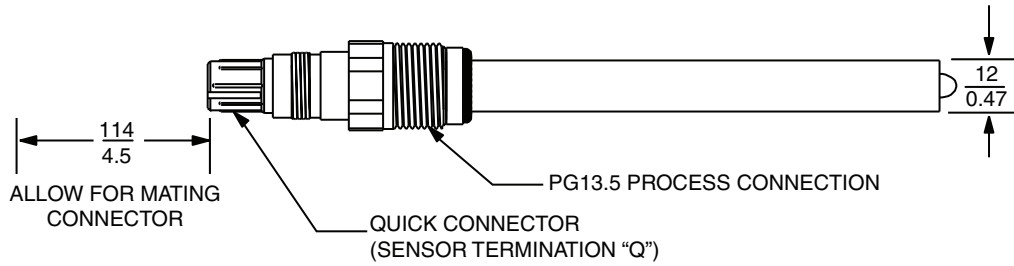
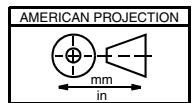
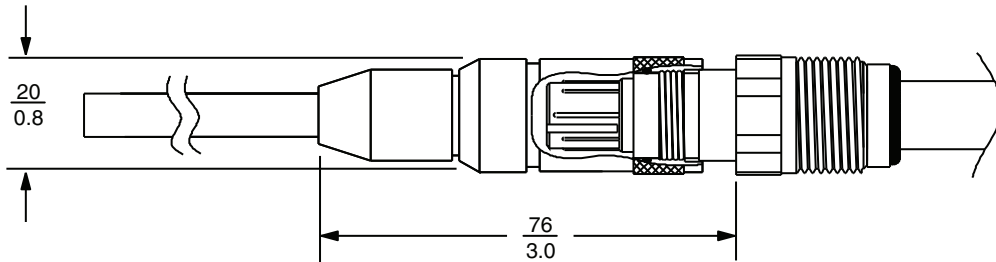


# PH12 Series pH and ORP Sensors and Accessories

## COMMON DIMENSIONS

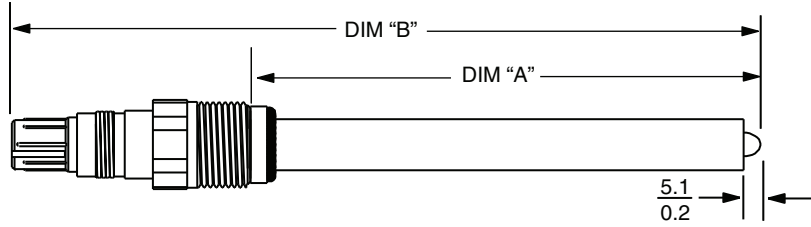


## QUICK DISCONNECT SENSOR TERMINATION "Q"

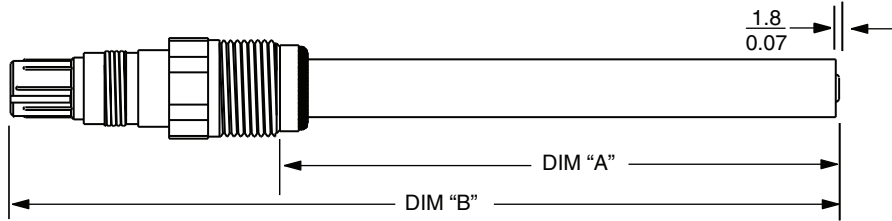


For dimensional information specific to your sales order, refer to Certified Dimensional Prints (CDPs) which can be ordered from your Foxboro Sales Office or authorized factory representative.

PH12-1, -2, -A, and -B DOMED SENSOR



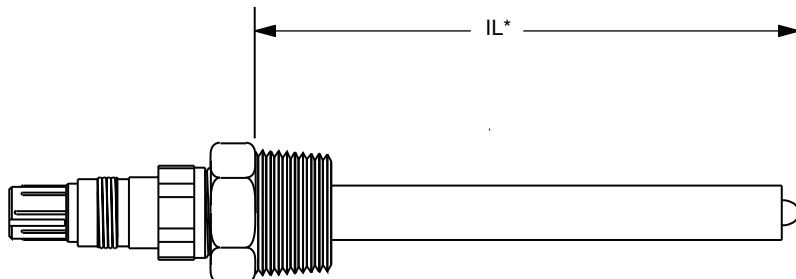
PH12-3, -4, and -C FLAT SENSOR



PH12-1, -2, -A, -B Domed Sensor				PH12-3, -4, -C Flat Sensor			
Dimension A		Dimension B		Dimension A		Dimension B	
mm	in	mm	in	mm	in	mm	in
120	4.7	176	6.9	117	4.6	173	6.8
225	8.9	281	11.1	222	8.8	278	11.0
360	14.2	416	16.4	357	14.1	413	16.3
425	16.7	481	18.9	422	16.6	478	18.8

**PH12 SENSOR MOUNTING ACCESSORIES**

**FIT12-3Nx000x NPT CONNECTION WITHOUT HOLDER**

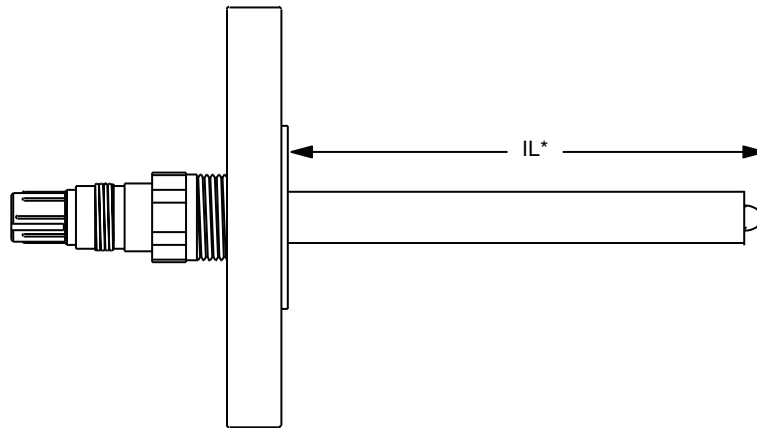


\*IMMERSION LENGTH PER MODEL CODE SELECTION.

SENSOR BODY LENGTH		IMMERSION LENGTH IL <sup>(a)</sup>	
mm	in	mm	in
120	4.7	121	4.8
225	8.9	226	8.9
360	14.2	361	14.2
425	16.7	426	16.8

a. Dimensions shown for Domed Sensor; For Flat Sensor, subtract 3 mm (0.1 in)

FIT12-3Fx000x FLANGE CONNECTION WITHOUT HOLDER



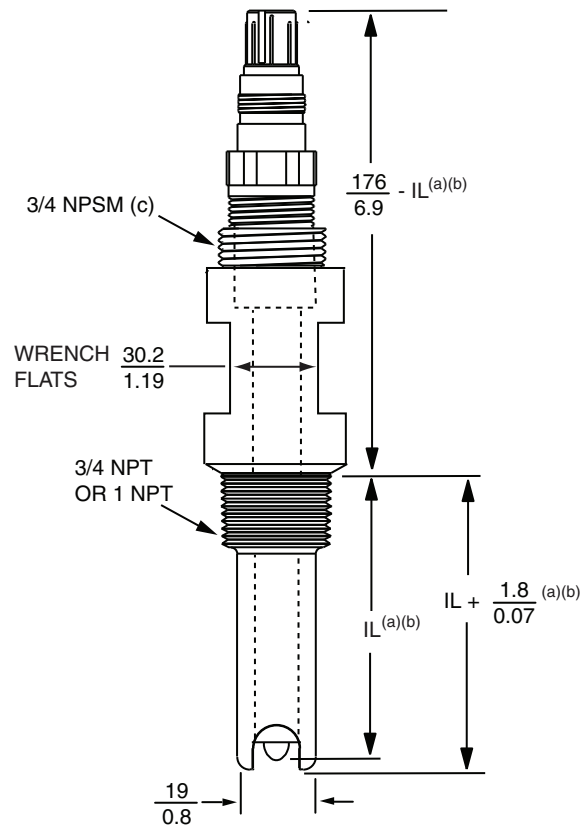
\*IMMERSION LENGTH PER MODEL CODE SELECTION

SENSOR BODY LENGTH		FLANGE TYPE	IMMERSION LENGTH IL <sup>(a)</sup>	
mm	in		mm	in
120	4.7	FA, FB, FC	112	4.4
		FD	109	4.3
		FF, FH	104	4.1
225	8.9	FA, FB, FC	216	8.5
		FD	213	8.4
		FF, FH	211	8.3
360	14.2	FA, FB, FC	351	13.8
		FD	348	13.7
		FF, FH	345	13.6
425	16.7	FA, FB, FC	417	16.4
		FD	414	16.3
		FF, FH	409	16.1

a. Dimensions shown for Domed Sensor; For Flat Sensor, subtract 3 mm (0.1 in)

NPT CONNECTION WITH CPVC OR KYNAR GUARDED SENSOR HOLDER

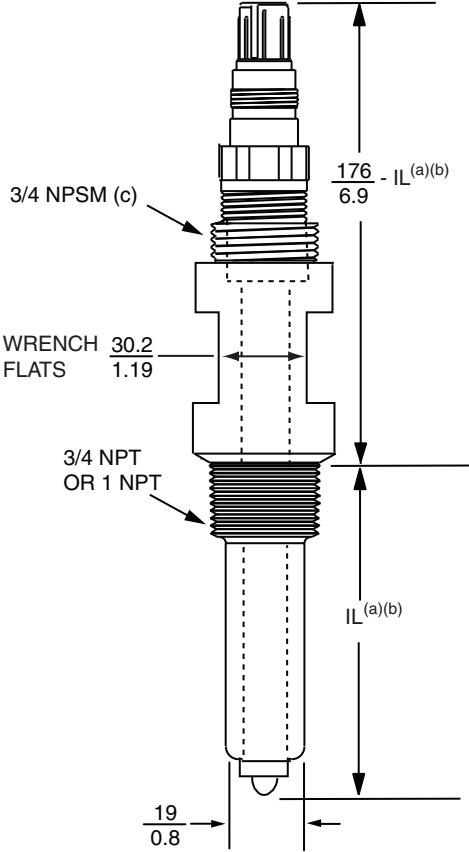
MODEL FIT12-1NxxxxC or FIT12-1NxxxxK



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

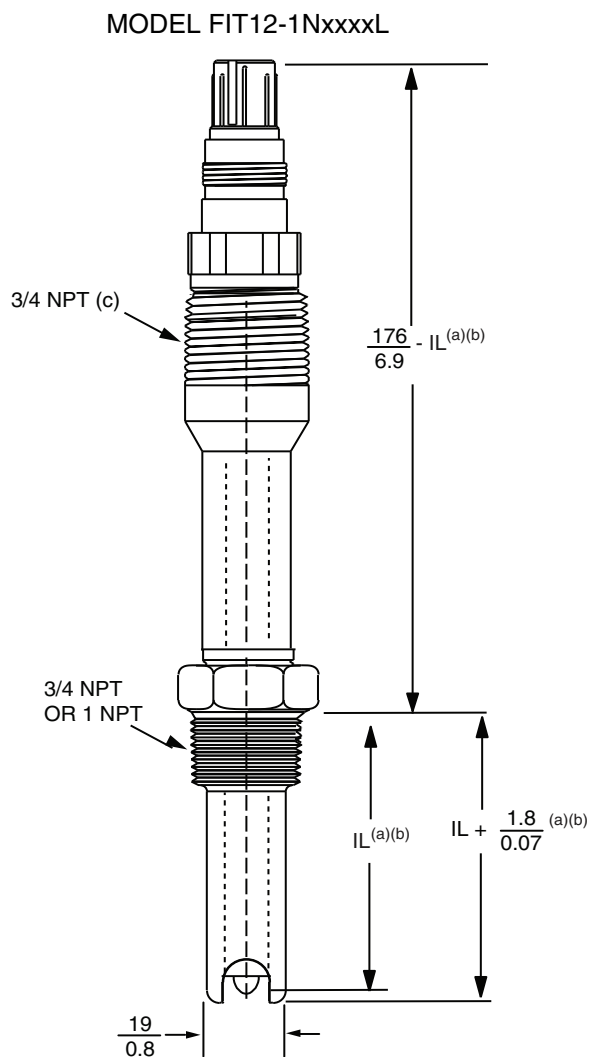
NPT CONNECTION WITH CPVC OR KYNAR UNGUARDED SENSOR HOLDER

MODEL FIT12-2NxxxxC or FIT12-2NxxxxK



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

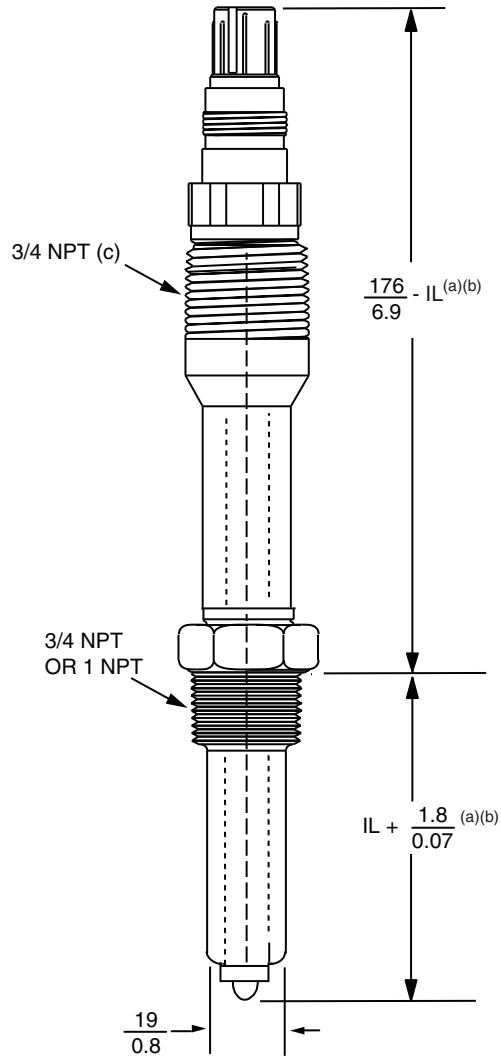
NPT CONNECTION WITH STAINLESS STEEL GUARDED SENSOR HOLDER



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

NPT CONNECTION WITH STAINLESS STEEL UNGUARDED SENSOR HOLDER

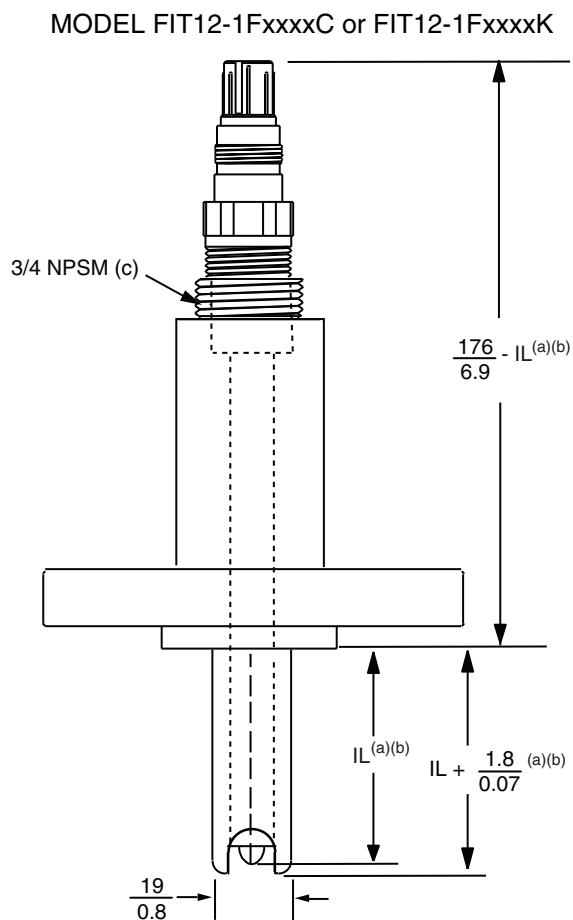
MODEL FIT12-2NxxxxL



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF



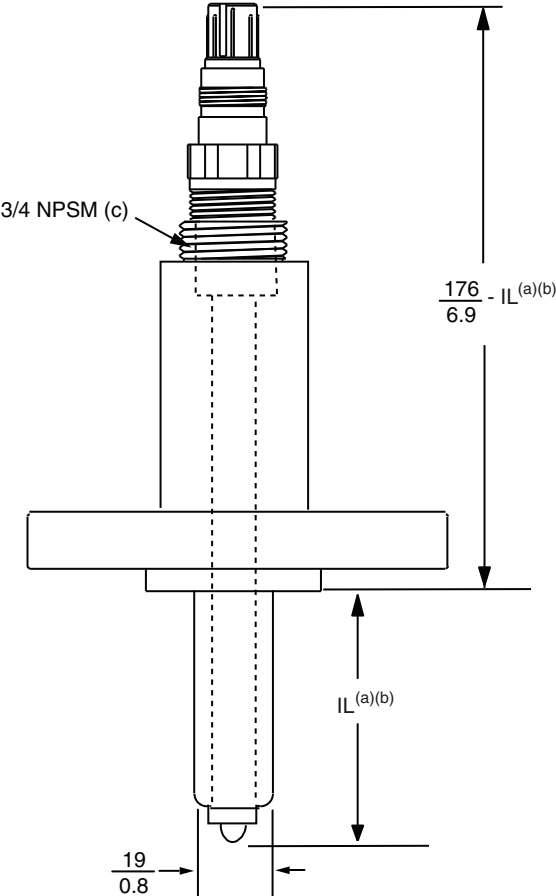
FLANGE CONNECTION WITH CPVC OR KYNAR GUARDED SENSOR HOLDER



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

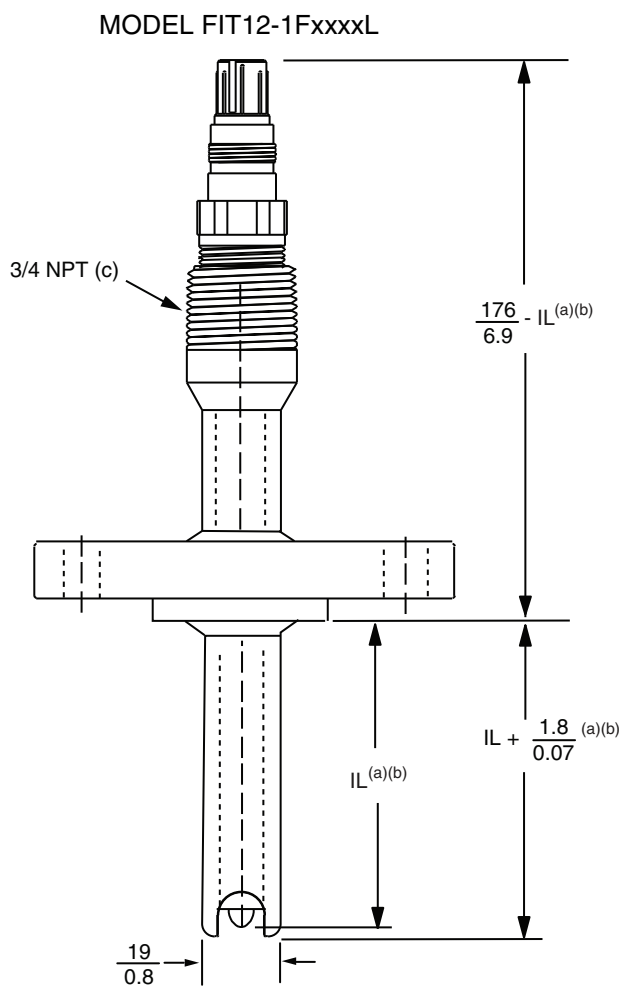
FLANGE CONNECTION WITH CPVC OR KYNAR UNGUARDED SENSOR HOLDER

MODEL FIT12-2FxxxxC or FIT12-2FxxxxK



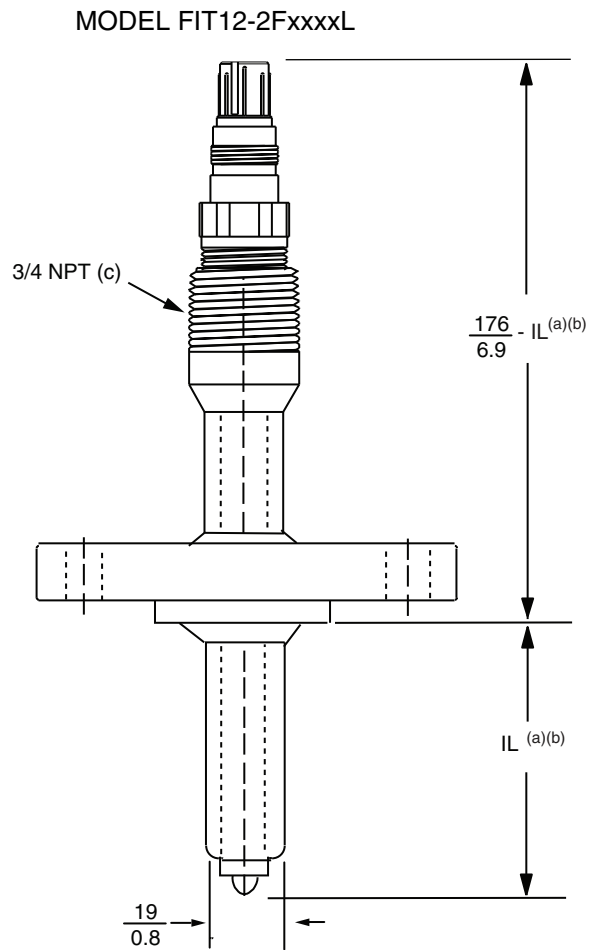
- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

FLANGE CONNECTION WITH STAINLESS STEEL GUARDED SENSOR HOLDER



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

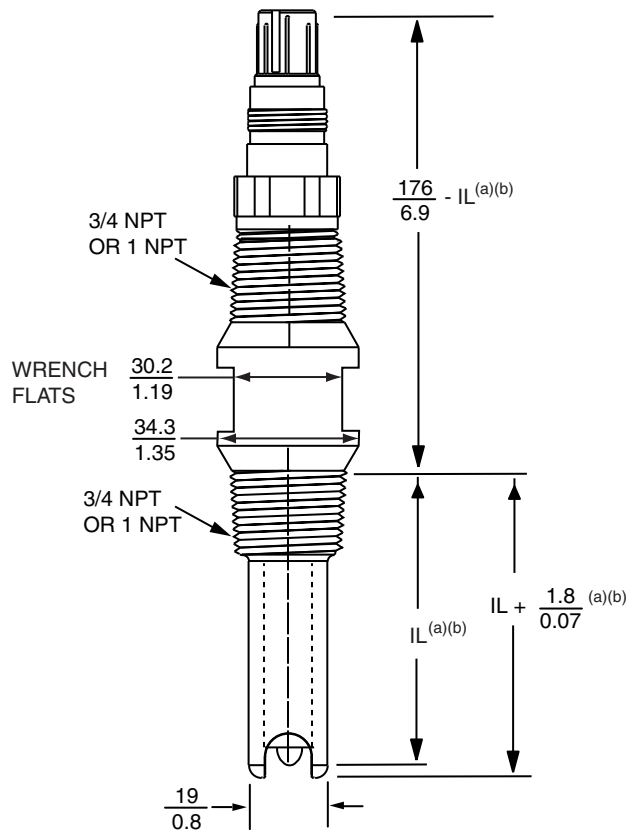
FLANGE CONNECTION WITH STAINLESS STEEL UNGUARDED SENSOR HOLDER



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

PIPE ADAPTER CONNECTION WITH GUARDED SENSOR HOLDER

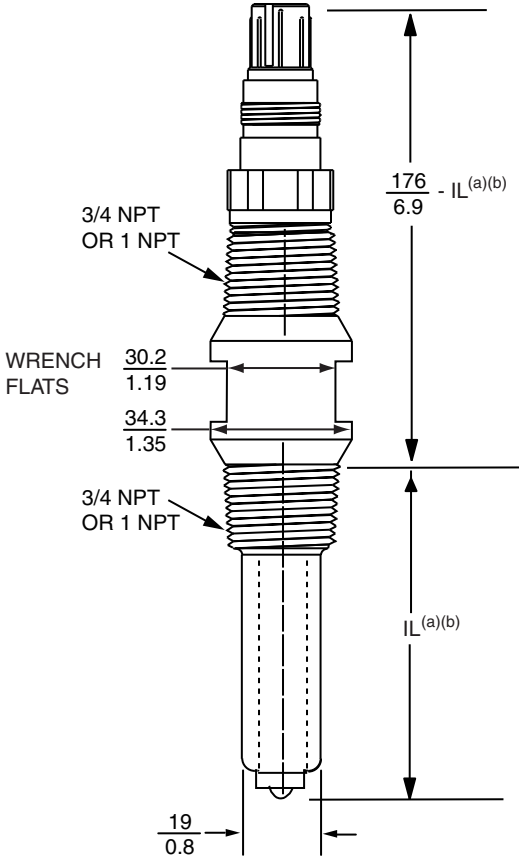
MODEL FIT12-1Sxxxxx



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION  
 (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)

PIPE ADAPTER CONNECTION WITH UNGUARDED SENSOR HOLDER

MODEL FIT12-2Sxxxxx



- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)

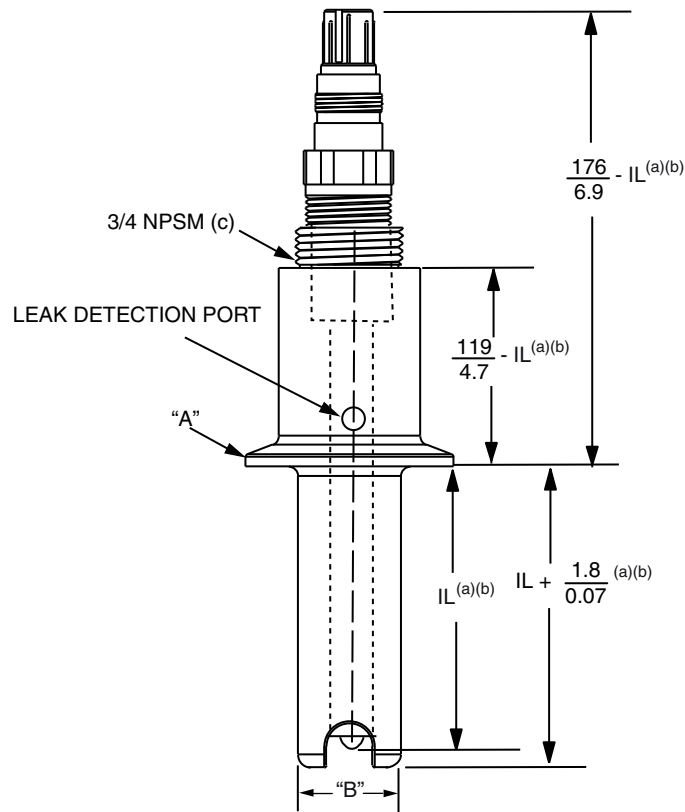
---

**NOTE:** The Pipe Adapter is for use with the 120 mm (4.7 in) PH12 Sensor only.

---

TRI-CLAMP SANITARY CONNECTION WITH GUARDED SENSOR HOLDER

MODEL FIT12-1TxxxxL

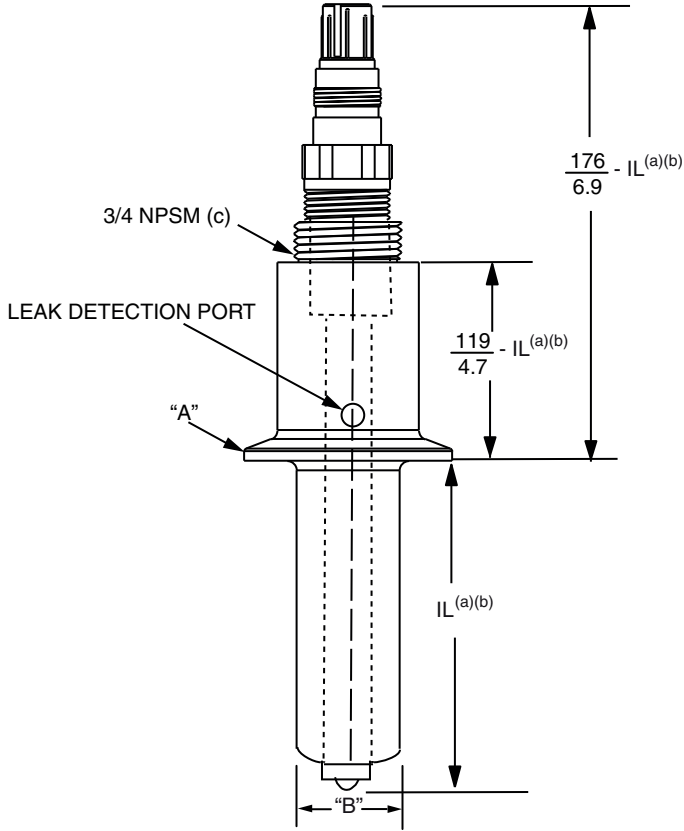


- (a) IMMERSION LENGTH PER MODEL CODE SELECTION  
 (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)  
 (c) FOR OPTIONAL CABLE STRAIN RELIEF

Tri-Clamp Type Connection Size	DIAMETER "A"		DIAMETER "B"	
	mm	in	mm	in
1, 1 1/2	50	2.0	18	0.7
2	64	2.5	25	1.0

TRI-CLAMP SANITARY CONNECTION WITH UNGUARDED SENSOR HOLDER

MODEL FIT12-2TxxxxL

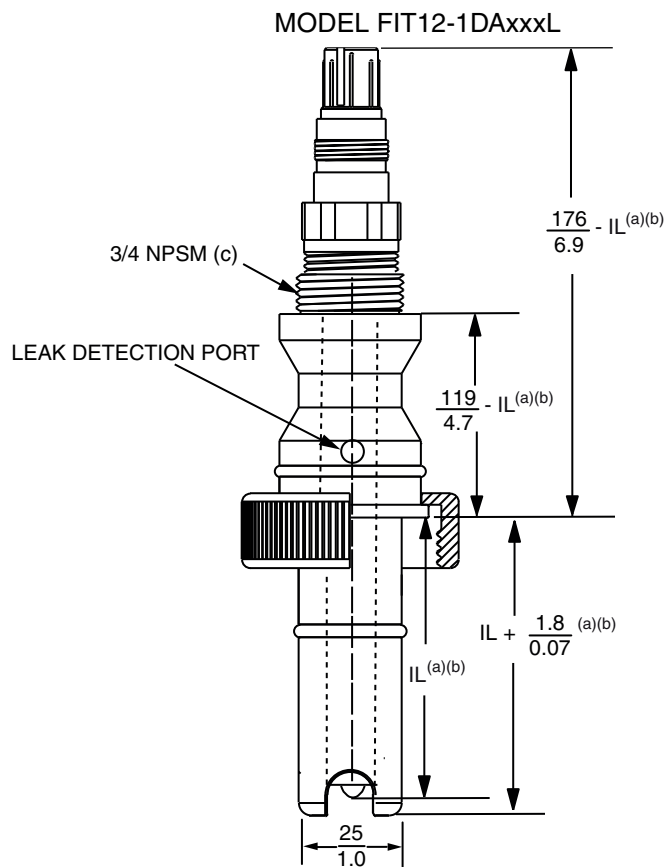


- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

Tri-Clamp Type Connection Size	DIAMETER "A"		DIAMETER "B"	
	mm	in	mm	in
1, 1 1/2	50	2.0	19	0.8
2	64	2.5	25	1.0

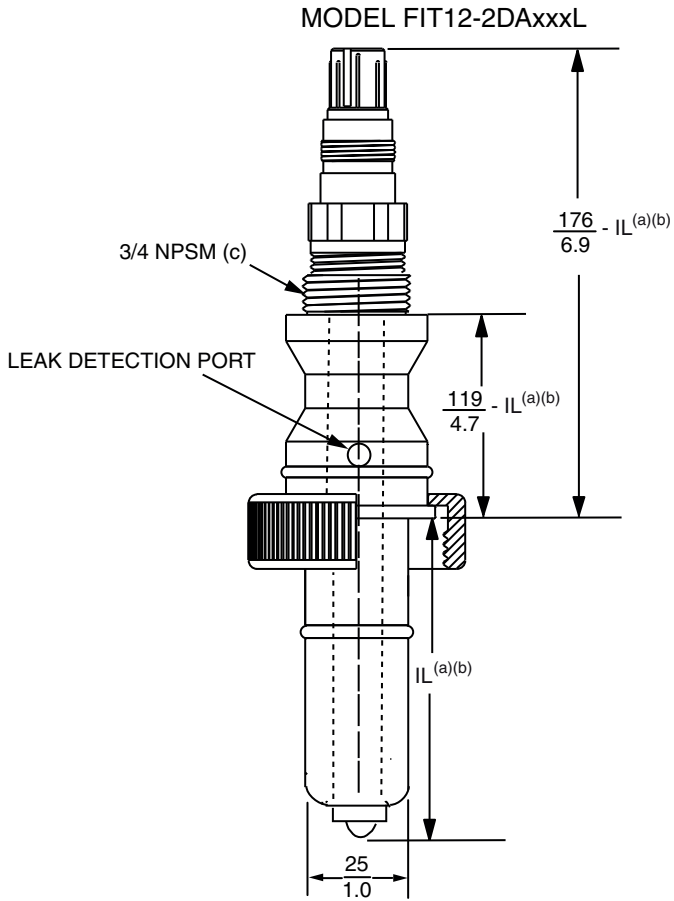


DN25 THREADED SANITARY CONNECTION WITH GUARDED SENSOR HOLDER



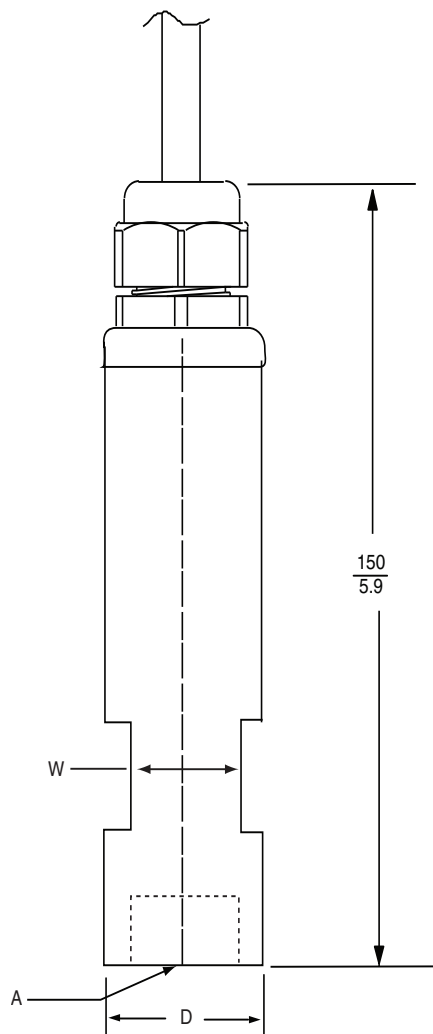
- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

DN25 THREADED SANITARY CONNECTION WITH UNGUARDED SENSOR HOLDER



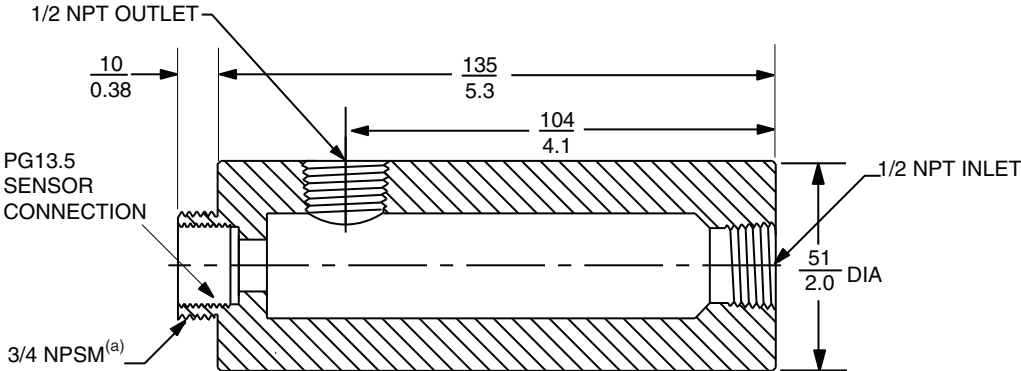
- (a) IMMERSION LENGTH PER MODEL CODE SELECTION
- (b) DOMED ELECTRODE SHOWN. FOR FLAT ELECTRODE, SUBTRACT 3 mm (0.1 in)
- (c) FOR OPTIONAL CABLE STRAIN RELIEF

OPTIONAL CABLE STRAIN RELIEF HOUSING



THREAD A	DIAMETER D		WRENCH FLATS W	
	mm	in	mm	in
3/4 NPSM	34.3	1.35	28.7	1.13
3/4 NPT	34.3	1.35	28.7	1.13
1 NPT	50.8	2.00	44.5	1.75

FLOW CHAMBER



(a) FOR CABLE STRAIN RELIEF OPTION

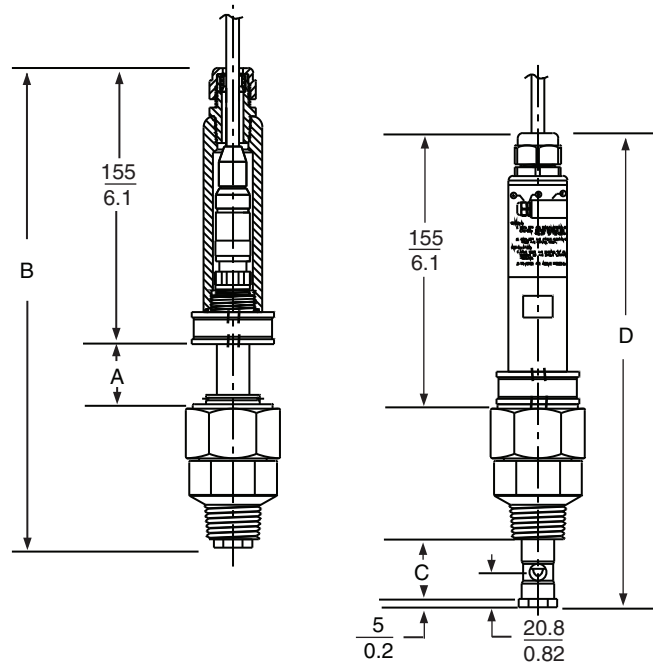
---

NOTE: The Flow Chamber accessory is for use with the 120 mm (4.7 in) PH12 Sensor only.

---

RETRACTION/INSERTION ASSEMBLY

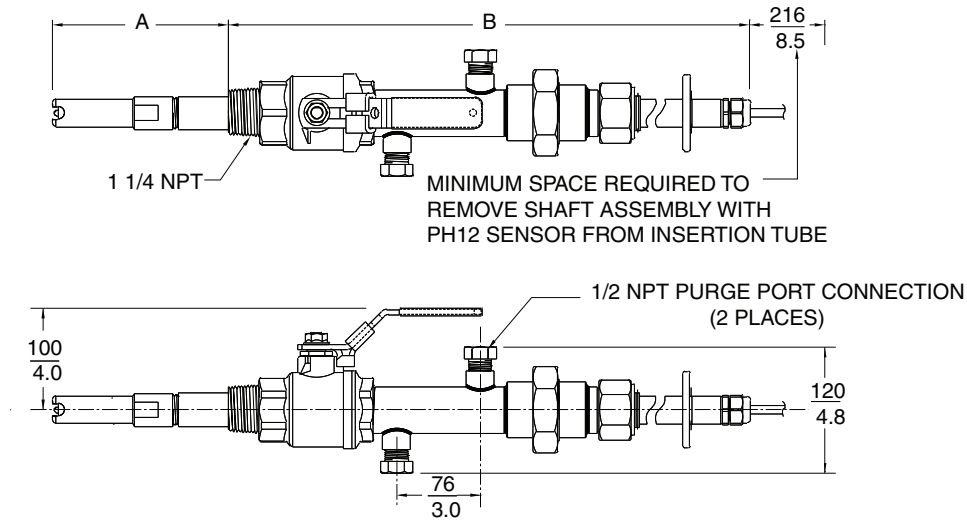
MODEL FIT12-1Rxxxxx



Dimension	Sensor Length							
	120 mm (4.7 in)		225 mm (8.9 in)		360 mm (14.2 in)		425 mm (16.7 in)	
	mm	in	mm	in	mm	in	mm	in
A	0 to 36	0 to 1.4	0 to 142	0 to 5.6	0 to 277	0 to 10.9	0 to 340	0 to 13.4
B	280	11.0	386	15.2	521	20.5	584	23.0
C	0 to 36	0 to 1.4	0 to 142	0 to 5.6	0 to 277	0 to 10.9	0 to 340	0 to 13.4
D	280	11.0	386	15.2	521	20.5	584	23.0

BALL VALVE INSERTION ASSEMBLY

MODEL BVA-PHD...



Ball Valve Material	Dimension "A" Insertion Length	Dimension "B" (a) Overall Length
316 ss	0 to 20 cm (0 to 8 in)	75 cm (29.5 in)
316 ss	0 to 40 cm (0 to 16 in)	95 cm (37.5 in)
316 ss	0 to 60 cm (0 to 24 in)	115 cm (45.5 in)
316 ss	0 to 80 cm (0 to 32 in)	135 cm (53.5 in)
316 ss	0 to xx cm (0 to length per sales order) <sup>(b)</sup>	
Titanium	0 to 20 cm (0 to 8 in)	77 cm (30.5 in)
Titanium	0 to 40 cm (0 to 16 in)	98 cm (38.5 in)
Titanium	0 to 60 cm (0 to 24 in)	117 cm (46.5 in)
Titanium	0 to 80 cm (0 to 32 in)	132 cm (54.5 in)
Titanium	0 to xx cm (0 to length per sales order) <sup>(b)</sup>	

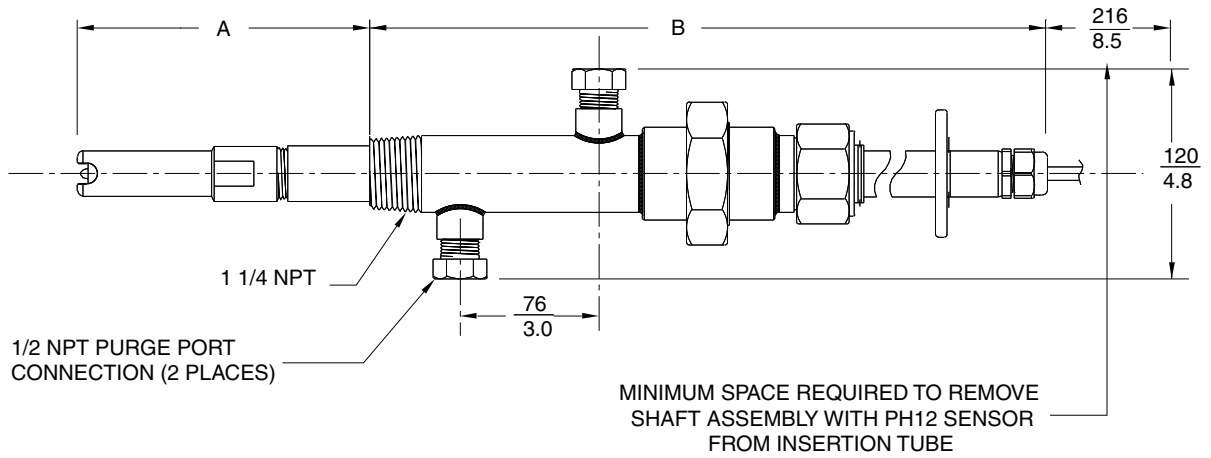
- a. Overall length B dimension is at the fully retracted position (not shown).
- b. Contact Invensys for availability in 20 cm (8 in) increments.

---

**NOTE:** The ball valve insertion assembly is for use with the 120 mm (4.7 in) PH12 Sensor only.

---

BALL VALVE INSERTION ASSEMBLY -A OPTION  
MODEL BVA-PHD... -A



Ball Valve Material	Dimension "A" Insertion Length	Dimension "B" (a) Overall Length
316 ss	0 to 36 cm (0 to 14 in)	67 cm (26.5 in)
316 ss	0 to 56 cm (0 to 22 in)	88 cm (34.5 in)
316 ss	0 to 76 cm (0 to 30 in)	108 cm (42.5 in)
316 ss	0 to 96 cm (0 to 38 in)	128 cm (50.5 in)
316 ss	0 to Length per Sales Order <sup>(b)</sup>	
Titanium	0 to 38 cm (0 to 15 in)	70 cm (27.5 in)
Titanium	0 to 58 cm (0 to 23 in)	90 cm (35.5 in)
Titanium	0 to 78 cm (0 to 31 in)	110 cm (43.5 in)
Titanium	0 to 98 cm (0 to 39 in)	138 cm (51.5 in)
Titanium	0 to Length per Sales Order <sup>(b)</sup>	

- a. Overall length B dimension is at the fully retracted position (not shown).  
b. Contact Invensys for availability in 20 cm (8 in) increments.

Invensys Operations Management  
5601 Granite Parkway Suite 1000  
Plano, TX 75024  
United States of America  
<http://www.iom.invensys.com>

Global Customer Support  
Inside U.S.: 1-866-746-6477  
Outside U.S.: 1-508-549-2424 or contact  
your local Invensys representative.  
Website: <http://support.ips.invensys.com>

Invensys and Foxboro are trademarks of Invensys plc, its  
subsidiaries, and affiliates.  
All other brand names may be trademarks of their respective  
owners.

Copyright 2009-2012 Invensys Systems, Inc.  
All rights reserved

MB 123

0912