

SPX-3-T Series Pressure sensors

*General Purpose Smart Pressure Sensors for
Hazardous Locations*

Description

The SPX-T (3-Series) is a smart 4-20mA pressure transmitter that includes Temperature Compensation and DynaLarity™, a Dynisco innovation. The SPX-T delivers the best spec performance in the line. Temperature Compensation is based on an RTD measurement that compensates for temperature variations which reduces temperature-related drift and increases accuracy. No need to re-zero for temperature changes after installation. DynaLarity uses an advanced algorithm that will linearize offsets due to process effects on the sensor. Combined Temperature Compensation and DynaLarity reduces temperature-related drift by as much as 80% and improves accuracy by more than 60% over other sensors. Process temperature output is available (RTD or 4-20mA). HART communication is standard. The SPX 3-Series is an all-welded construction 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

Features

- 4-20mA loop-powered output
- +/- 0.15% accuracy available
- Reduced temperature drift by 80% over non compensated units
- Temperature output available (RTD or 4-20mA)
- 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
- FM Explosion proof approved
- CSA Explosion proof approved
- SIL 2 Certified (pressure output)
- PL'c' Certified (relay output)
- Additional approvals are available



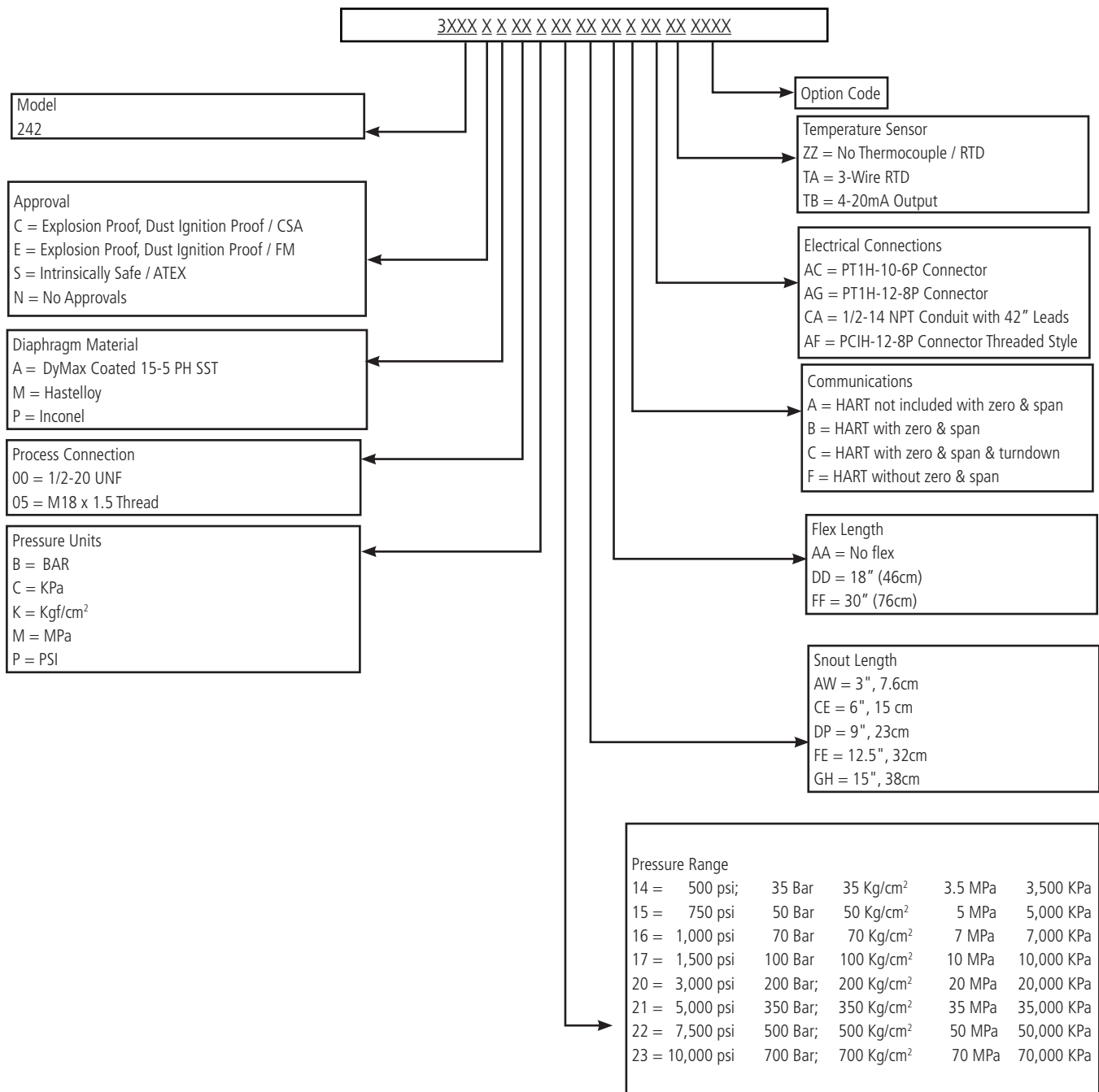
Performance Characteristics SPX-T (3- Series)

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; Snout compensated temperature range; capillary of $\leq 36"$; 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>	32XX: $\pm 0.25\%$ for pressure ranges $\geq 3,000$ psi $\pm 0.5\%$ for pressure ranges = 1,500 psi $\pm 0.75\%$ for pressure ranges $< 1,500$ psi 33XX: $\pm 0.15\%$ for pressure ranges $\geq 3,000$ psi $\pm 0.25\%$ for pressure ranges = 1,500 psi $\pm 0.5\%$ for pressure ranges $< 1,500$ psi
Repeatability	$\pm 0.1\%$
Rangeability	6:1 Turndown
Over Pressure	1.5 x FSO
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)
Electronics Compensated Temperature Range	70 to 185°F (20 to 85°C)
Snout Compensated Temperature Range	70 to 572°F (20 to 300°C)
Snout Operating Temperature	Models: 3242, 3243, 3342, 3343: 32 to 752°F (0 to 400°C) Models: 3290, 3291, 3390, 3391: 32 to 600°F (0 to 315°C)

Mechanical Characteristics

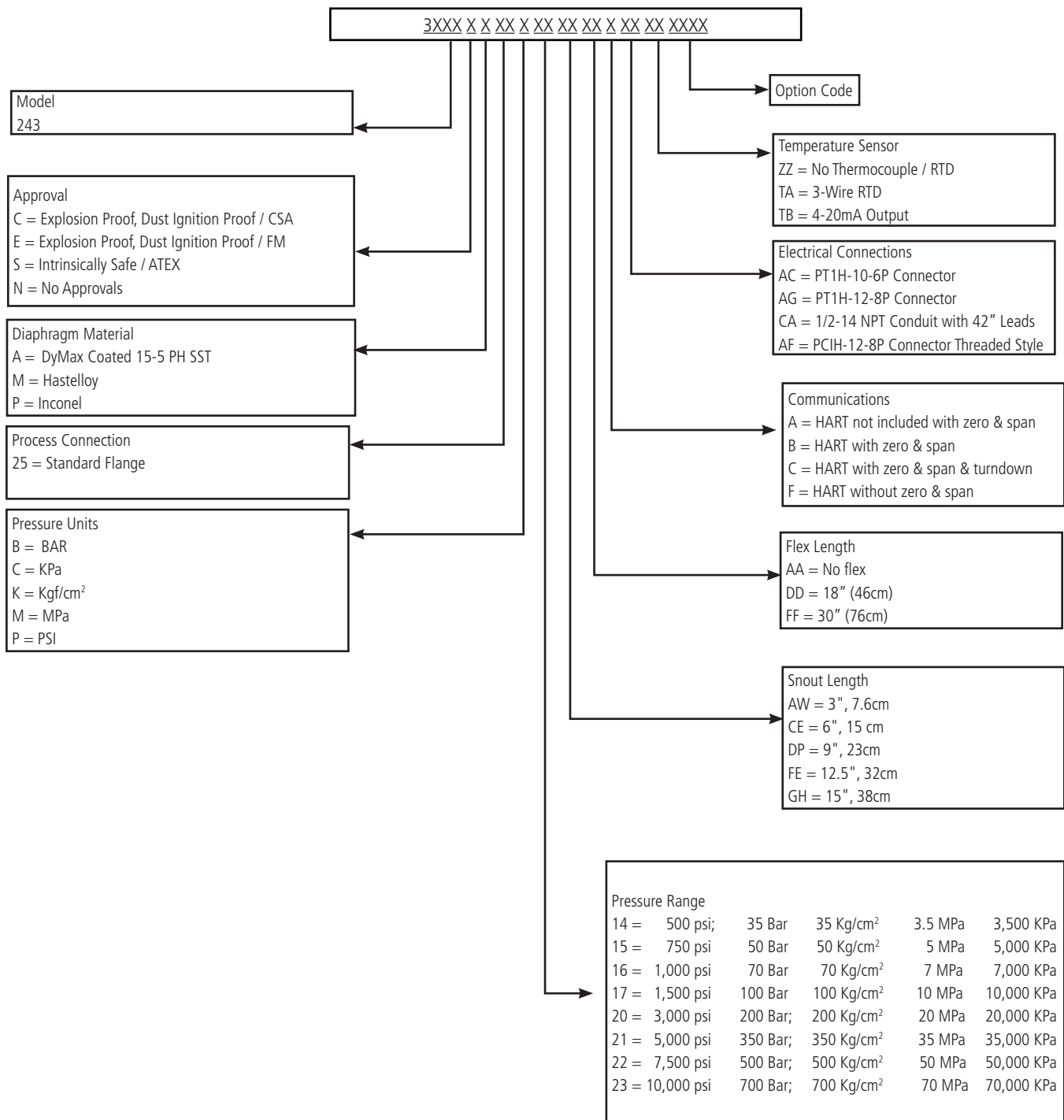
Mounting Torque	3242: 500 inch-lbf max 3243: 50 inch-lbf max 3342: 500 inch-lbf max 3343: 50 inch-lbf max 3290: 350 inch-lbf max 3291: 350 inch-lbf max 3390: 350 inch-lbf max 3391: 350 inch-lbf max
Standard Wetted Parts	DyMax coated 15-5 PH SST
Approvals & Certifications	
CE ATEX IS	
SIL 2 (pressure output) & PL'c' (relay output)	
FM & CSA Explosion Proof	
Additional Approvals are Available	

Ordering Guide for Models SPX3242¹

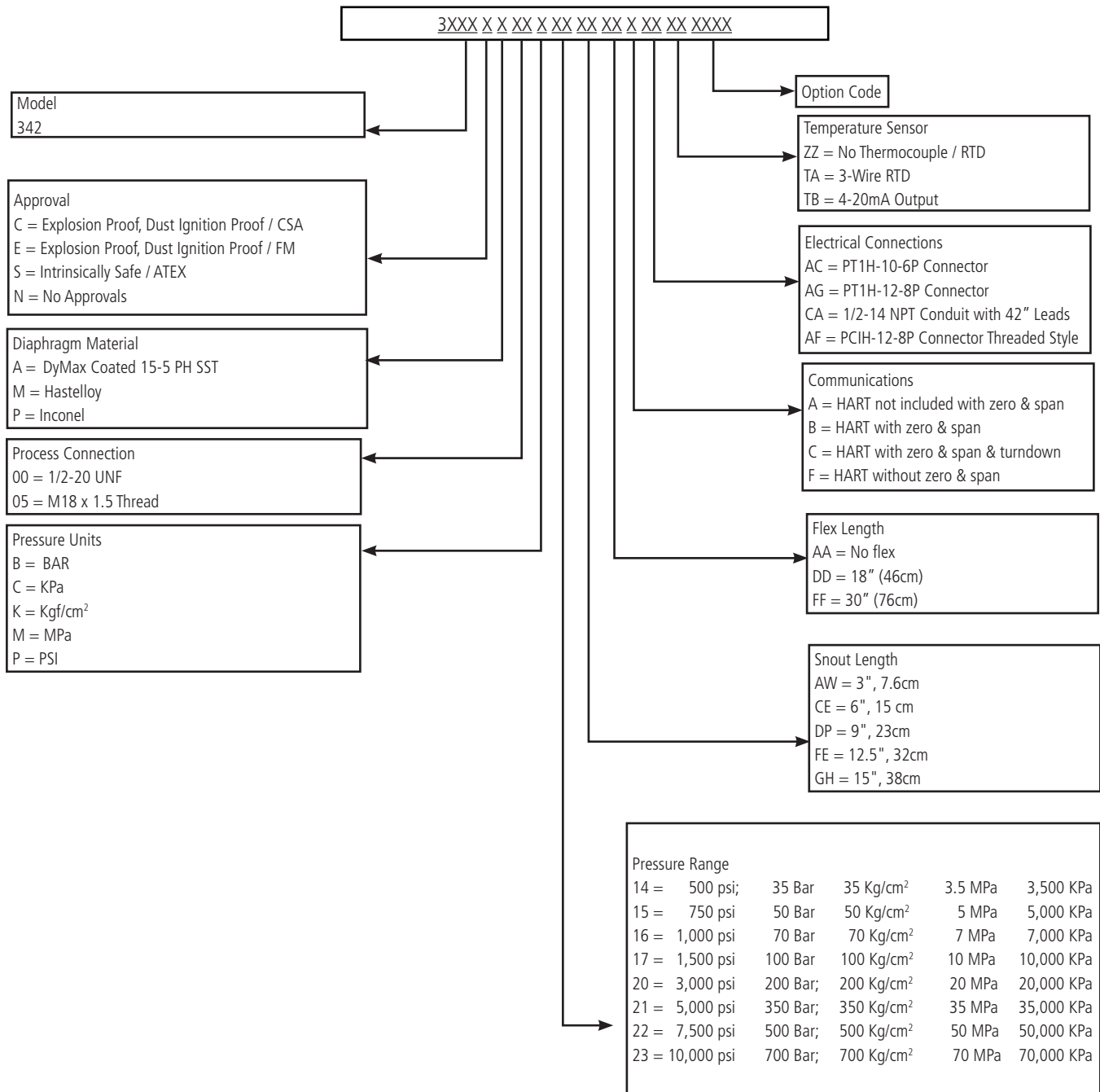


¹ Other configurations are available. Please consult factory.

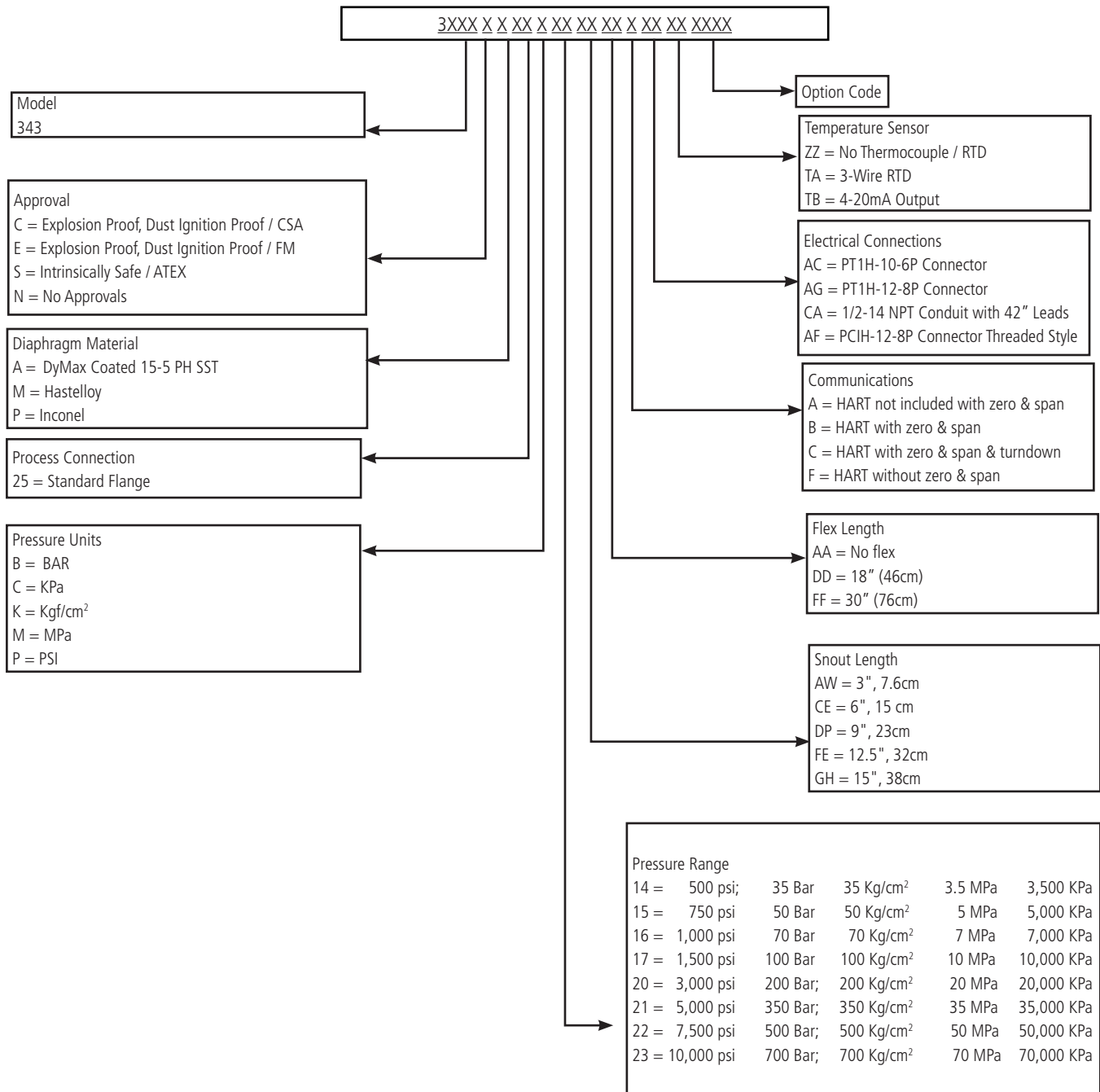
Ordering Guide for Models SPX3243¹



¹ Other configurations are available. Please consult factory.

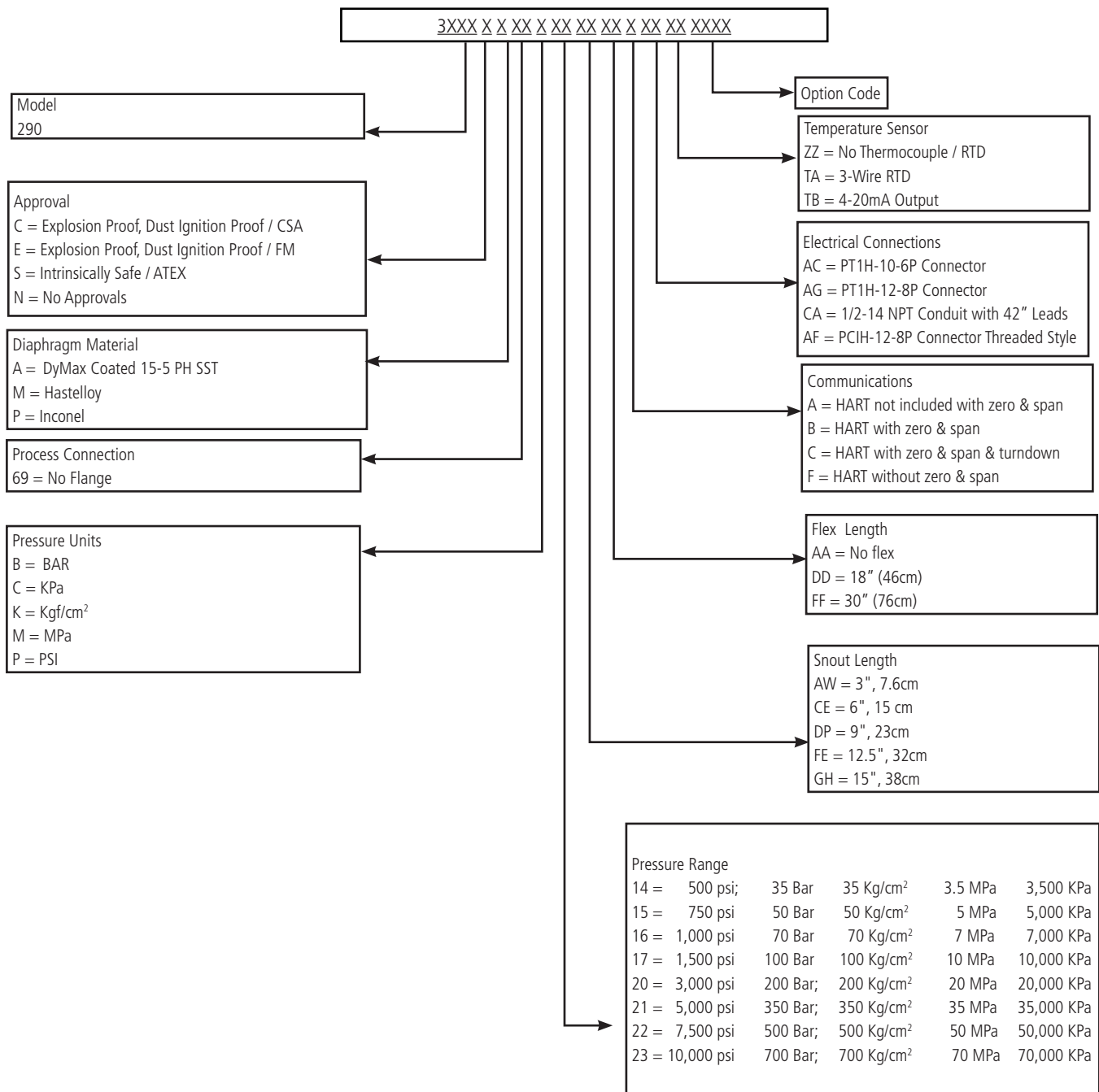
Ordering Guide for Models SPX3342¹¹ Other configurations are available. Please consult factory.

Ordering Guide for Models SPX3343¹



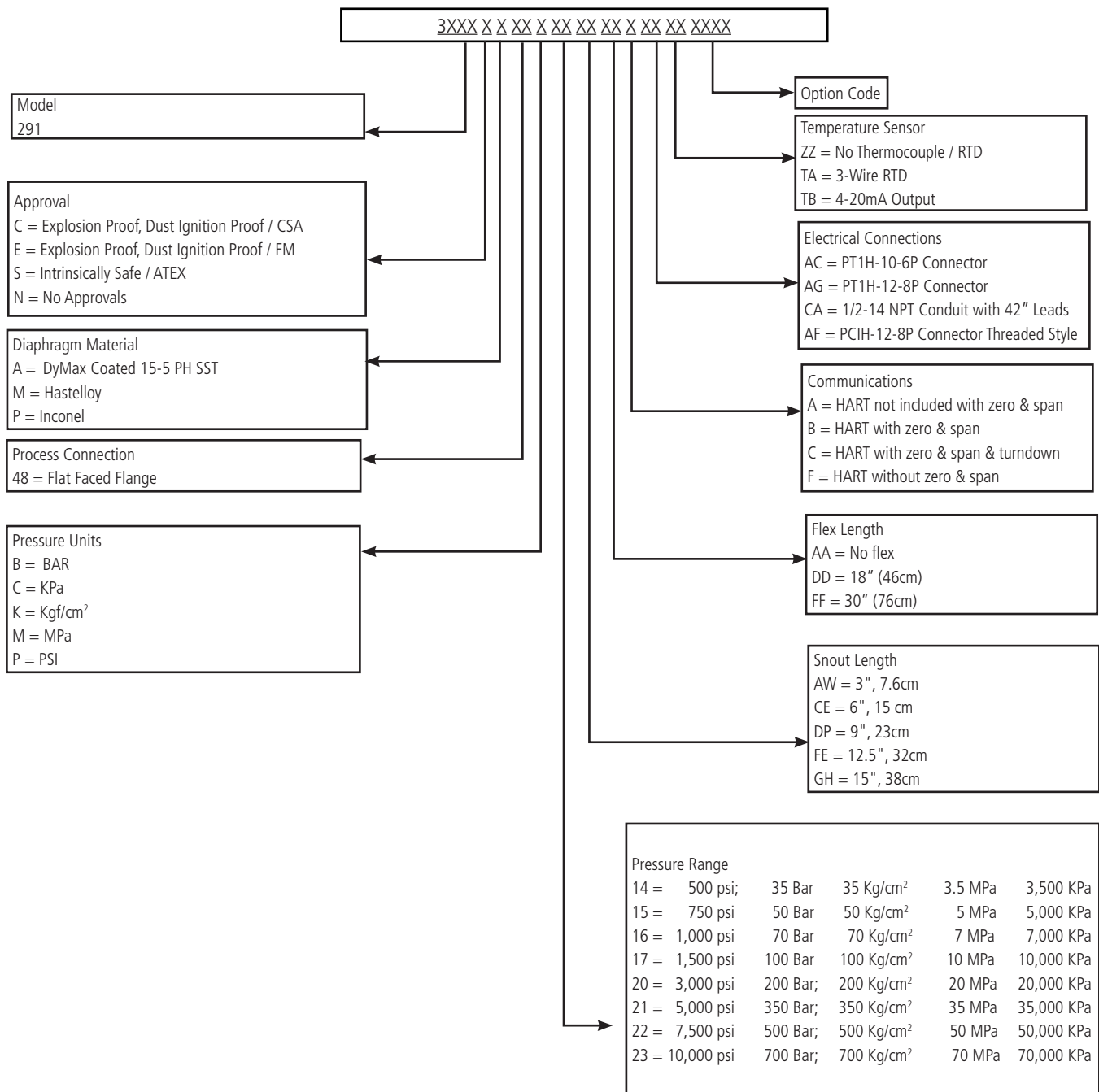
¹ Other configurations are available. Please consult factory.

Ordering Guide for Models SPX3290¹



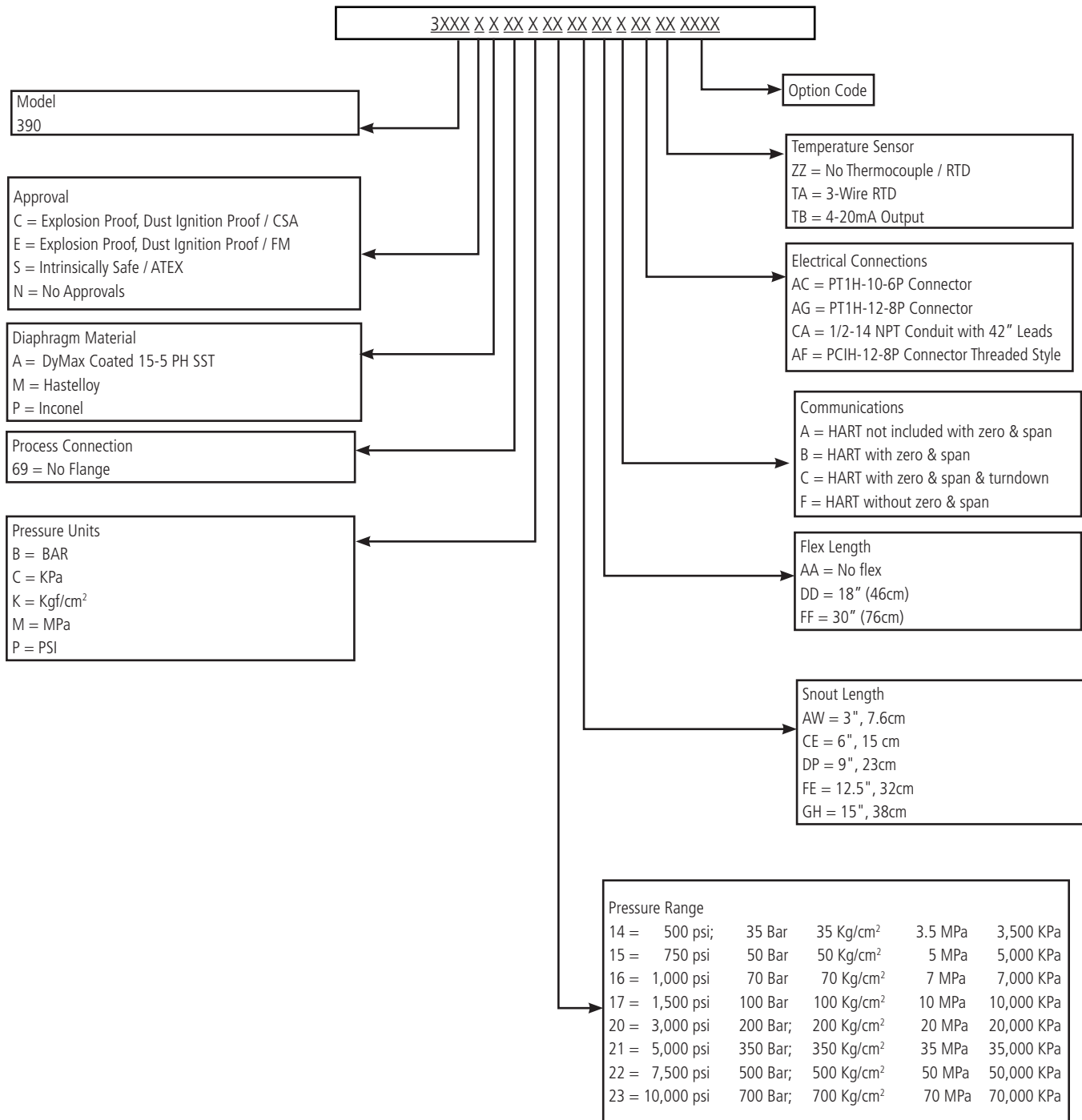
¹ Other configurations are available. Please consult factory.

Ordering Guide for Models SPX3291¹



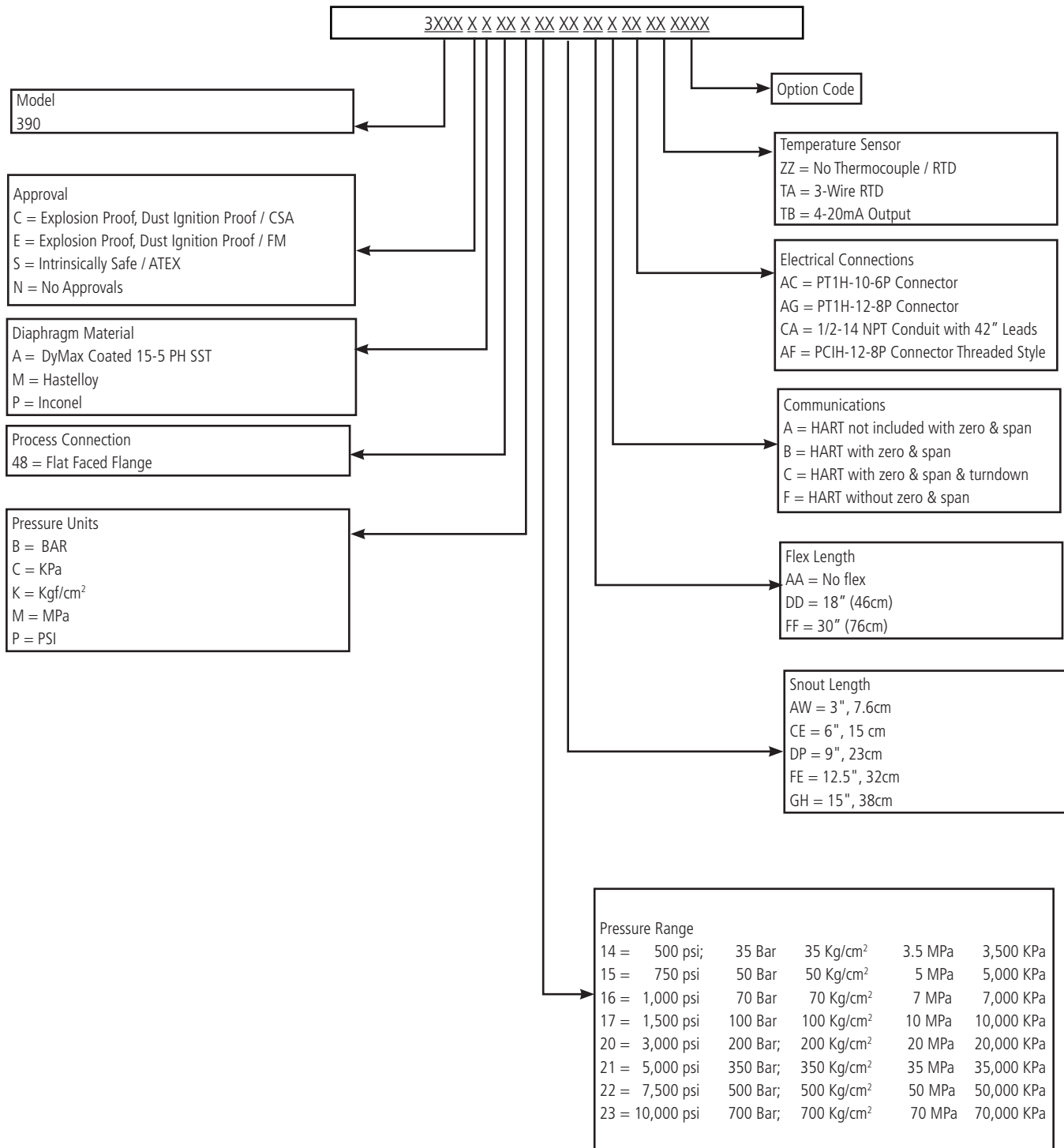
¹ Other configurations are available. Please consult factory.

Ordering Guide for Models SPX3390¹



¹ Other configurations are available. Please consult factory.

Ordering Guide for Models SPX3391¹



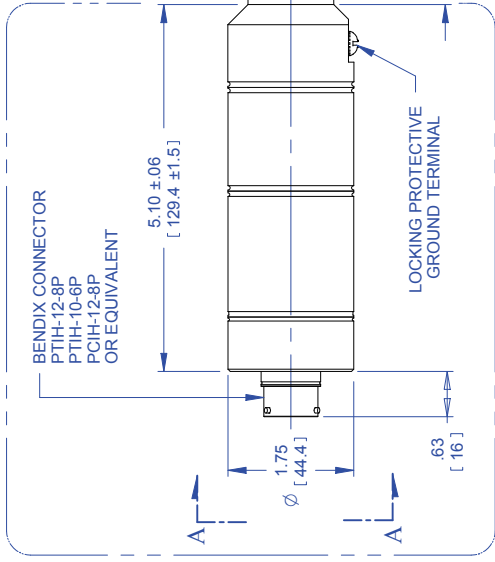
¹ Other configurations are available. Please consult factory.

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

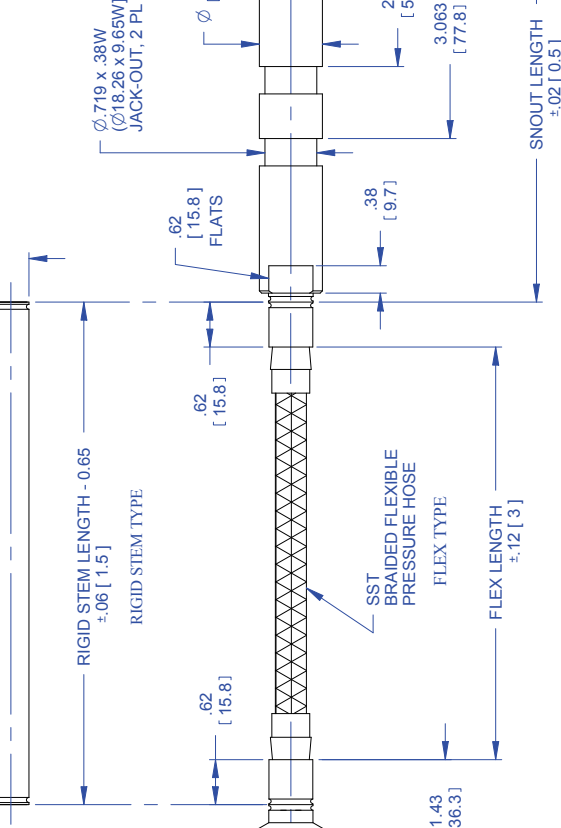
690001

DETAIL 'A'

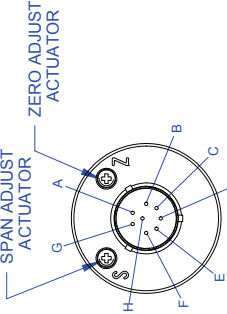
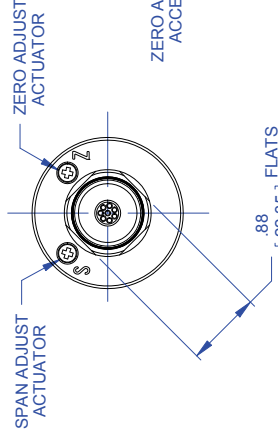
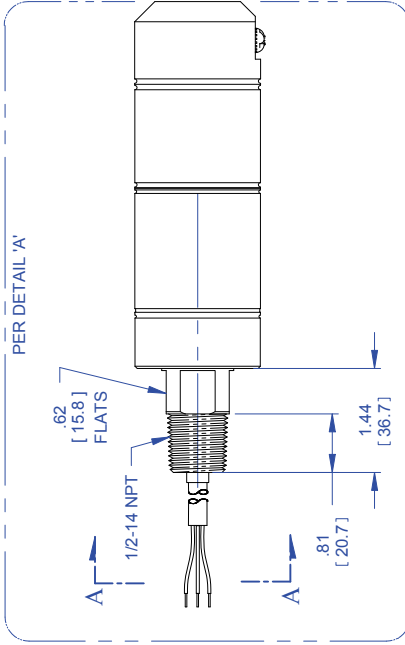
ELECTRICAL HOUSING, CONNECTOR



RIGID STEM LENGTH - 0.65 ± .06 [1.5]



ELECTRICAL HOUSING, CONDUIT



VIEW A-A

VIEW A-A

VIEW A-A

SIGNAL	TERMINAL DESCRIPTION	CONDUIT-LEAD WIRE COLOR	6 PIN 8 PIN
PRIMARY 4-20mA	PWR+/SIG+	RED	A
	PWR-/SIG-	BLACK	B
	CASE	GREEN	-
	OPTIONS		
RCAL ONLY	RCAL+	ORANGE	F
	RCAL-	BLUE	E
	RCAL+	ORANGE	-
	RCAL-	BLUE	-
SECONDARY 4-20mA ONLY	2ND PWR+/SIG+	VIOLET	-
	2ND PWR-/SIG-	YELLOW	-
	2ND PWR+/SIG+	VIOLET	-
	2ND PWR-/SIG-	YELLOW	-
DUAL RTD ONLY	RTD (-)	WHITE	-
	RTD (+)	GREY	-
	RTD (+)	BROWN	-
	RTD (+)	BROWN	-

NOTES:

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

1. UNLESS OTHERWISE SPECIFIED:
 1. 1/2 INCH BORE
 2. 1/2 INCH BORE
 3. 1/2 INCH BORE
 4. 1/2 INCH BORE
 5. 1/2 INCH BORE
 6. 1/2 INCH BORE
 7. 1/2 INCH BORE
 8. 1/2 INCH BORE
 9. 1/2 INCH BORE
 10. 1/2 INCH BORE

SPX-T 3390
 OUTLINE DWG

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Dynisco

FORGE PARTWAY TRAVEL IN VA

SIZE DWG NO.

C 690001 C

SCALE NONE SHEET 1 OF 1

REV	ECO	BY	APP	DATE	000652	
A	46553	TP	LEB	07/29/16	R	

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.

TITLE

GUARDIAN SERIES CONNECTORS

TOOLERANCES UNLESS OTHERWISE SPECIFIED:

1. 1 PLACE DECIMAL ± .005

2. FRACTIONS ± 1/32

3. DRILLS < 0.5 DIA ± .002 > 0.5 DIA ± .003

4. ANGLES ± 0.5°

5. EDGES R .005 MAX

6. EDGES R .006 OR CHAMFER MAX

7. PART TO BE FREE OF BURRS

8. ALL DIMENSIONS ARE IN INCHES.

MODEL NO.

X

DO NOT SCALE DRAWING

MATERIAL X

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Dynisco

FORCE INNOVATION. FRANKLIN, MA

SIZE

B

DWG. NO.

000652

REV

A

SCALE

NONE

SHEET

1

OF

1



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