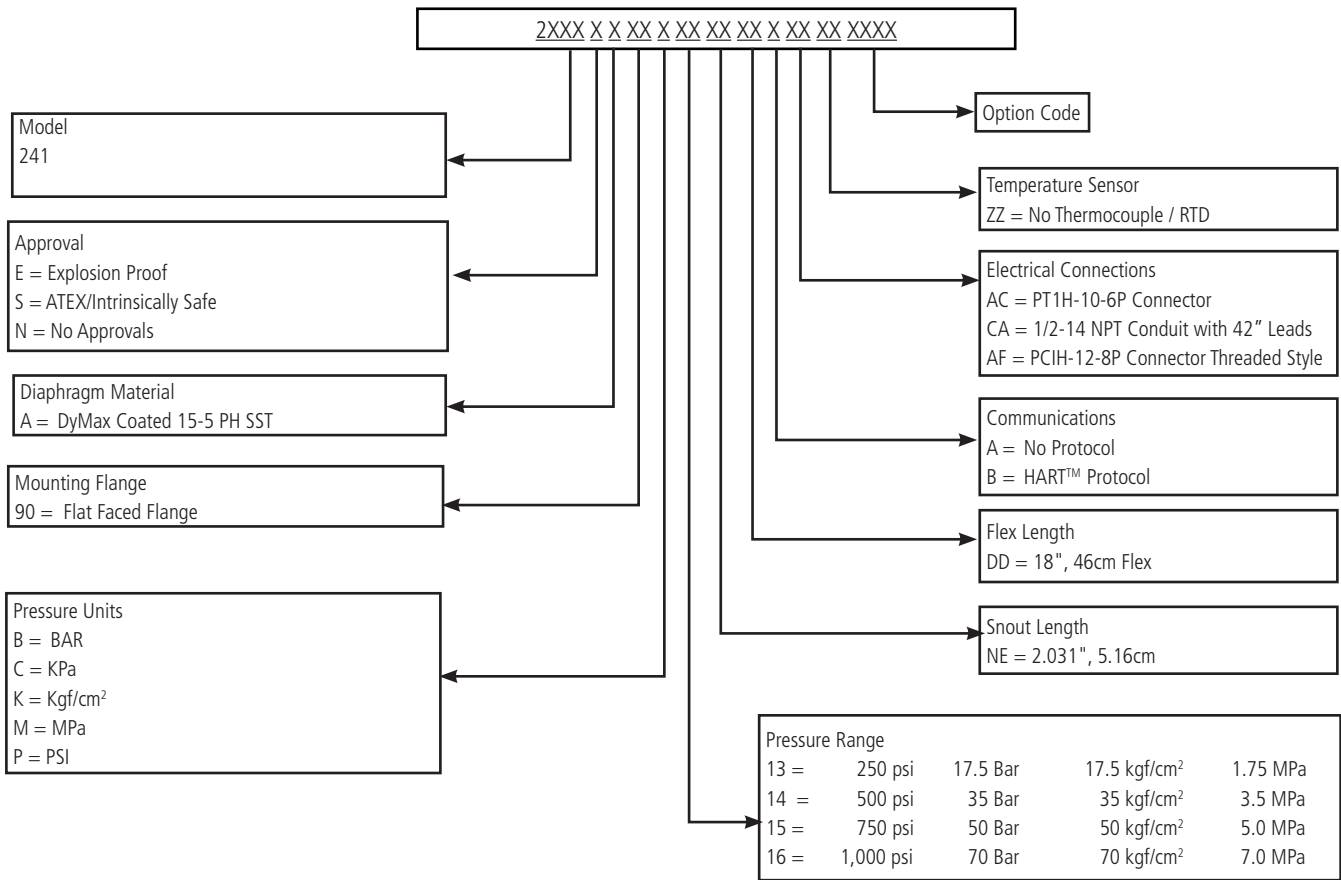
Features

- 4-20mA loop-powered output
- +/- 0.25% accuracy available
- Wide selection of pressure ranges available
- Turndown 6:1 (3:1 Turndown for model SPX 2290)
- 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
- FM Explosion Proof Approved
- CSA Explosion Proof Approved
- SIL 2 Certified (Pressure Output)
- PL'c' Certified (Relay Output)
- Additional approvals are available

Performance Characteristics SPX2- Series	
Output	4 - 20 mA, with optional HART™
Input Voltage	16 - 36 Vdc (Std); 16 - 30 Vdc (ATEX IS)
Accuracy <small>Accuracy is defined as the combined error expressed as a percentage of full scale output with the specifications of: Electronics ambient temperature, capillary of <= 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.</small>	2241 ± 1.0% 2242 ± 0.25% for pressure ranges >= 1,500 psi; ± 0.50% for pressure ranges < 1,500 psi 2243 ± 0.25% for pressure ranges >= 1,500 psi; ± 0.50% for pressure ranges < 1,500 psi 2244 ± 0.25% for pressure ranges >= 500 psi; ± 1.0% for pressure ranges < 500 psi 2290/2291/2292 ± 0.50%
Repeatability	±0.1%
Rangeability	6:1 Turndown (3:1 Turndown for Model SPX2290)
Over Pressure	2X FSO or 35,000 psi, whichever is less (2290, 2291, & 2292 1.5 x FSO for 10,000 psi)
Zero Balance Adjustment Range	-40% to +10%; -80% to 20% for FSP < 500 psi
Load Resistance	500 Ω @ 24 Vdc, 1,000 Ω @ 36 Vdc
Electronics Ambient Temperature	70°F (20°C)
Electronics Operating Temperature	-20 to 185°F (-29 to 85°C)
Diaphragm Temperature	750°F (400°C) max [Models 2241, 2244, 2290, 2291, 2292 limited to 600°F (315°C)]
Electronics Compensated Temperature Range	0 to 150°F (-18 to 65°C)
Zero Shift (Electronics Temp Change)	All Models: 0.01% F.S./°F max (0.02% F.S./°C max)
Span Shift (Electronics Temp Change)	All Models: 0.01% F.S./°F max (0.02% F.S./°C max)
Zero Shift (Snout Temp Change)	2241/2244//2290/2291/2292: 1 psi/100°F (from 75-450°F) typical 2 psi/100°F (from 450-600°F) typical 2242/2243: 15 psi/100°F (27 psi/100°C) typical

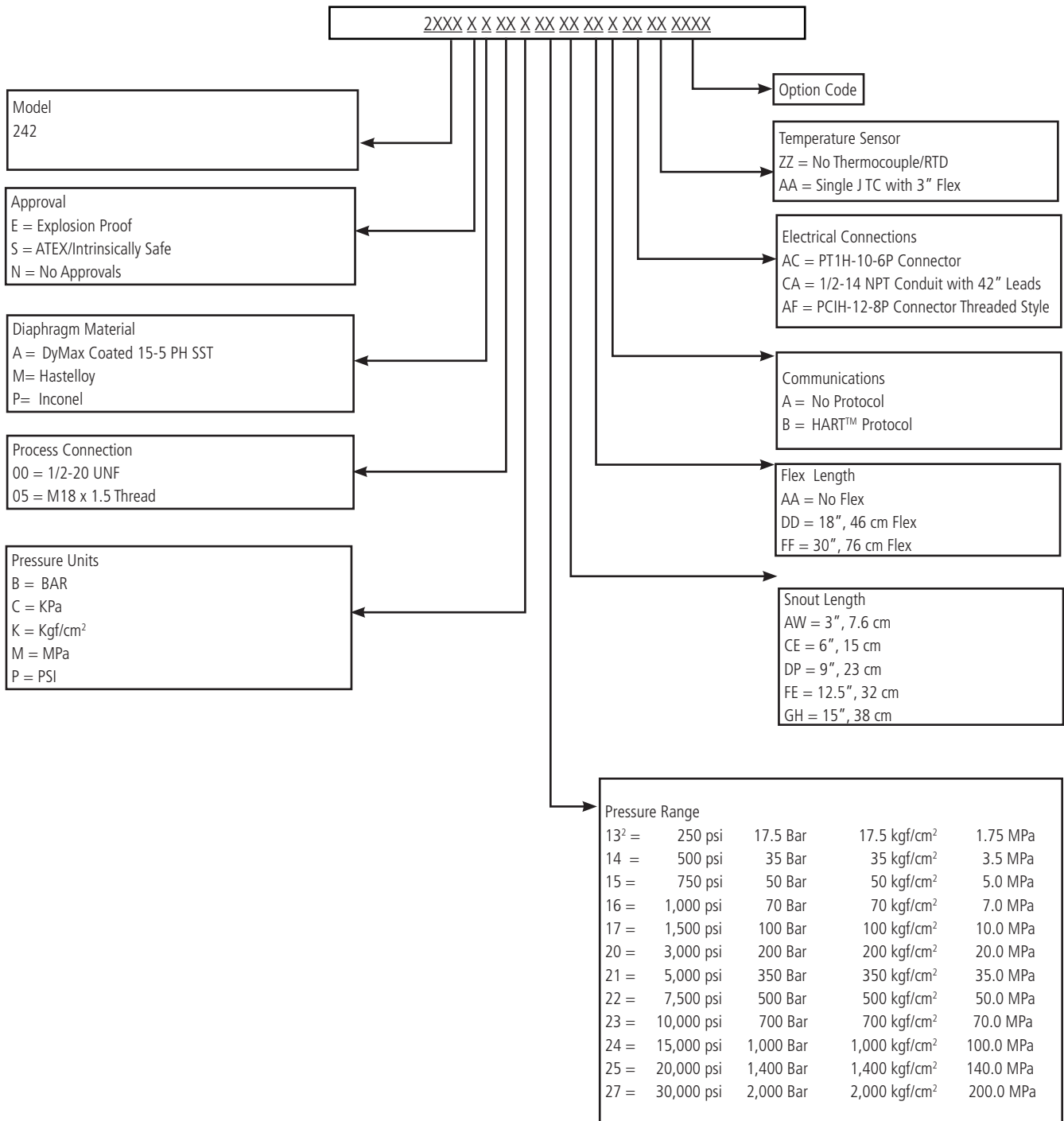
Mechanical Characteristics	
Mounting Torque	2241: 350 inch-lbf max 2242: 500 inch-lbf max 2243: 50 inch-lbf max 2244: 350 inch-lbf max 2290: 350 inch-lbf max 2291: 350 inch-lbf max 2292: 80 ft-lbf max
Standard Wetted Parts	DyMax coated 15-5 PH SST
Approvals & Certifications	
CE ATEX IS	
SIL 2 (pressure output) & PL'c' (relay output)	
FM & CSA Explosion Proof	
Additional Approvals are Available	

Ordering Guide for Models SPX2241¹



¹ Other configurations are available. Please consult factory.

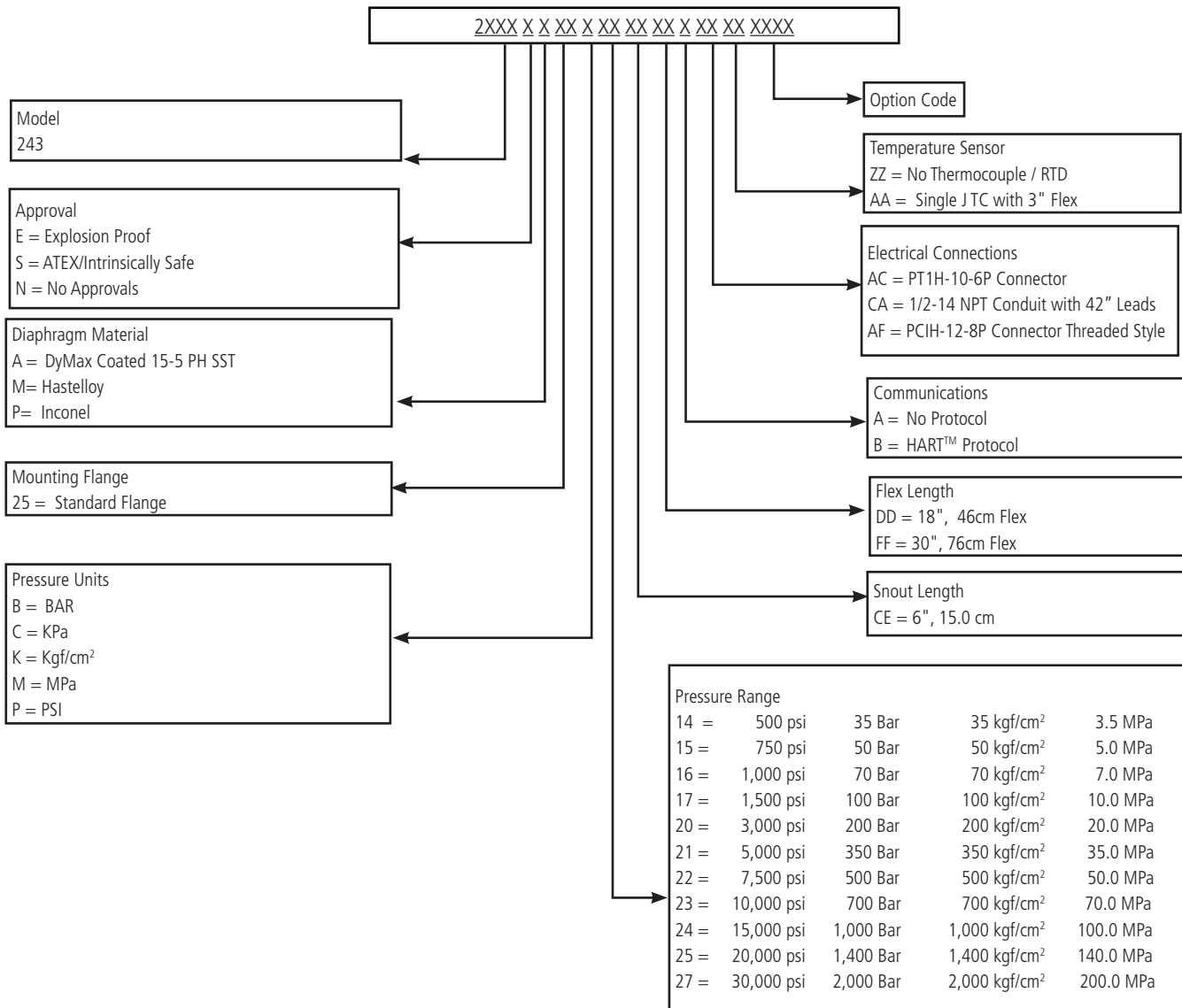
Ordering Guide for Models SPX2242¹



¹Other configurations are available. Please consult factory.

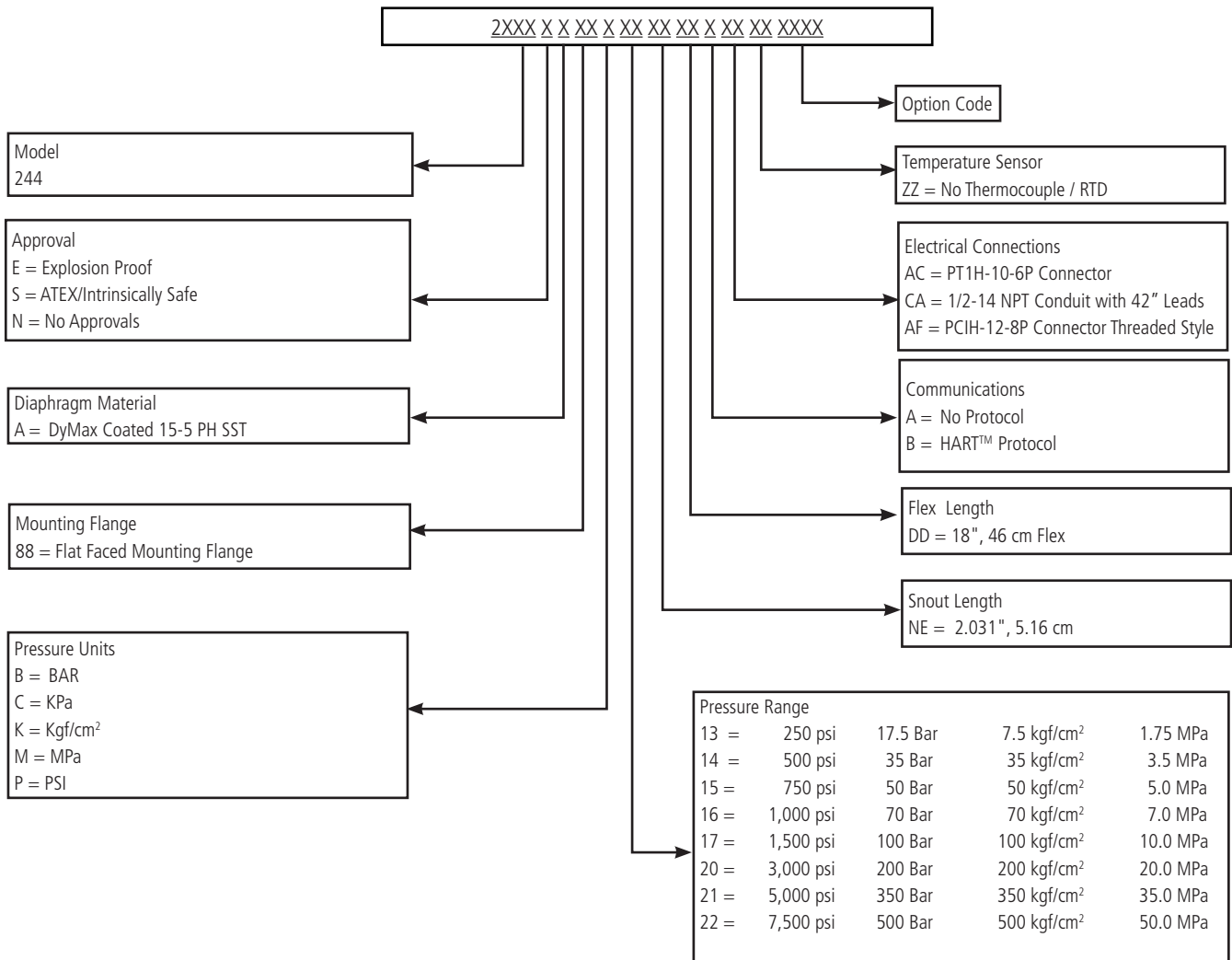
²Available in M18 x 1.5 thread only.

Ordering Guide for Models SPX2243¹



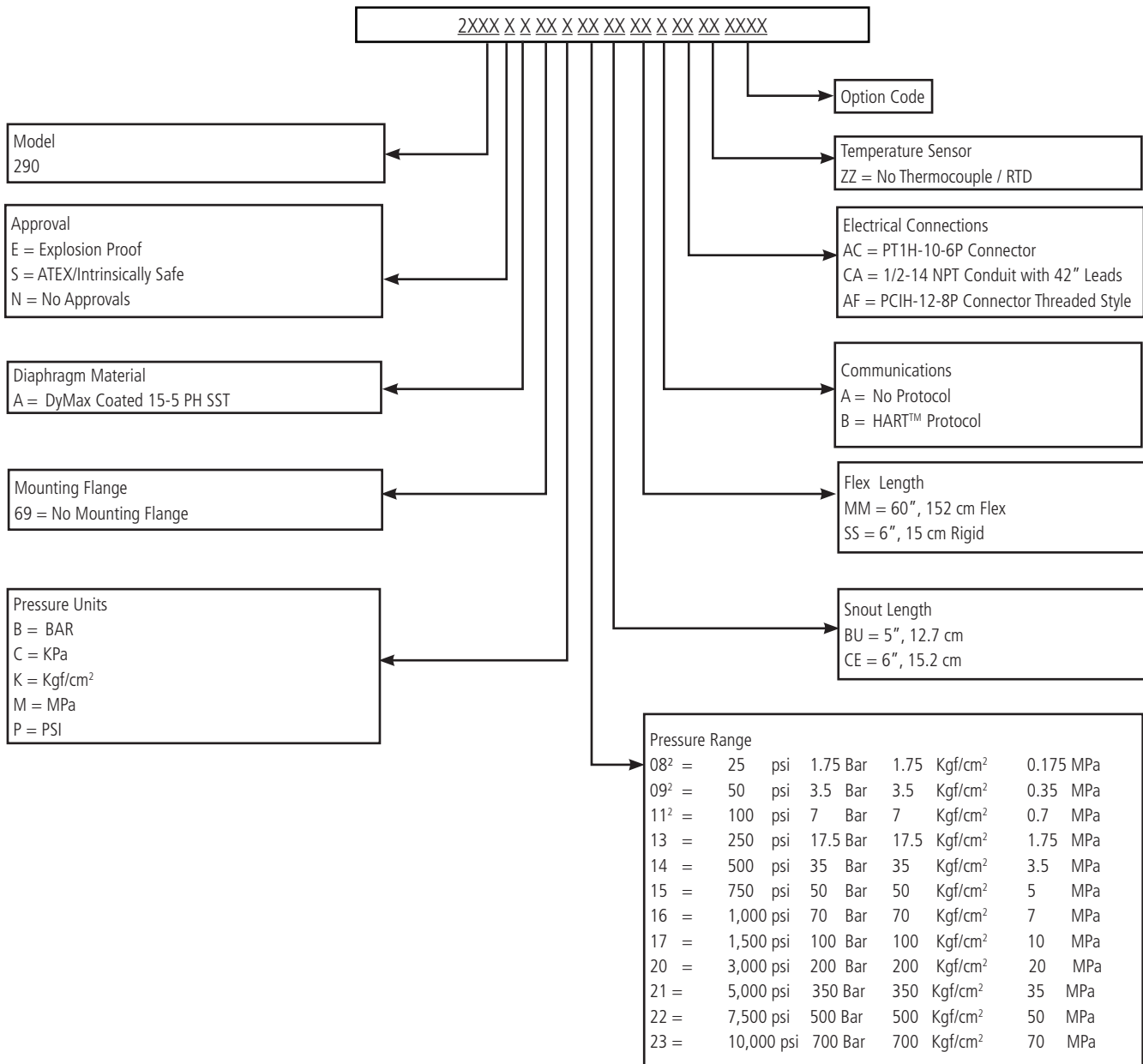
¹Other configurations are available. Please consult factory.

Ordering Guide for Models SPX2244¹



¹Other configurations are available. Please consult factory.

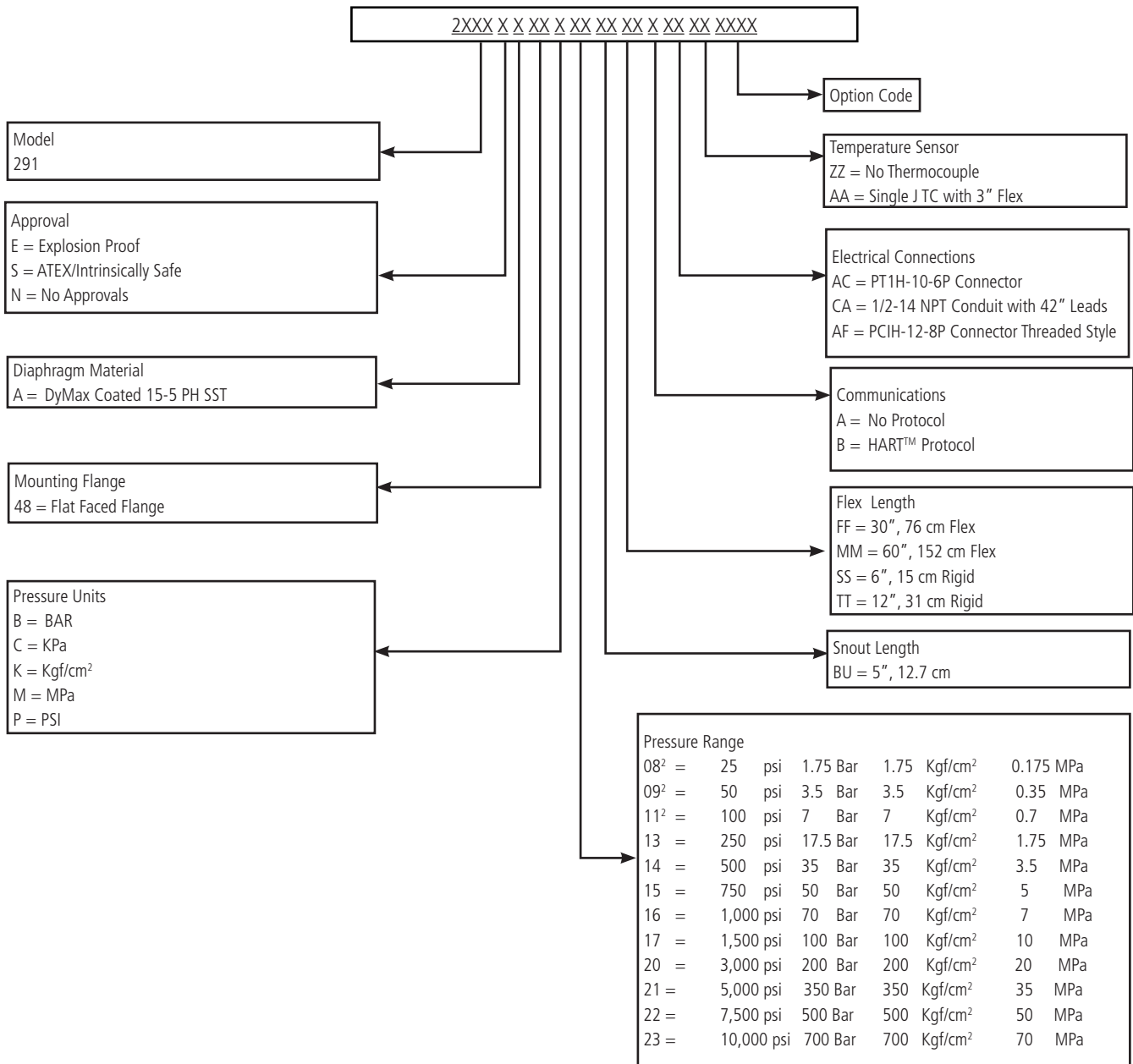
Ordering Guide for Models SPX2290¹



¹Other configurations are available. Please consult factory.

²Pressure ranges below 250 psi are supplied with rigid capillary

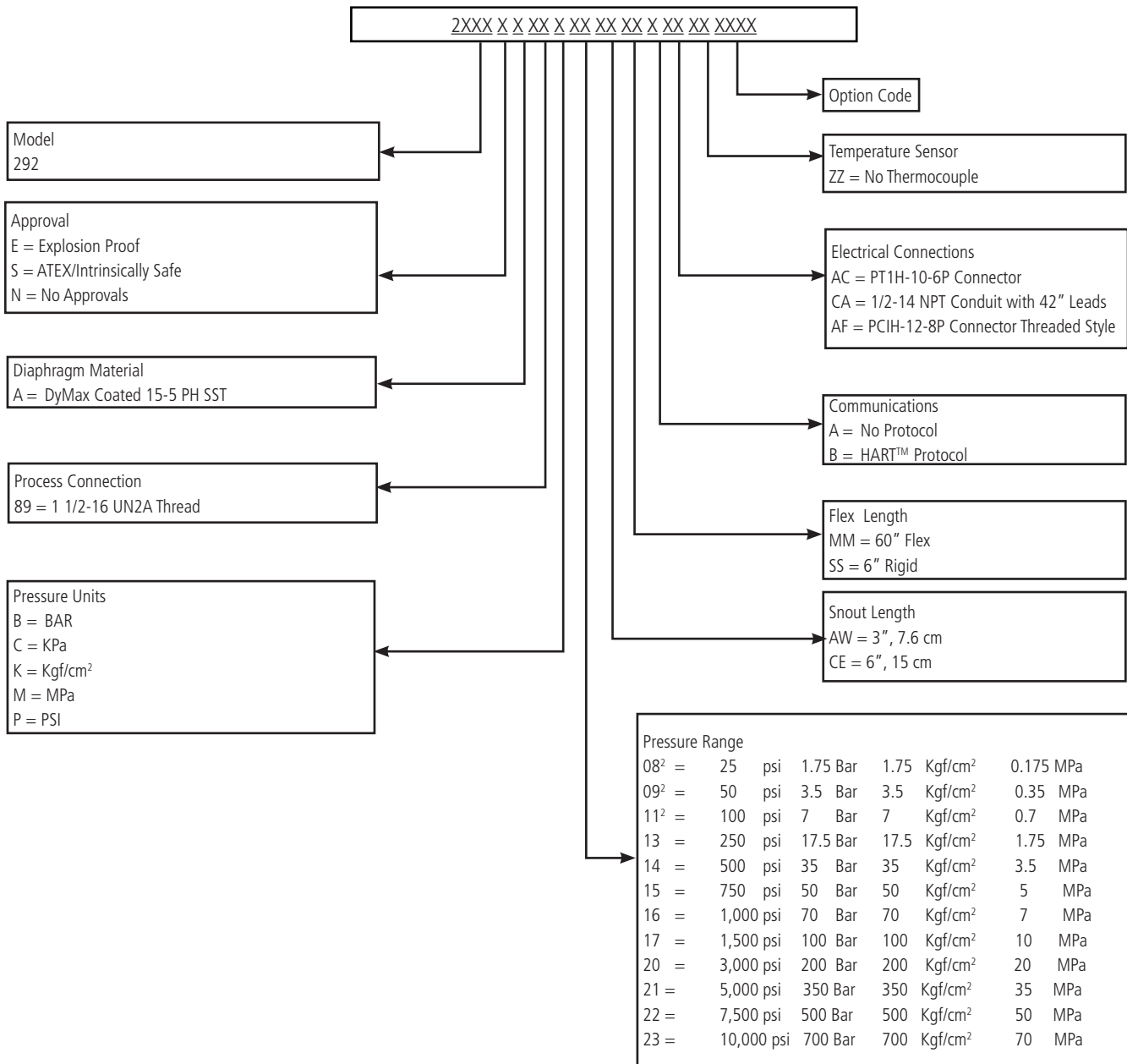
Ordering Guide for Models SPX2291¹



¹Other configurations are available. Please consult factory.

²Pressure ranges below 250 psi are supplied with rigid capillary

Ordering Guide for Models SPX2292¹



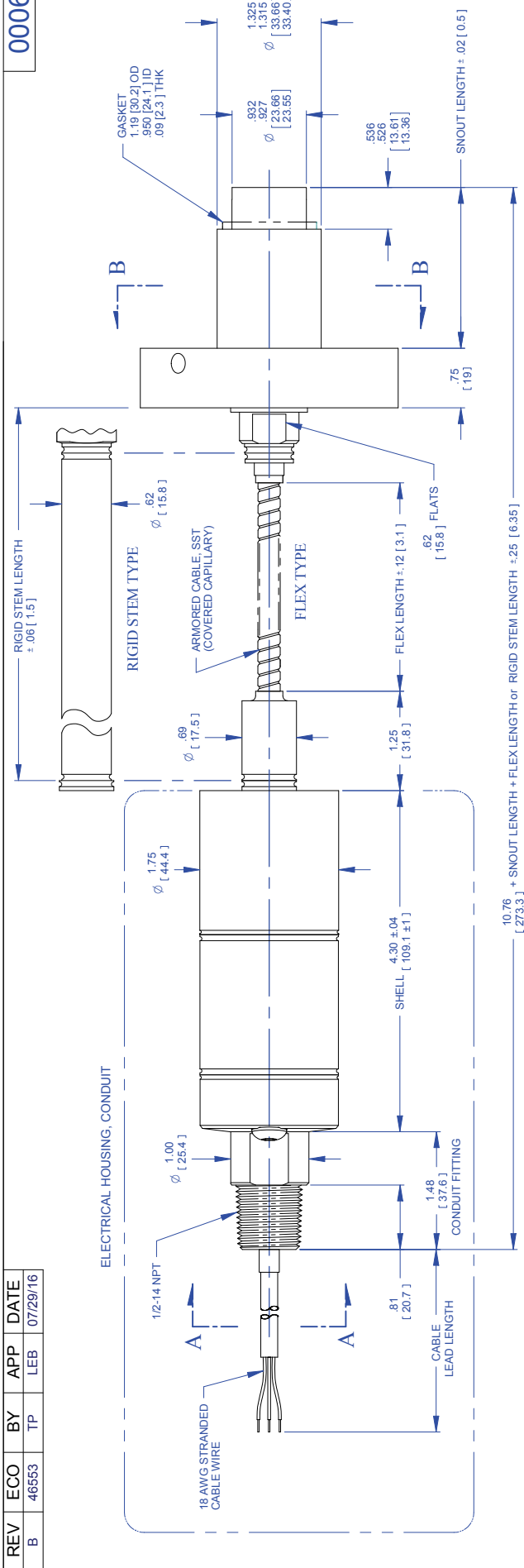
¹Other configurations are available. Please consult factory.

²Pressure ranges below 250 psi are supplied with rigid capillary

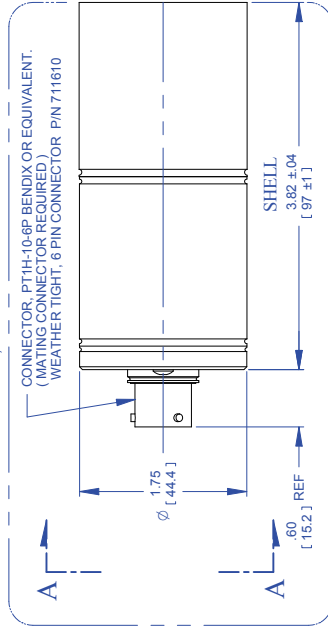
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16

000614

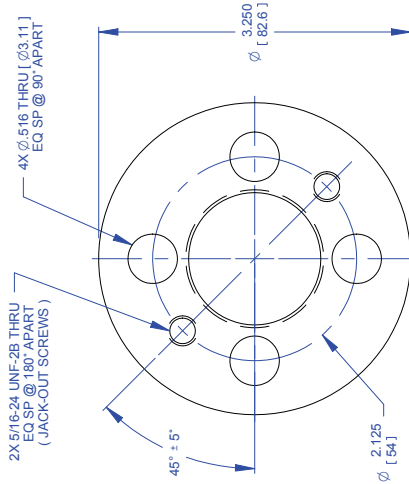
ELECTRICAL HOUSING, CONDUIT



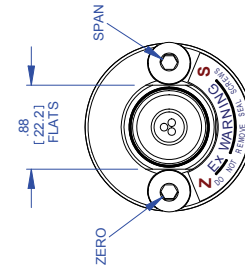
ELECTRICAL HOUSING, CONNECTOR CONFIGURATION



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



VIEW B-B
FLANGE



VIEW A-A

Cable Wiring	
Color	Function
RED	POWER + / SIG +
BLACK	POWER - / SIG -
GREEN	GROUND
ORANGE	Rcal +
BLUE	Rcal -

TO DIMENSIONS UNLESS OTHERWISE SPECIFIED:

- 1.2 PLACE DECIMAL 1.01
- 3 PLACE DECIMAL 1.005
- 3 PLACE DECIMAL 1.005
- Ø DRAWS ±0.005, ±0.005 -0.005, ±0.005
- 4 ANGLES ±0.05° MAX
- 6 EDGES R .005 OR CHAMFER MAX
- 8 ALL DIMENSIONS ARE IN INCHES
- 9 ALL DIMENSIONS ARE IN MILLIMETERS

TITLE
SPX-GEN2 OUTLINE
MODELS 2241, 5341
FLEX & RIGID VERSIONS

DRAWN DRG DATE 11/24/11
CHECKED MUL DATE 11/03/11
APPROVED DATE 11/03/11
FINISH

MODEL NO. SPX-GEN2

DO NOT SCALE DRAWING

MATERIAL

NOTES:

1. ALL DIMENSIONS ARE [MILLIMETERS] INCHES
2. EXPOSED SURFACES ARE STAINLESS STEEL.



FORGE PARKWAY FRANKLIN, VA

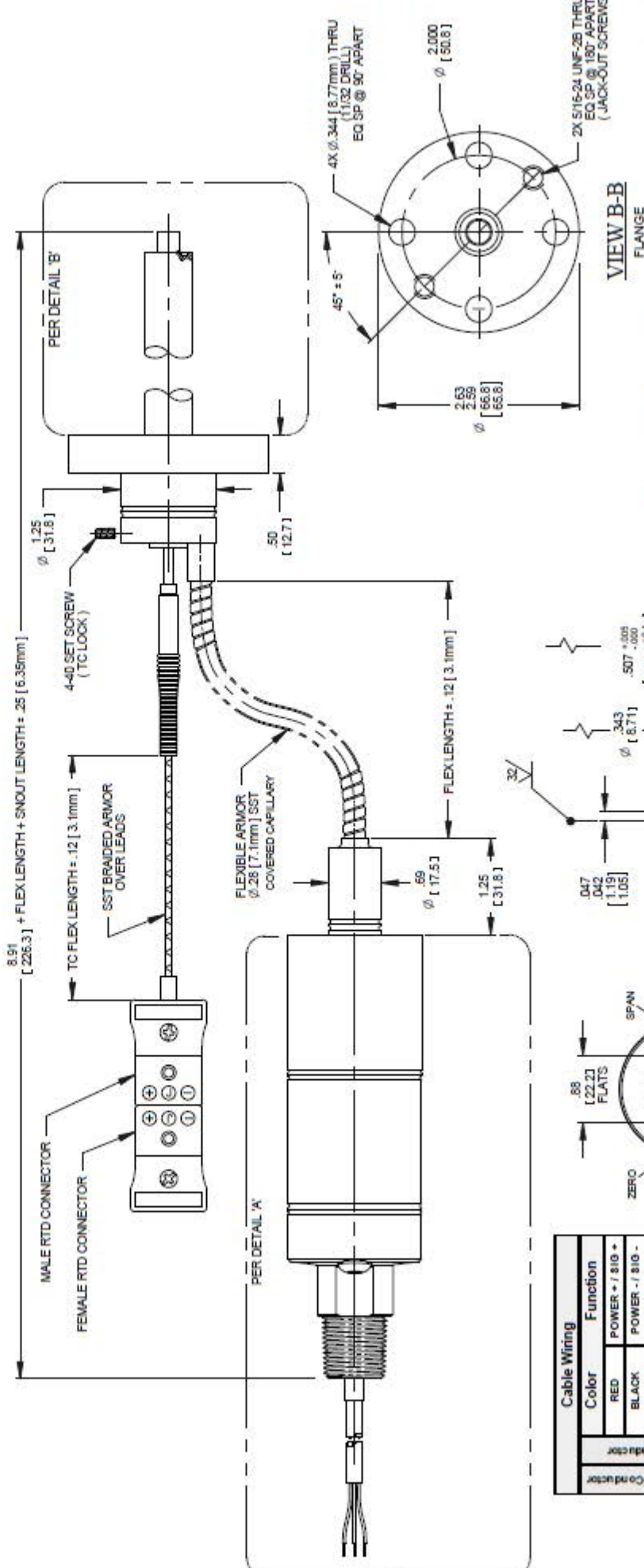
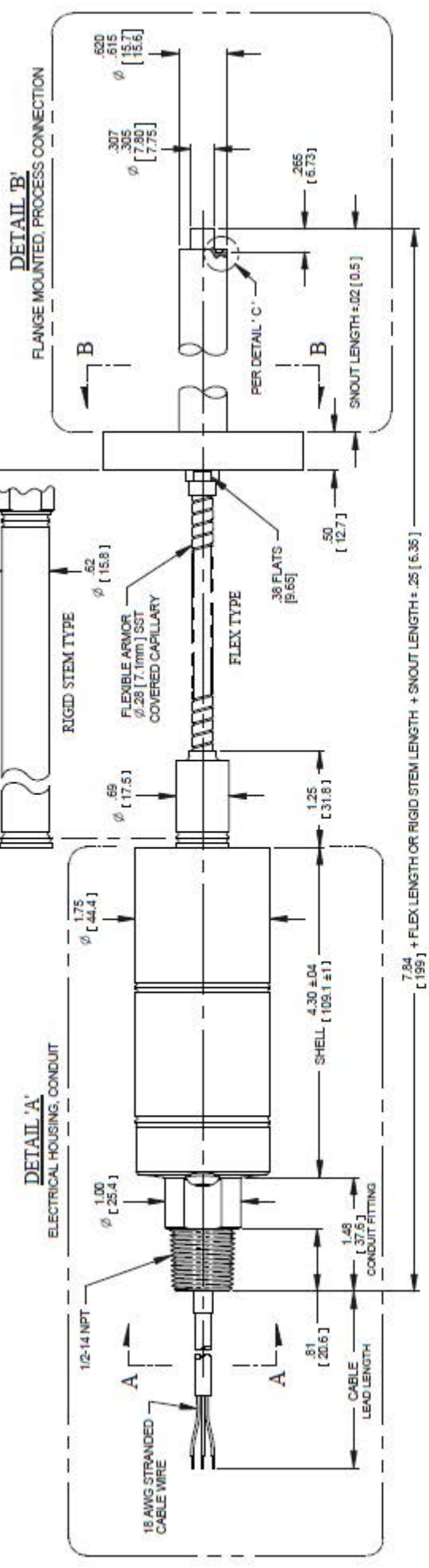
SIZE DWG. NO. REV

C 000614 B

SCALE: NONE SHEET 1 OF 1

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

000618



Cable Wiring	
Color	Function
RED	POWER + / 81G +
BLACK	POWER - / 81G -
GREEN	GROUND
ORANGE	Roal +
BLUE	Roal -

- NOTES:
- ALL DIMENSIONS ARE INCHES [MILLIMETERS]
 - EXPOSED SURFACES ARE STAINLESS STEEL.

TOLERANCES UNLESS OTHERWISE SPECIFIED:
 1. 3 PLACE DECIMAL ± .01
 2. FRACTIONS ± .005
 3. DIMS IN PARENTS ± .005
 4. DIMS IN PARENTS ± .005
 5. DIMS IN PARENTS ± .005
 6. DIMS IN PARENTS ± .005
 7. DIMS IN PARENTS ± .005
 8. DIMS IN PARENTS ± .005
 9. DIMS IN PARENTS ± .005
 10. DIMS IN PARENTS ± .005

DATE: 11/29/10
 DRAWN: DRG
 CHECKED: MLL
 APPROVED: MLL
 FINISH: NONE

TITLE: SPX-GEN2 OUTLINE
 MODELS 2243, 5343
 FLEX, RIGID & TPT VERSIONS

SCALE: NONE
 SHEET 1 OF 1

Dynisco

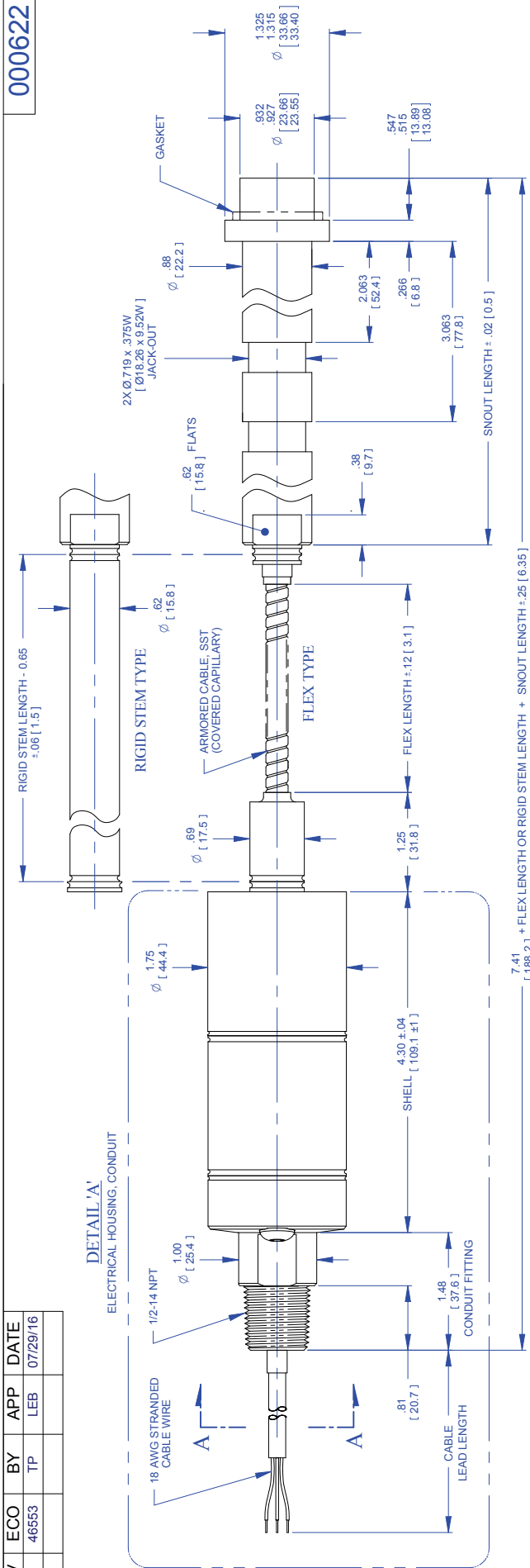
DETAIL C
 GROOVE FOR 1/2 NOM O.D.
 VENTED METAL O-RING

VIEW A-A
 3 CONDUCTOR SHOWN

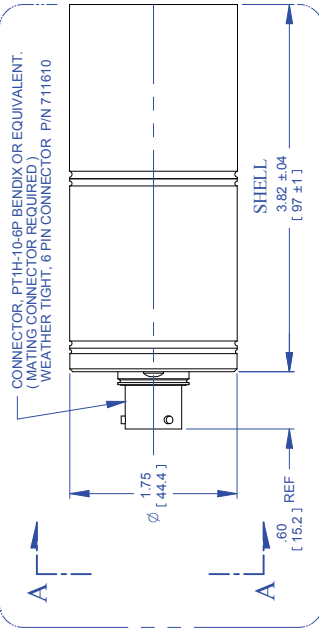
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16

000622

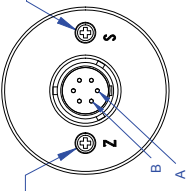
DETAIL A
ELECTRICAL HOUSING, CONDUIT



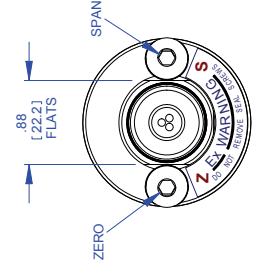
ELECTRICAL HOUSING, CONNECTOR CONFIGURATION



ZERO AND SPAN ADJUSTS ARE PROTECTED BY SEAL SCREWS



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



VIEW A-A
3. CONDUCTOR SHOWN

Cable Wiring	
Color	Function
RED	POWER + / SIG +
BLACK	POWER - / SIG -
GREEN	GROUND
ORANGE	Rcal +
BLUE	Rcal -

- TOLERANCES UNLESS OTHERWISE SPECIFIED:
1. 2 PLACE DECIMAL ±.01
 2. 3 PLACE DECIMAL ±.005
 3. DRILLS ±0.020
 4. DRILLS ±0.020
 5. ANGLES ±0.5° MAX
 6. EDGES R .005 OR CHAMFER MAX
 7. FINISHES AS SHOWN
 8. ALL DIMENSIONS ARE IN INCHES

TITLE
SPX-GEN2 OUTLINE
MODELS 2290, 5390
FLEX & RIGID VERSIONS

DRAWN	DRG	DATE	12/08/10
CHECKED	MUL	DATE	01/31/11
APPROVED	MUL	DATE	01/31/11
FINISH			

- NOTES:
1. ALL DIMENSIONS ARE INCHES [MILLIMETERS]
 2. EXPOSED SURFACES ARE STAINLESS STEEL.

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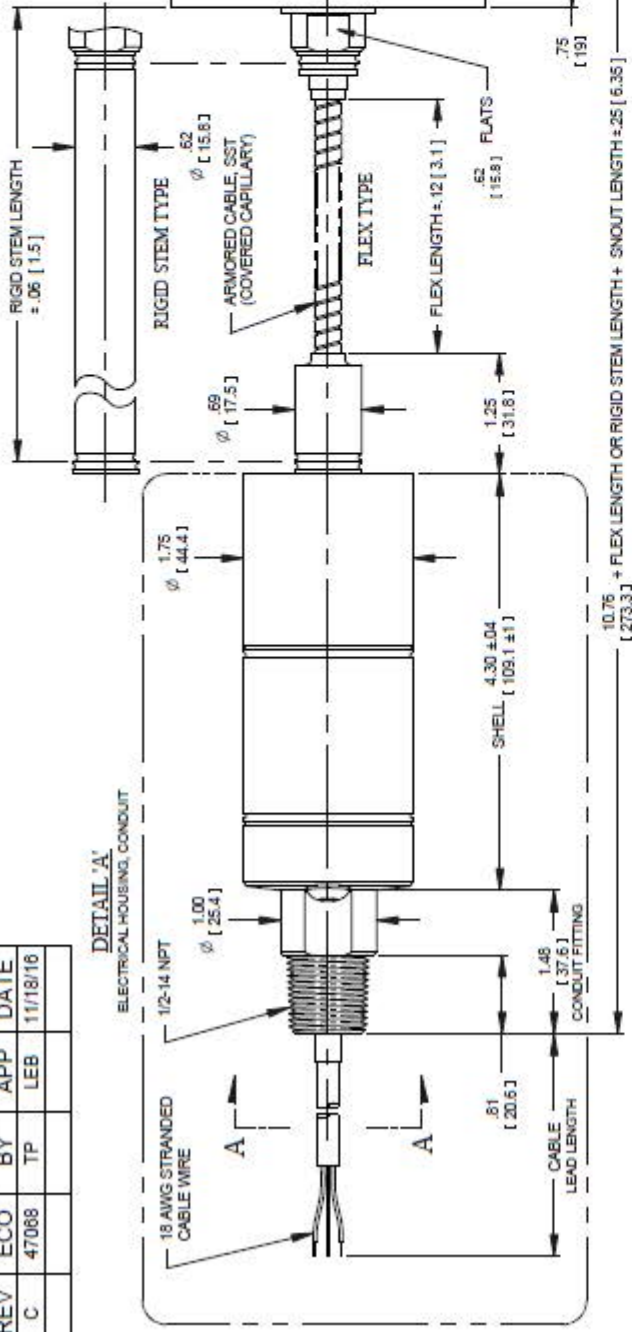
SIZE	DWG. NO.	REV.
C	000622	B

SCALE: NONE SHEET 1 OF 1

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

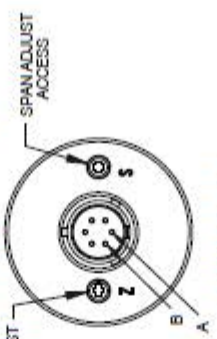
000623

DETAIL 'A'
ELECTRICAL HOUSING, CONDUIT



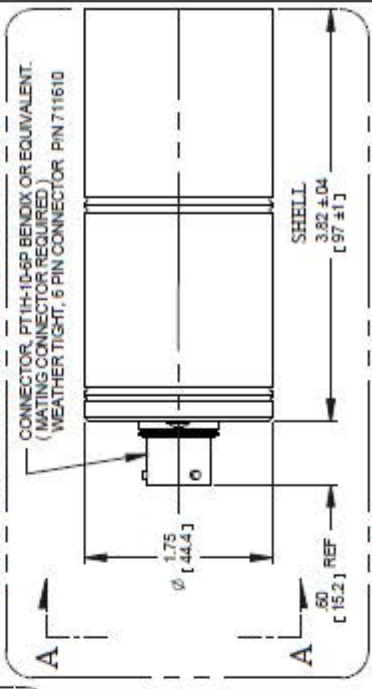
PIN	CONNECTOR WIRING
A	POWER + / SIGNAL +
B	POWER - / SIGNAL -
C	NO
D	CONNECTION
E	RES -
F	RES +

ZERO AND SPAN ADJUSTERS ARE PROTECTED BY SEAL SCREWS



VIEW A-A

ELECTRICAL HOUSING, CONNECTOR CONFIGURATION



SIZE	C
REV	C
DATE	01/31/11
M.L.	
APPROVED	
FINISH	
DATE	12/08/10
DRG	
MODEL NO.	SPX-GEN2
TITLE	SPX-GEN2 OUTLINE MODELS 2291, 5391 FLEX, RIGID & TPT VERSIONS

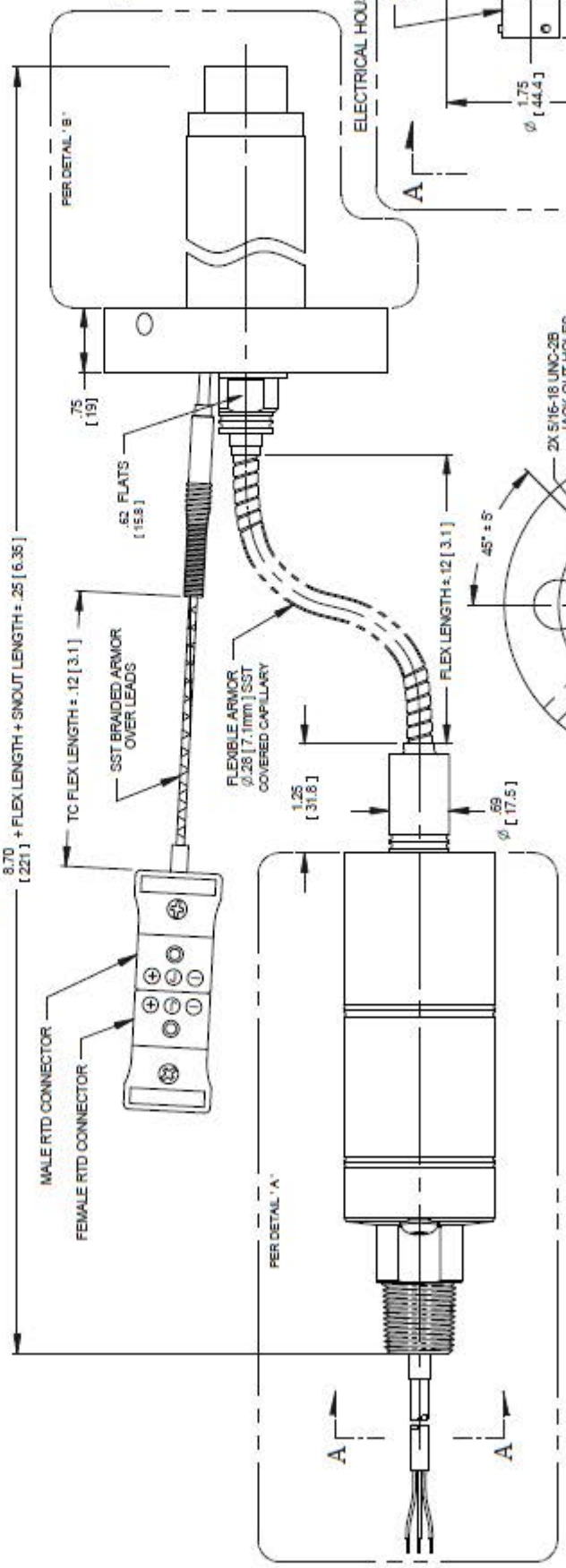
DO NOT SCALE DRAWING
MATERIAL

1. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]
2. EXPOSED SURFACES ARE STAINLESS STEEL.

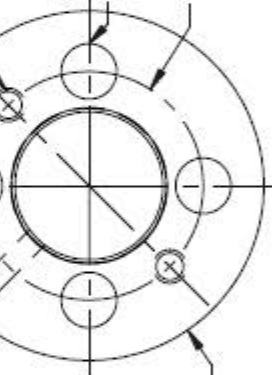
VIEW A-A
3 CONDUCTOR SHOWN

Cable Wiring	Color	Function
5 - CONDUCTOR	RED	POWER + / SIG +
	BLACK	POWER - / SIG -
	GREEN	GROUND
	ORANGE	RES +
	BLUE	RES -

NOTES:
1. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]
2. EXPOSED SURFACES ARE STAINLESS STEEL.



VIEW B-B
FLANGE



3 CONDUCTOR SHOWN

1. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]
2. EXPOSED SURFACES ARE STAINLESS STEEL.

SCALE: NONE SHEET 1 OF 1

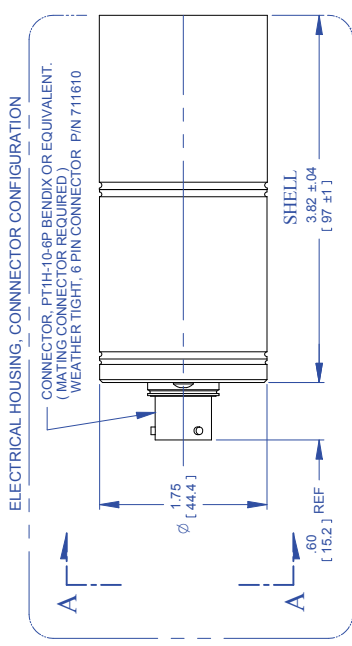
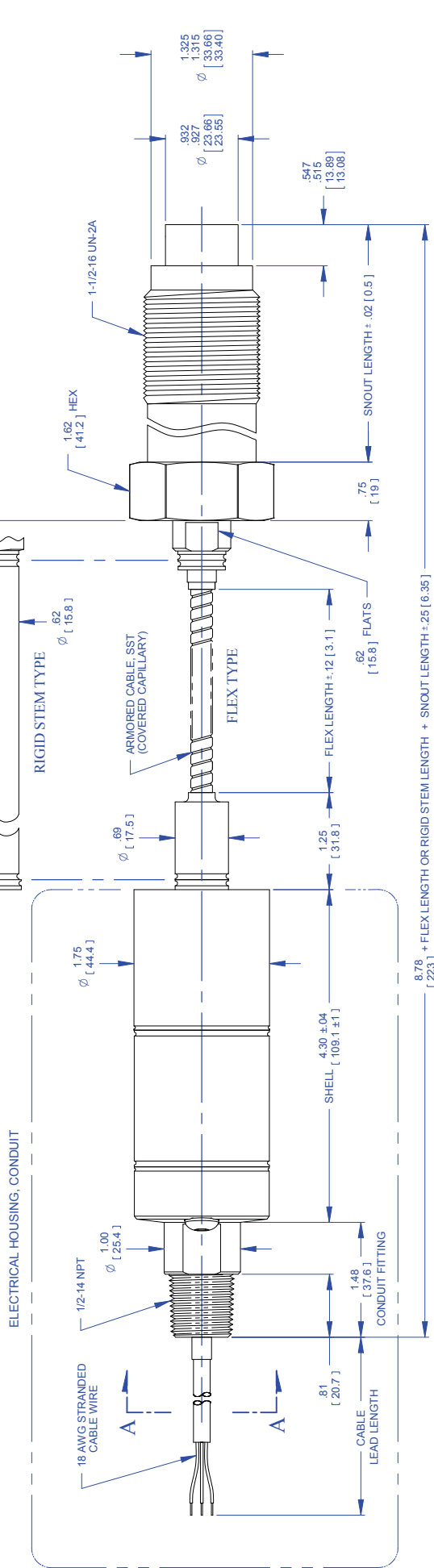


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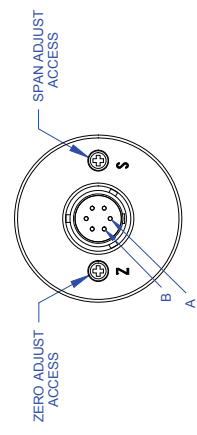
1. 3 PLACE DECIMALS UNLESS OTHERWISE SPECIFIED.
2. FRACTIONS IN 16ths.
3. DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS.
4. DIMENSIONS IN SQUARE BRACKETS ARE IN INCHES.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

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

000625

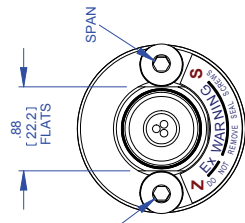


ZERO AND SPAN ADJUSTS ARE PROTECTED BY SEAL SCREWS



VIEW A-A

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



VIEW A-A

3 CONDUCTOR SHOWN

Cable Wiring	
Color	Function
RED	POWER + / SIG +
BLACK	POWER - / SIG -
GREEN	GROUND
ORANGE	Rcal +
BLUE	Rcal -

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Dynisco
FORCE PARKWAY, FRANKLIN, MA

TITLE: **SPX-GEN2 OUTLINE**
MODELS 2292, 5392
FLEX & RIGID VERSIONS

DRAWN: DRG DATE: 12/07/10
CHECKED: DATE: 01/13/11
APPROVED: MJL
FINISH: NONE

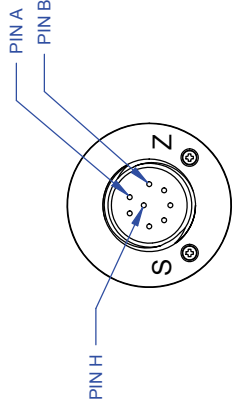
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DWG. NO.: 000625
REV: B

SCALE: NONE SHEET 1 OF 1

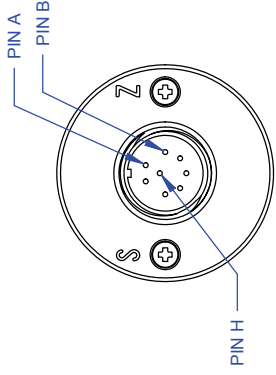
NOTES:
1. ALL DIMENSIONS ARE INCHES [MILLIMETERS]
2. EXPOSED SURFACES ARE STAINLESS STEEL.

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

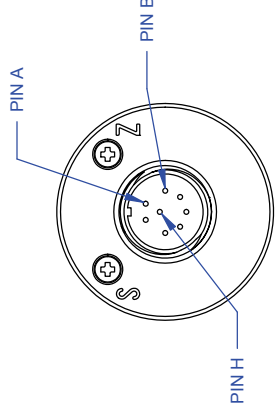
000652



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. DIMENSIONS IN PARENTHESES
 2. PLACE DECIMAL ± .005
 3. FRACTIONS ± 1/32
 4. DRILLS < 0.5 DIA. ± .002 > 0.5 DIA. ± .003
 5. ANGLES ± 0.5° MAX.
 6. EDGES R .006 OR CHAMFER MAX
 7. PART TO BE FREE OF BURRS
 8. ALL DIMENSIONS ARE IN INCHES.

TITLE		DATE	
GUARDIAN SERIES CONNECTORS		TP	7/27/16
DRAWN	CHECKED	DATE	DATE
LEB	LEB	7/27/16	7/27/16
APPROVED	APPROVED	DATE	DATE
FINISH	FINISH	63	✓

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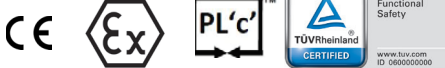
SIZE	DWG. NO.	REV
B	000652	A

SCALE	NONE	SHEET	1 OF 1
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Refer to www.dynisco.com for access to Operator Manual and other support documentation.
PN: DSSPX2SERIES
REV: 1116
ECO: 470658



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