



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.

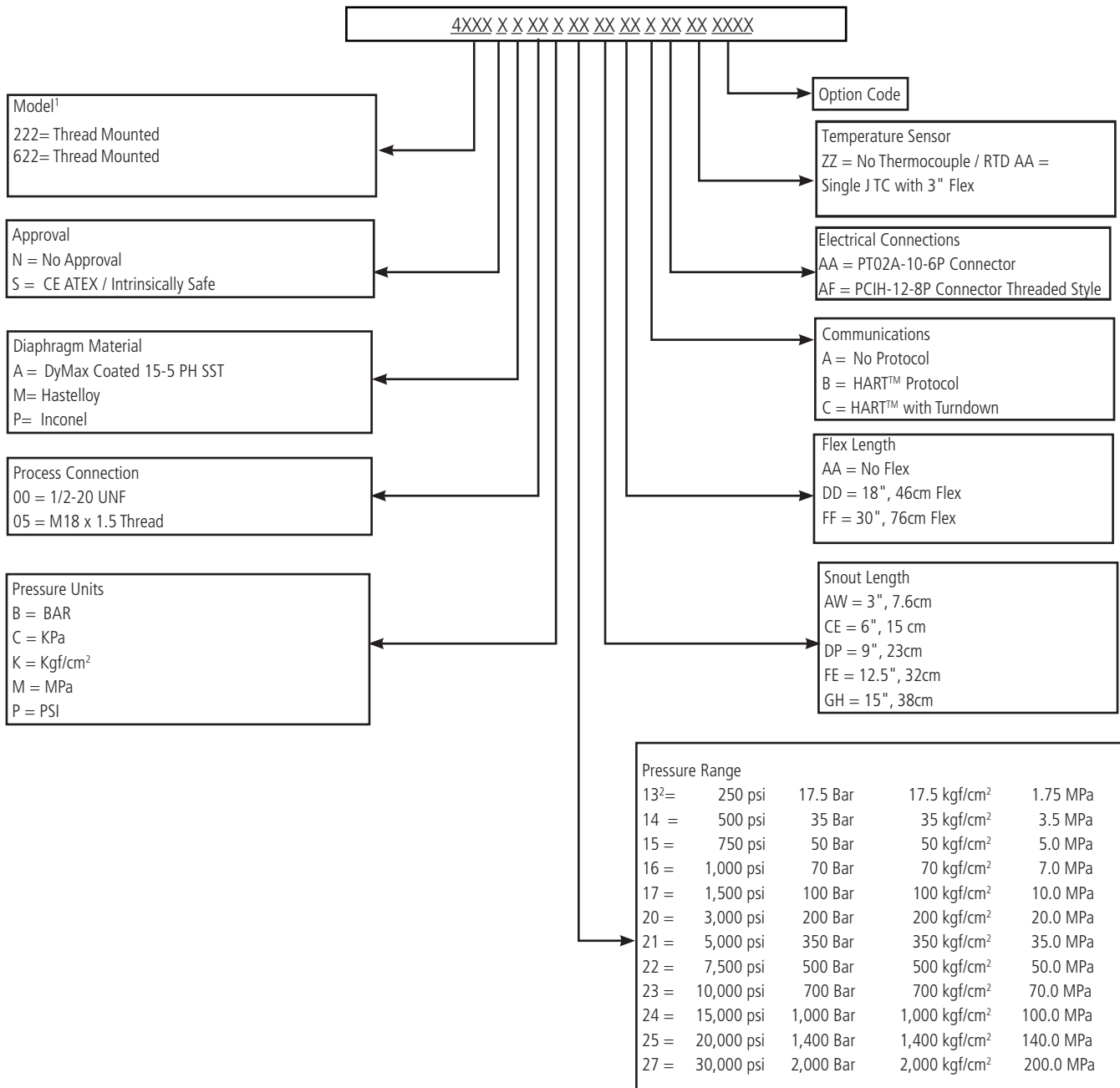
Features

- 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	
Output	4 - 20 mA, with optional HART™
Input Voltage	16 - 36 Vdc (Std); 16 - 30 Vdc (ATEX IS)
Accuracy <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 <= 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%
Repeatability	±0.1%
Rangeability	6:1 Turndown
Over Pressure	2X FSO or 35,000 psi, whichever is less 1.2 X FSO 35,000 - 72,500 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 [SPX4502 model limited to 600°F (315°C)]
Electronics Compensated Temperature Range	0 to 150°F (-18 to 65°C)
Zero Shift (Electronics Temp Change)	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)
Span Shift (Electronics Temp Change)	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)
Zero Shift (Snout Temp Change)	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	
Mounting Torque	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
Standard Wetted Parts	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)	

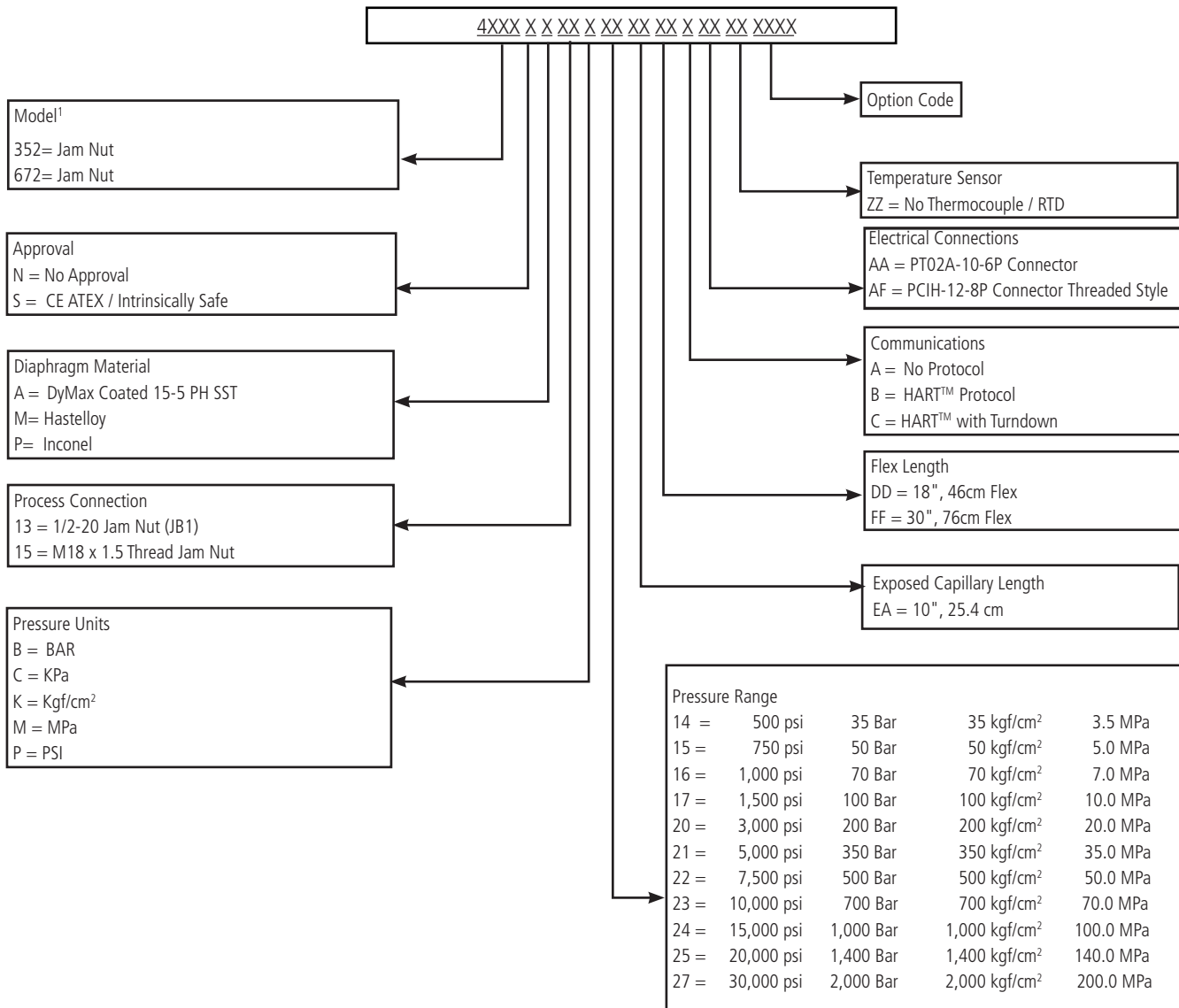
Ordering Guide for Models SPX4222 & SPX4622



¹Other configurations are available. Please consult factory.

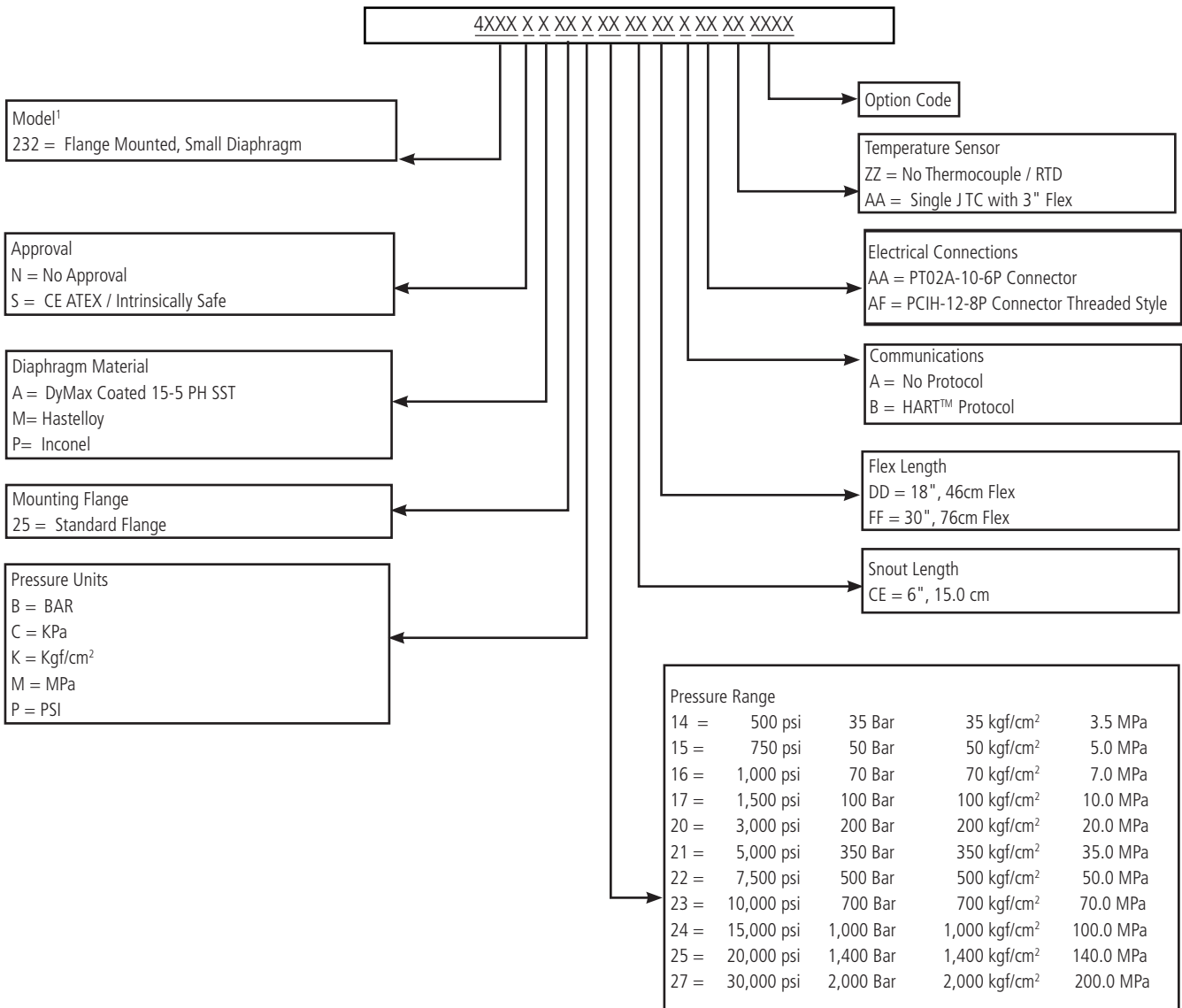
²Available in M18 x 1.5 thread only

Ordering Guide for Models SPX4352 & SPX4672



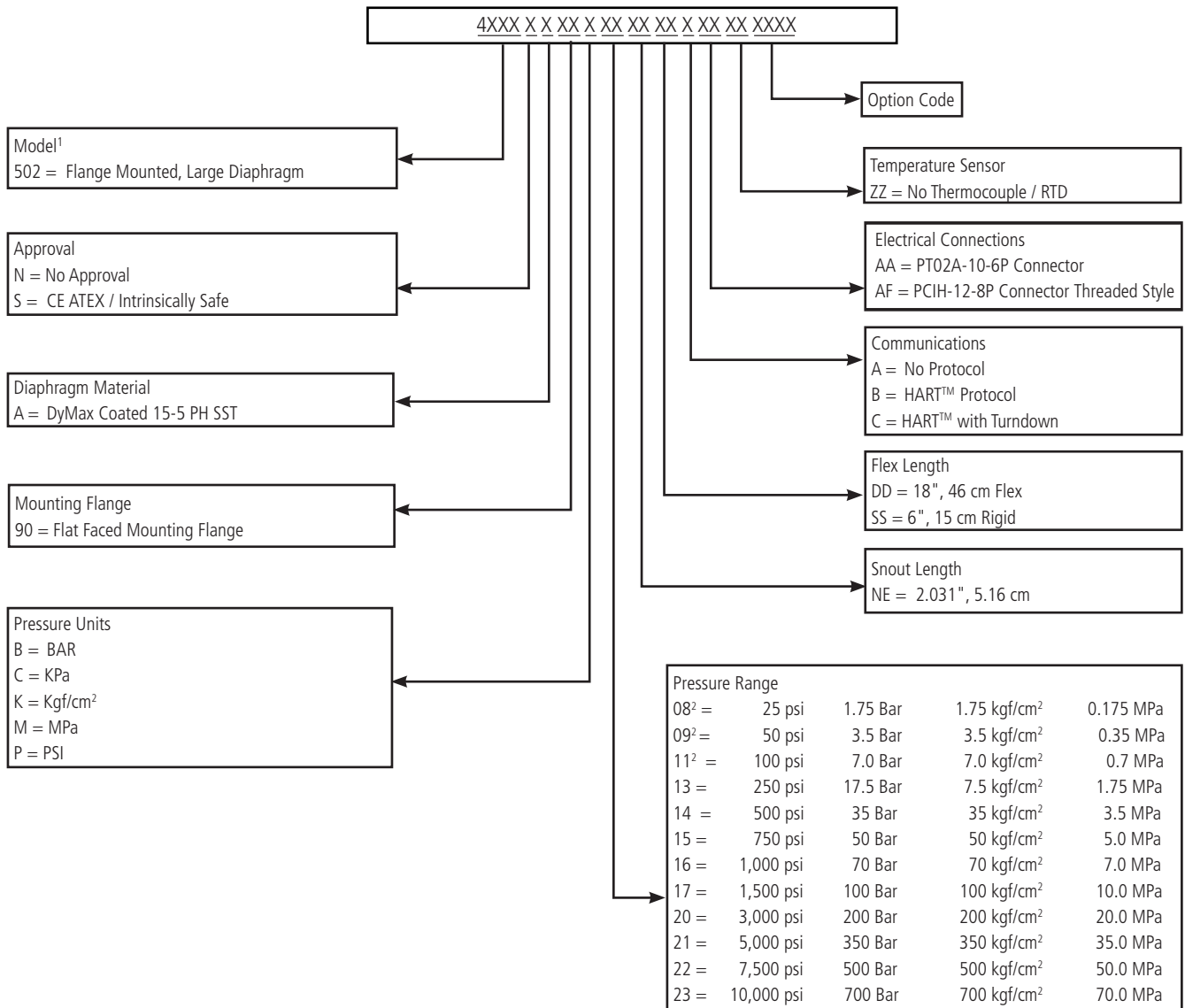
¹Other configurations are available. Please consult factory.

Ordering Guide for Model SPX4232



¹Other configurations are available. Please consult factory.

Ordering Guide for Model SPX4502

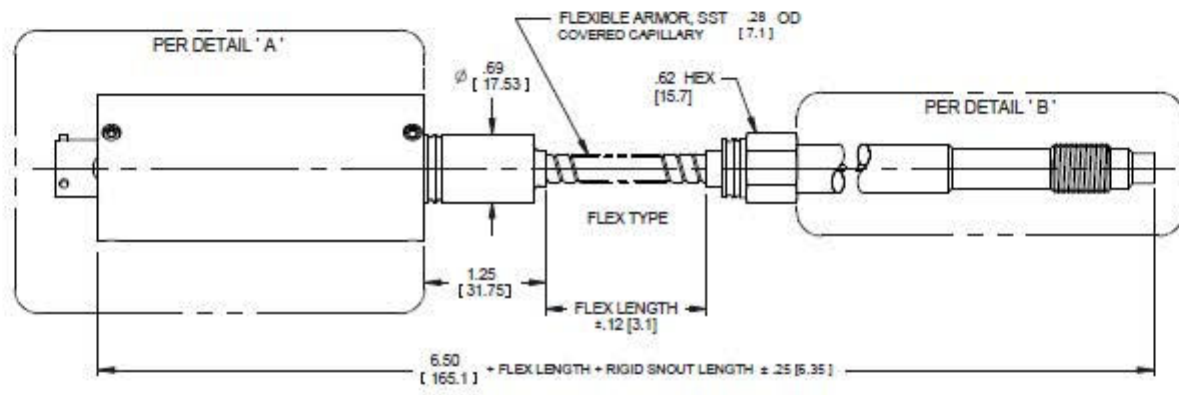
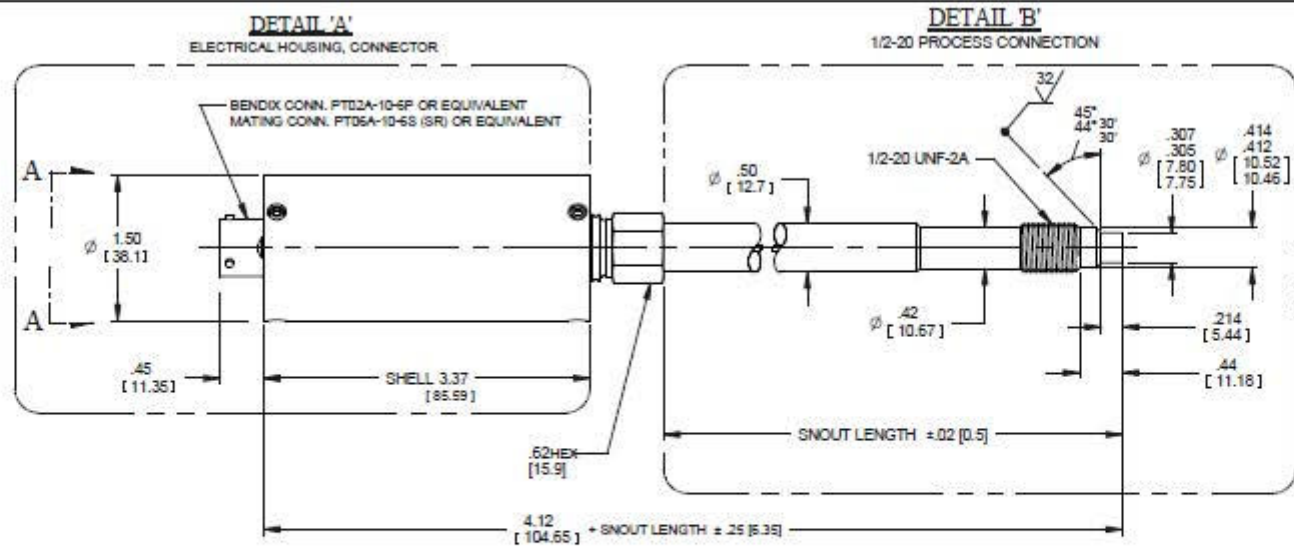


¹Other configurations are available. Please consult factory.

²Pressure ranges below 250 psi are supplied with rigid capillary.

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

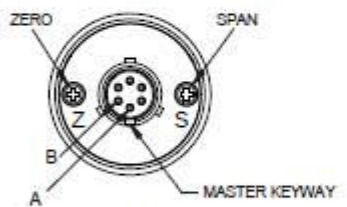
000405



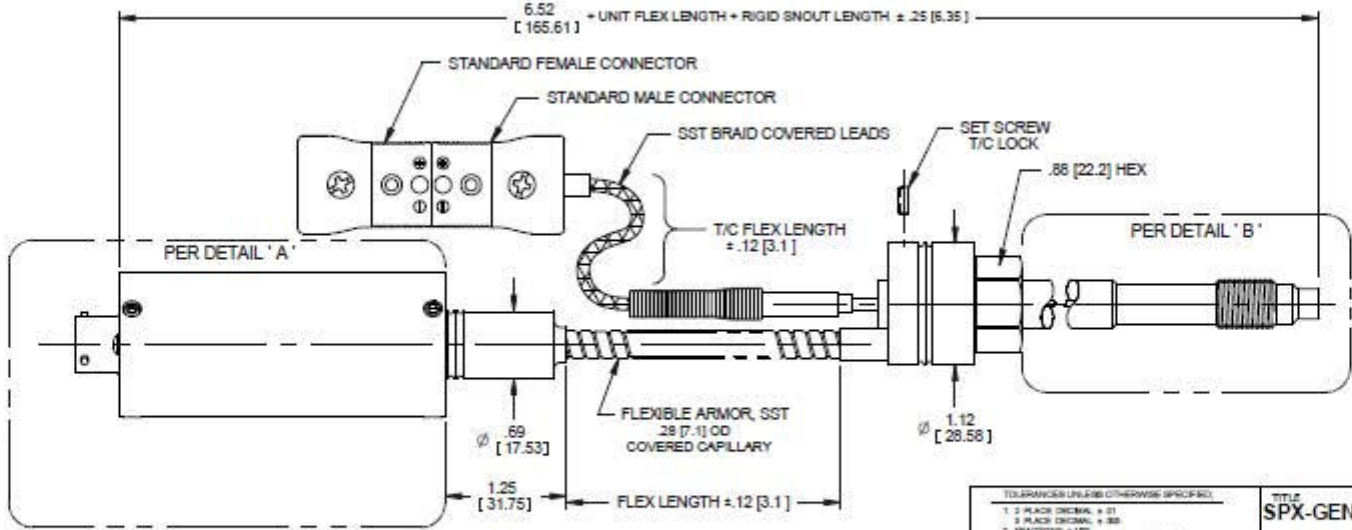
CONNECTOR WIRING

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]

TELEMARKET UNLESS OTHERWISE SPECIFIED:

1. 2 PLACE DECIMAL ± .01
2. PLACE DECIMAL ± .005
3. FRACTIONS ± 1/32
4. DRILLS ± .0004 ± .002 ± .0004 ± .002
5. ANGLES ± .05°
6. FILLETS R .005 MAX
7. ROUNDS R .005 OR CHAMFER MAX
8. PART TO BE FREE OF BURRS
9. 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		✓

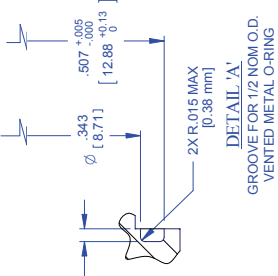
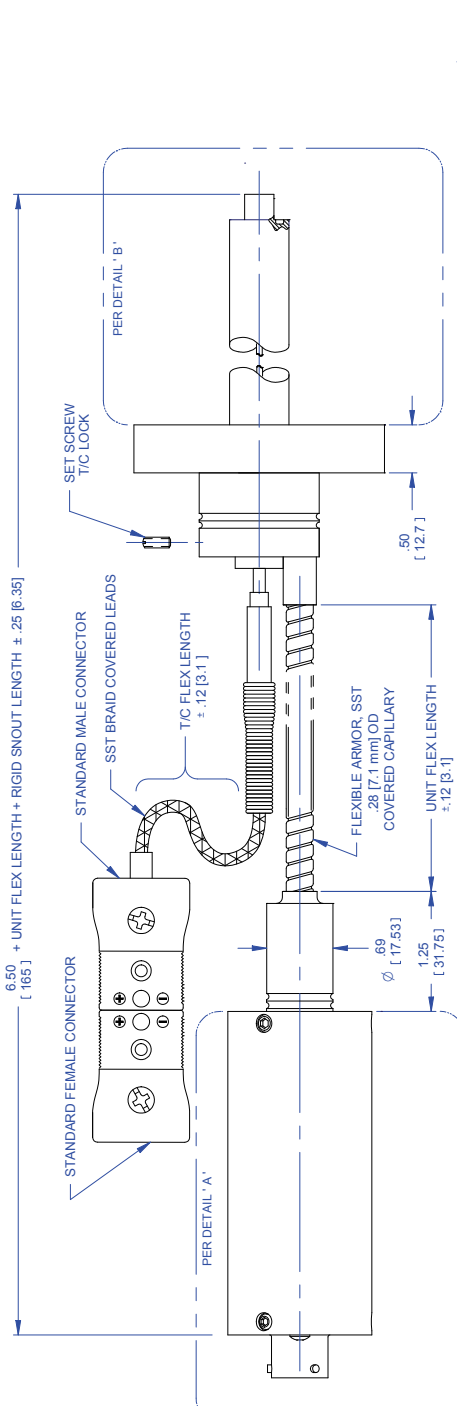
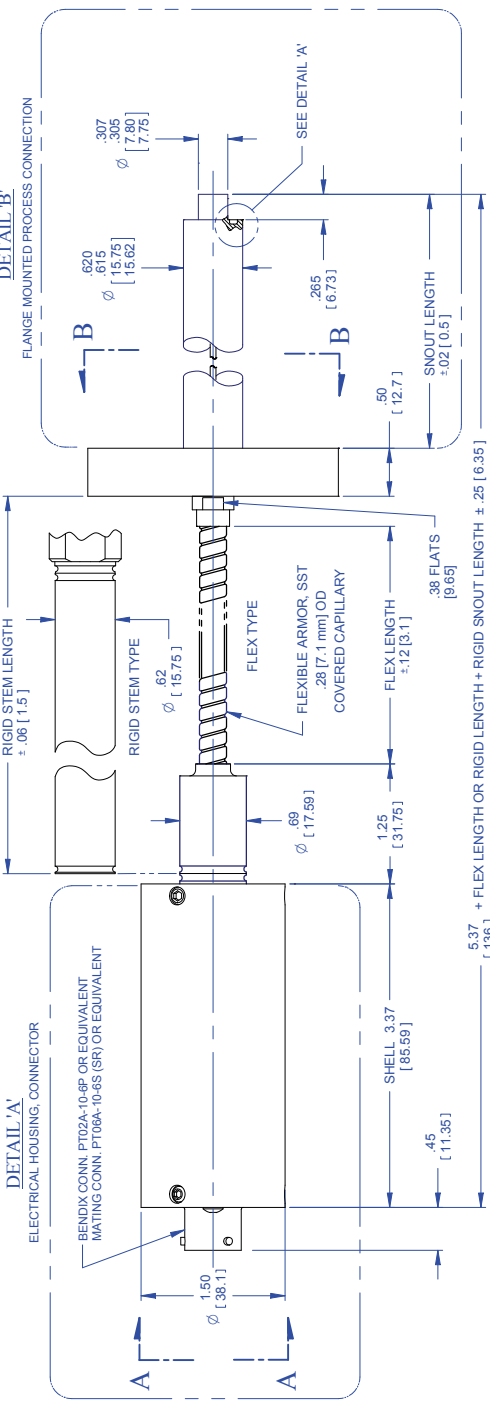
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Dynisco
CORPORATION

SIZE	DWG. NO.	REV
C	000405	C
SCALE NONE SHEET 1 OF 1		

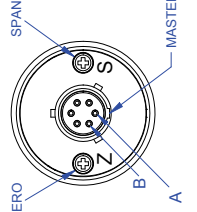
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16 R

000408



PIN	CONNECTOR 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 0.01
2	3 PLACE DECIMAL 0.005
3	4 PLACE DECIMAL 0.0005
4	ANGLES ± 0.5° MAX
5	EDGES R 0.005 OR CHAMFER MAX 0.015
6	ALL DIMENSIONS ARE IN INCHES
TITLE SPX-GEN2 OUTLINES MODEL4232 FLEX, RIGID & TPT	
DRAWN DG	DATE 07/20/10
CHECKED MJJ	DATE 07/20/10
APPROVED 65/	DATE
FINISH X	DATE
MATERIAL	
DO NOT SCALE DRAWING	
SCALE NONE SHEET 1 OF 1	

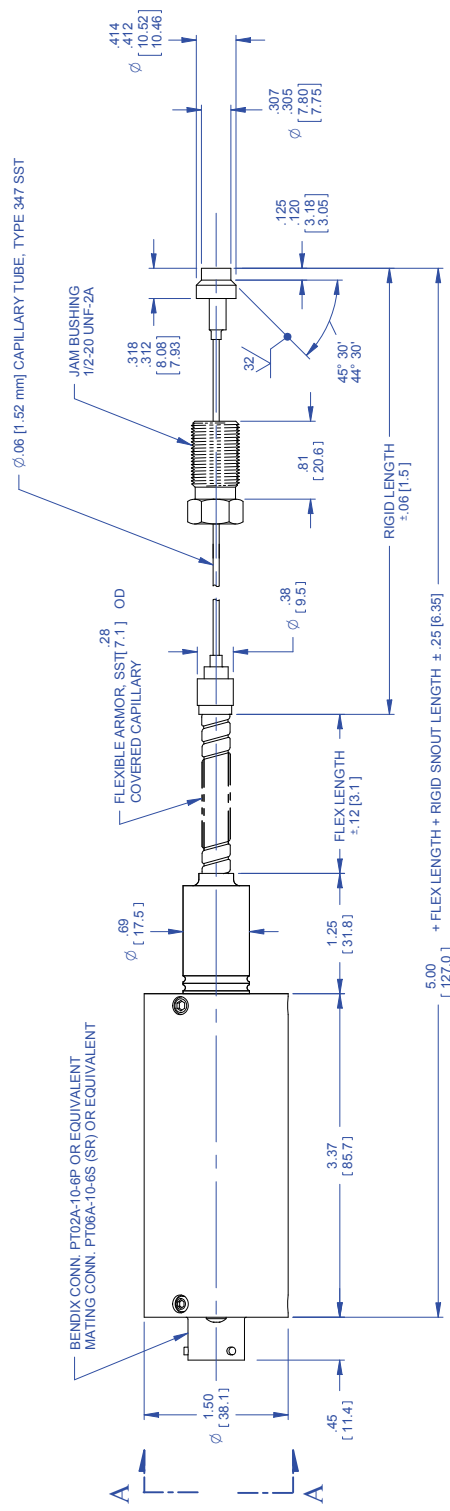
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COMMERCIAL STREET BAKERSVILLE, SC 29008

SIZE DWG. NO. REV
C 000408 B

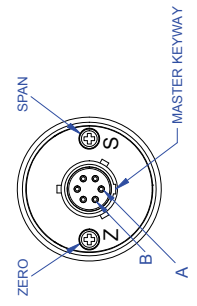
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16 R

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



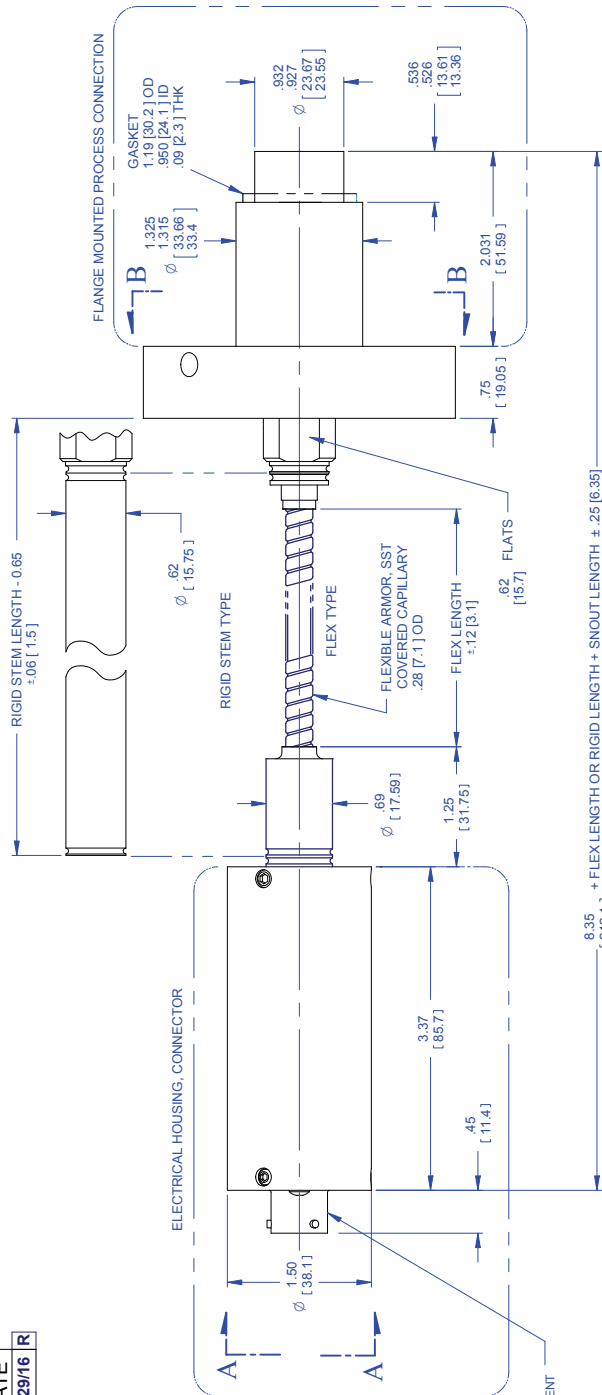
VIEW A-A

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COMMERCIAL STREET BAKERSVILLE, SOUTH CAROLINA	
DWG. NO. C 000411	REV. B
TITLE OUTLINE DRAWING SPX4352-GEN2 SPX4672-GEN2	SIZE C
DRAWN DRG DATE 06/15/10	CHECKED MJL DATE 08/12/10
APPROVED MJL	FINISH 63
MODEL NO. SPX-GEN2	MATERIAL X
DO NOT SCALE DRAWING	SCALE NONE SHEET 1 OF 1

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

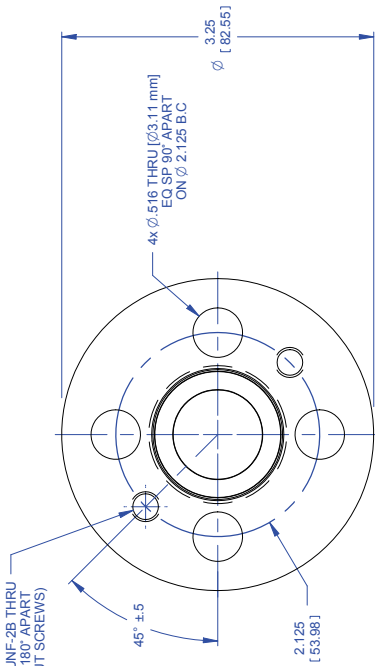
REV	ECO	BY	APP	DATE
B	46553	TP	LEB	07/29/16

000412



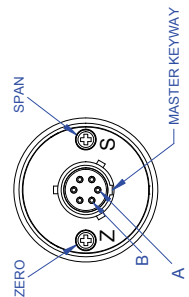
BENDIX CONN. PT02A-10-6P OR EQUIVALENT
MATING CONN. PT06A-10-6S (SR) OR EQUIVALENT

2x 5/16-24 UNF-2B THRU
EQ SP 180° APART
(JACK-OUT SCREWS)



VIEW B-B
FLANGE

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 +

1. TO CHANGE UNLESS OTHERWISE SPECIFIED:
 1. 2 PLACE DECIMAL 1.01
 2. 3 PLACE DECIMAL 1.005
 3. DRILLS - 0.050 DIA. ±.005
 4. ANGLES 90° MAX
 5. EDGES R .005 OR CHAMFER MAX
 6. 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	63
FINISH	X

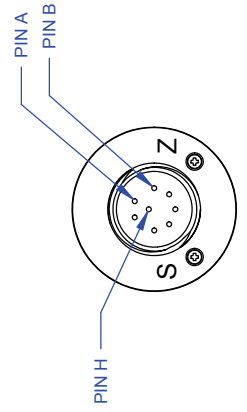
SIZE	REV
C	B
SCALE	NONE
SHEET	1 OF 1

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

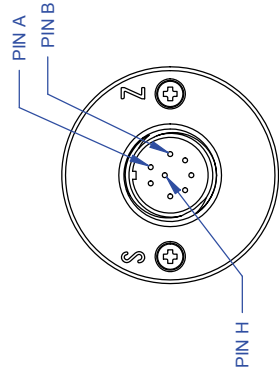


REV	ECO	BY	APP	DATE
A	46553	TP	LEB	07/29/16 R

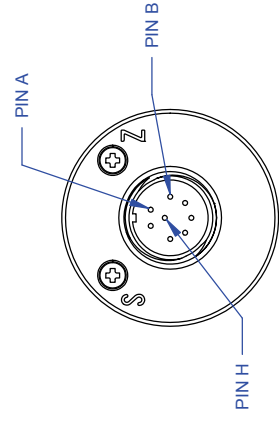
000652



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. DIMENSIONS IN PARENTHESES ARE IN INCHES
 2. PLACE DECIMAL ± .005
 3. FRACTIONS ± 1/32
 4. DRILLS < 0.5 DIA. ± .002, > 0.5 DIA. ± .003
 5. ANGLES ± 0.5°
 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		
FINISH	FINISH	63	

SIZE		REV	
B		A	
DWG. NO.		REV	
000652			
SCALE NONE SHEET 1 OF 1			

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Refer to www.dynisco.com for access to Operator Manual and other support documentation.
P/N: DSSPX4SERIES
REV: 1116
ECO: 47068



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