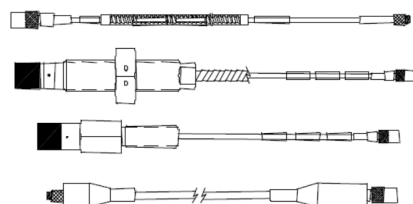
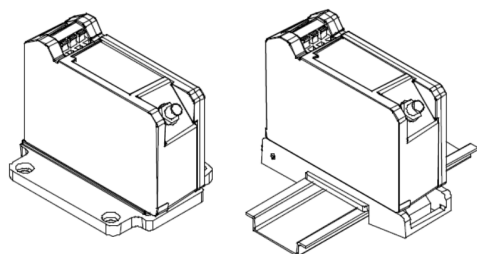


3300 XL 11 mm Proximity Transducer System

Datasheet

Cordant™

146256 Rev. T



Description

Transducer System

The Bently Nevada™ 3300 XL 11 mm Proximity Transducer System consists of:

- 3300 XL 11 mm probe
- 3300 XL 11 mm extension cable
- 3300 XL 11 mm Proximitor Sensor¹

The 3300 XL 11 mm Proximity Transducer System has a 3.94 V/mm (100 mV/mil) output for non-contacting vibration and displacement measurements on fluid film bearing machines. The large 11 mm tip enables this transducer system to have a longer linear range compared to our standard 3300 XL 8 mm Transducer System. It is primarily used in the following applications where the longer linear range is necessary:

- Axial (thrust) position measurements
- Ramp differential expansion measurements on steam turbines
- Rod position or rod drop measurements on reciprocating compressors
- Tachometer and zero speed measurements
- Phase reference (Keyphasor) signals

The 3300 XL 11 mm Proximitor Sensor is designed to replace the 7200-series 11 mm and 14 mm Transducer Systems. When upgrading from the 7200-series system to the 3300 XL 11 mm system, every component must be replaced with 3300 XL 11 mm components. In addition, the monitoring system must be updated. If using a 3500 Monitoring System, an updated version of the configuration software that lists the 3300 XL 11 mm Transducer System as a compatible option is required.



ia	 II 1 G Ex ia IIC T5...T1 Ga, (see Temperature Schedule table to follow) Ex ia IIIC T90°C ... T280°C Dc For EPL Dc: <table border="1" data-bbox="386 430 743 579"> <tr> <td>Ui= -28V</td><td>Ci = 1.5 nF</td></tr> <tr> <td>Ii = 140 mA</td><td>Li = 610 µH</td></tr> <tr> <td>Pi = 0.91 W</td><td></td></tr> </table>	Ui= -28V	Ci = 1.5 nF	Ii = 140 mA	Li = 610 µH	Pi = 0.91 W	
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Ii = 140 mA	Li = 610 µH						
Pi = 0.91 W							
nA,ec	 II 3 G Ex nA IIC T5...T1 Gc, Ex ec IIC T5...T1 Gc, (see Temperature Schedule table to follow) <table border="1" data-bbox="386 793 743 842"> <tr> <td>Ui= -28V</td><td>Ii= 140 mA</td></tr> </table>	Ui= -28V	Ii= 140 mA				
Ui= -28V	Ii= 140 mA						

Temperature Schedule

Temperature Classification	Ambient Temperature (Probe Only)
For EPL Ga and Gc	
T1	-55°C to +232°C
T2	-55°C to +177°C
T3	-55°C to +120°C
T4	-55°C to +80°C
T5	-55°C to +40°C
For EPL Dc	
T280°C @ Ta	-55°C to +232°C
T225°C @ Ta	-55°C to +177°C
T170°C @ Ta	-55°C to +120°C
T130°C @ Ta	-55°C to +80°C
T105°C @ Ta	-55°C to +100°C
T90°C @ Ta	-55°C to +40°C

Hazardous Area Conditions of Safe Use

cNRTLus:

ia

Install per Bently Nevada drawing 141092.

nA, ec

Install per Bently Nevada drawing 140979.

ATEX/IECEx:

ia

Install per Bently Nevada drawing 141092.

nA, ec

The Proximitor must be installed so as to provide the terminals with a degree of protection of at least IP54.

Ordering Information



For the detailed listing of country and product-specific approvals, refer to the [Approvals Quick Reference Guide \(108M1756\)](#).

For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

3300 XL 11 mm Proximity Probes

330701 3300 XL 11 mm Probe, 1/2-20 UNF thread, without armor

330702 3300 XL 11 mm Probe, 1/2-20 UNF thread, with armor

330707 3300 XL 11 mm Probe, 5/8-18 UNF thread, without armor

330708 3300 XL 11 mm Probe, 5/8-18 UNF thread, with armor

Part Number-AA-BB-CC-DD-EE-

A: Unthreaded Length Option



Unthreaded length must be at least 1.0 inch less than the case length.

Order in increments of 0.1 in
Length configurations:

Maximum unthreaded length:
8.9 in

Minimum unthreaded length:
0.0 in

Example: **0 4** = 0.4 in

B: Overall Case Length Option

Order in increments of 0.1 in
Threaded length configurations:

Maximum case length: 9.9 in

Minimum case length: 1.0 in

Example: **2 4** = 2.4 in

C: Total Length Option

10	1.0 meter (3.3 feet)
50	5.0 meters (16.4 feet)
90	9.0 meters (29.5 feet)



Five meter probes are designed for use with the five meter Proximitor Sensor only.

D: Connector and Cable-Type Option

01	Miniature coaxial ClickLoc connector with connector protector, standard cable
02	Miniature coaxial ClickLoc connector, standard cable
11	Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable
12	Miniature coaxial ClickLoc connector, FluidLoc cable

E: Agency Approval Option

00	Not required
05	Multiple Approvals

3300 XL 11 mm Proximity Probes, Metric

330703 3300 XL 11 mm Probe, M14 x 1.5 thread, without armor

330704 3300 XL 11 mm Probe, M14 x 1.5 thread, with armor

330709 3300 XL 11 mm Probe, M16 x 1.5 thread, without armor

330710 3300 XL 11 mm Probe, M16 x 1.5 thread, with armor

Part Number-AAA-BBB-CC-DD-EE

A: Unthreaded Length Option

	 Unthreaded length must be at least 26 mm less than the case length.
	Order in increments of 2 mm. Length configuration: Maximum unthreaded length: 224 mm Minimum unthreaded length: 0 mm Example: 0 6 0 = 60 mm

B: Overall Case Length Option

	Order in increments of 2 mm. Metric thread configurations: Maximum length: 250 mm Minimum length: 26 mm Example: 0 6 0 = 60 mm
--	---

C: Total Length Option

10	1.0 meter (3.3 feet)
50	5.0 meters (16.4 feet)
90	9.0 meters (29.5 feet)  Five meter probes are designed for use with the five meter Proximitor Sensor only.

D: Connector and Cable-Type Option

01	Miniature coaxial ClickLoc connector with connector protector, standard cable
02	Miniature coaxial ClickLoc connector, standard cable
11	Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable

12	Miniature coaxial ClickLoc connector, FluidLoc cable
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E: Agency Approval Option

00	Not required
05	Multiple Approvals

3300 XL 11 mm Reverse Mount Probe

330705-02-18- CC-DD-EE 3/8-24 UNF threads

330706-005-046- CC-DD-EE M10 x 1 threads

C: Total Length Option

10	1.0 meter (3.3 feet)
50	5.0 meters (16.4 feet)
90	9.0 meters (29.5 feet)  Five meter probes are designed for use with the five meter Proximitor Sensor only.

D: Connector Option

02	Miniature ClickLoc coaxial connector
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E: Agency Approval Option

00	Not required
05	Multiple Approvals

For a shorter delivery time, order commonly stocked probes. Currently, stocked probes consist of the following part numbers: 330701-00-10-10-02-00, 330701-00-20-10-02-00, 330703-000-050-10-02-00, 330705-02-18-10-02-00, 330706-005-046-10-02-00.

3300 XL 11 mm Proximitior Sensor

330780-AA-BB

A: Total Length and Mounting Option

50	5.0 meter (16.4 feet) system length, panel mount
51	5.0 meter (16.4 feet) system length, DIN mount
52	5.0 meter (16.4 feet) system length, no mounting hardware
90	9.0 meters (29.5 feet) system length, panel mount
91	9.0 meters (29.5 feet) system length, DIN mount
92	9.0 meters (29.5 feet) system length, no mounting hardware

B: Agency Approval Option

00	Not required
05	Multiple approvals



Country specific approvals may be available, consult your local Customer Care Representative for more information.

3300 XL 11 mm Extension Cable

330730-AAA-BB-CC

Make sure that the extension cable length and the probe length, when added together, **equal the Proximitior Sensor Total length.**

A: Cable Length Option

040	4.0 meters (13.1 feet)
080	8.0 meters (26.2 feet)

B: Connector and Cable Option

00	Standard cable
01	Armored cable
02	Standard cable with connector protector
03	Armored cable with connector protector
10	FluidLoc cable
11	Armored FluidLoc cable
12	FluidLoc cable with connector protector
13	Armored FluidLoc cable with connector protector

C: Agency Approval Option

00	Not required
05	Multiple Approvals

Accessories

146255	3300XL 11 mm User Guide
144979	Performance Specification
02120015	Bulk field wire. 1.0 mm ² (18 AWG), 3 conductor, twisted, shielded cable with drain wire. Specify length in feet.
02173009	Bulk field wire. 1.0 mm ² (18 AWG), 3 conductor, twisted, shielded cable. Specify length in feet.
138492-01	Replacement panel-mount mounting pad
138493-01	Replacement DIN-mount mounting pad
01609137	BNC (F) to banana plugs
01609138	Proximitior Connector Test Pin wiring (two test pins to a BNC (F) connector)

40971-04	50 Ω cable with two BNC (M) connectors. Use this cable in combination with adapter 01609137 and adapter 01609138 when checking performance of the transducer system from the Proximity Sensor test pin holes.	03839420	Female Connector Protector. Placed on the probe lead to connect to the male connector protector on the extension cable and provide environmental protection of connectors. Also placed on the extension cable to slide over the Proximity Sensor connection and protect it from the environment.
04310310	3300XL Proximity Sensor Panel-mount Screws. Package includes four 6-32 UNC thread forming mounting screws (Supplied standard with 3300 XL Proximity Housings [3300 XL option]).	330153-01	3300 XL Connector Kit. Used on 3300 XL probes and extension cables. Contains one set of male and female ClickLoc connectors, sleeves and one strip of silicone tape.
03200006	Silicone Self-fusing tape. A 9.1 meter (10 yard) roll of silicone tape to protect connectors. It is easy to install and provides excellent electrical isolation and protection from the environment. It is not recommended for use inside the casing of the machine.	163356	Connector Crimp Tool Kit. Includes one set of 75 Ω 3300 XL ClickLoc inserts and connector installation instructions. Supplied with carrying case.
40113-02	Connector Protector Kit. Connector Protector Kit for 3300 XL probes and extension cables, including connector protectors and installation tools.		
136536-01	Connector Protector Adapter. Makes our previous 3300 connector protector kits compatible with 3300 XL probes and extension cable connectors.		
40180-02	Connector Protectors. Package contains 10 pairs of connector protectors.		
03839410	Male Connector Protector. Placed on the extension cable to connect to the female connector protector on the probe and provide environmental protection of connectors.		

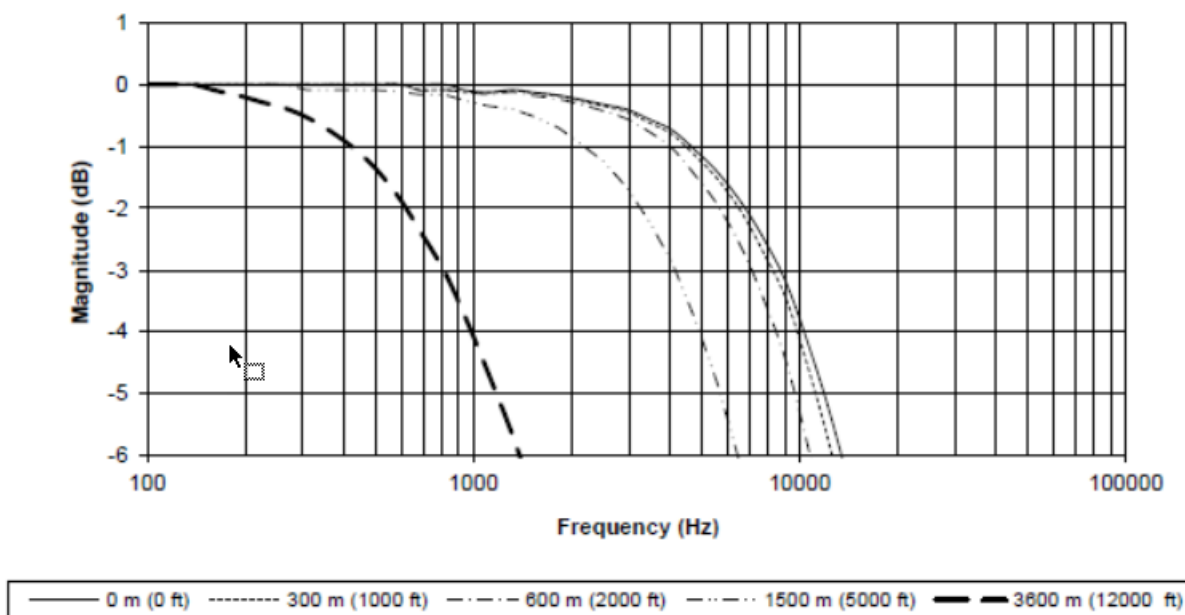


Figure 9: Frequency Response, magnitude of typical 3300 XL 11 mm System
with various lengths of field wiring, no barriers

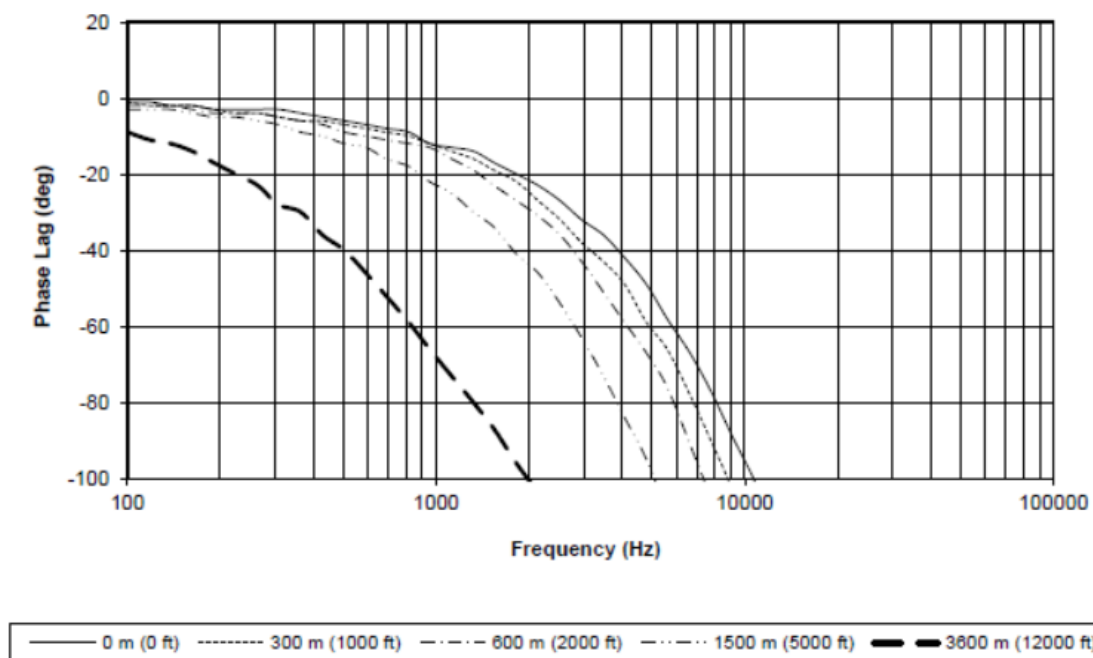


Figure 10: Frequency Response, phase change of typical 3300 XL 11 mm System
with various lengths of field wiring, no barriers

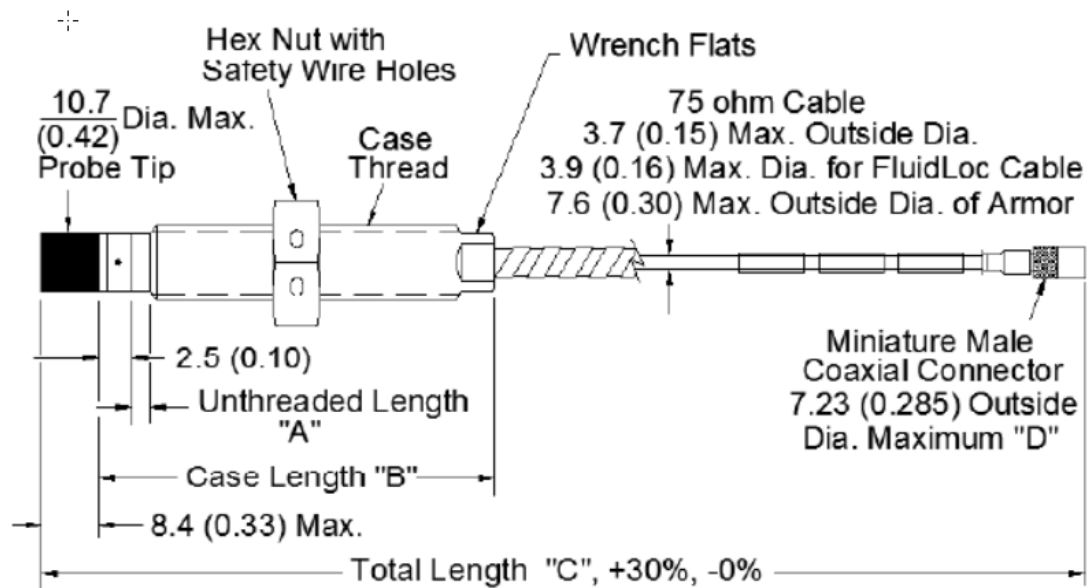
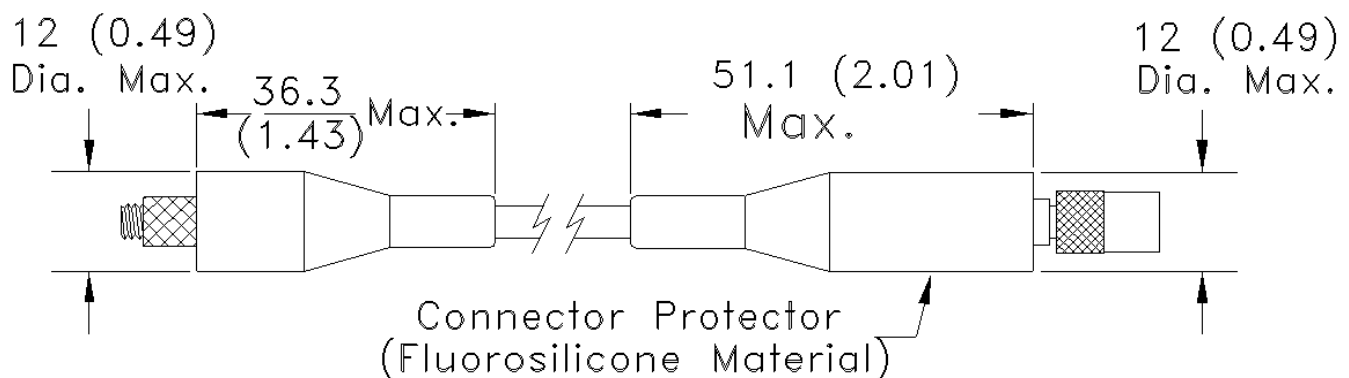


Figure 11: 3300 XL 11 mm Proximity probes, Standard Mount

330701, ½-20 UNF-2A, without armor
 330702, ½-20 UNF-2A, with armor
 330703, M14X1.5 thread, without armor
 330704, M14X1.5 thread, with armor
 330707, 5/8-18 UNF-2A, without armor
 330708, 5/8-18 UNF-2A, with armor
 330709, M16X1.5 thread, without armor
 330710, M16X1.5 thread, with armor



Note: Connector Protector only installed on female end when optioned. Both ends available as accessories.

Figure 12: Installed Connector Protectors

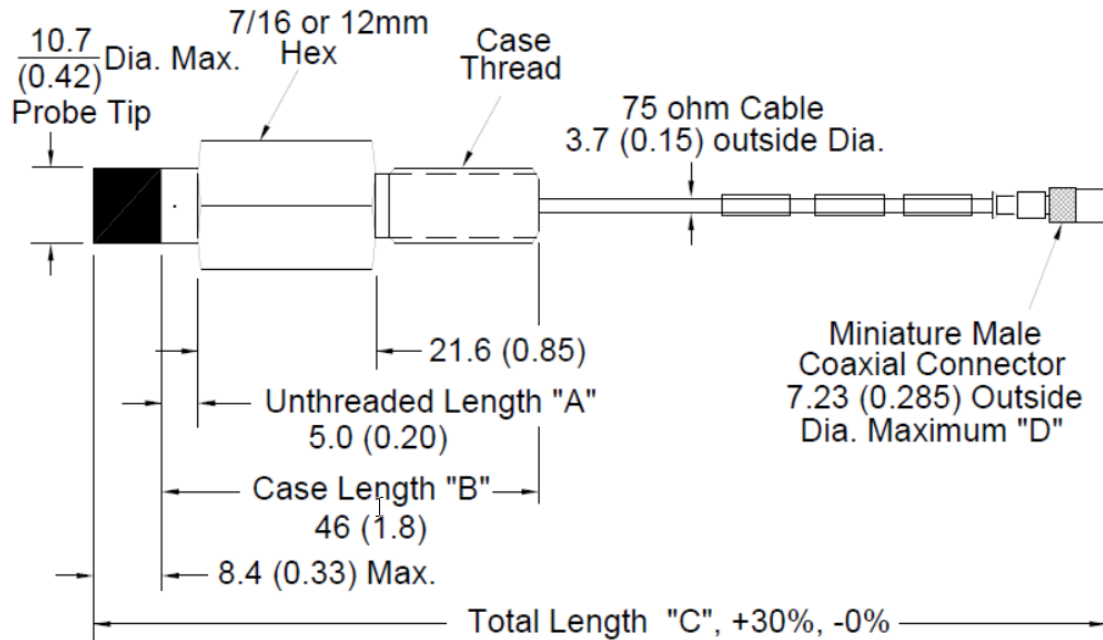


Figure 13: 3300 XL 11 mm Proximity Probes, Reverse Mount

330705, 3/8-24 UNF-2A threads
330706, M10X1 threads

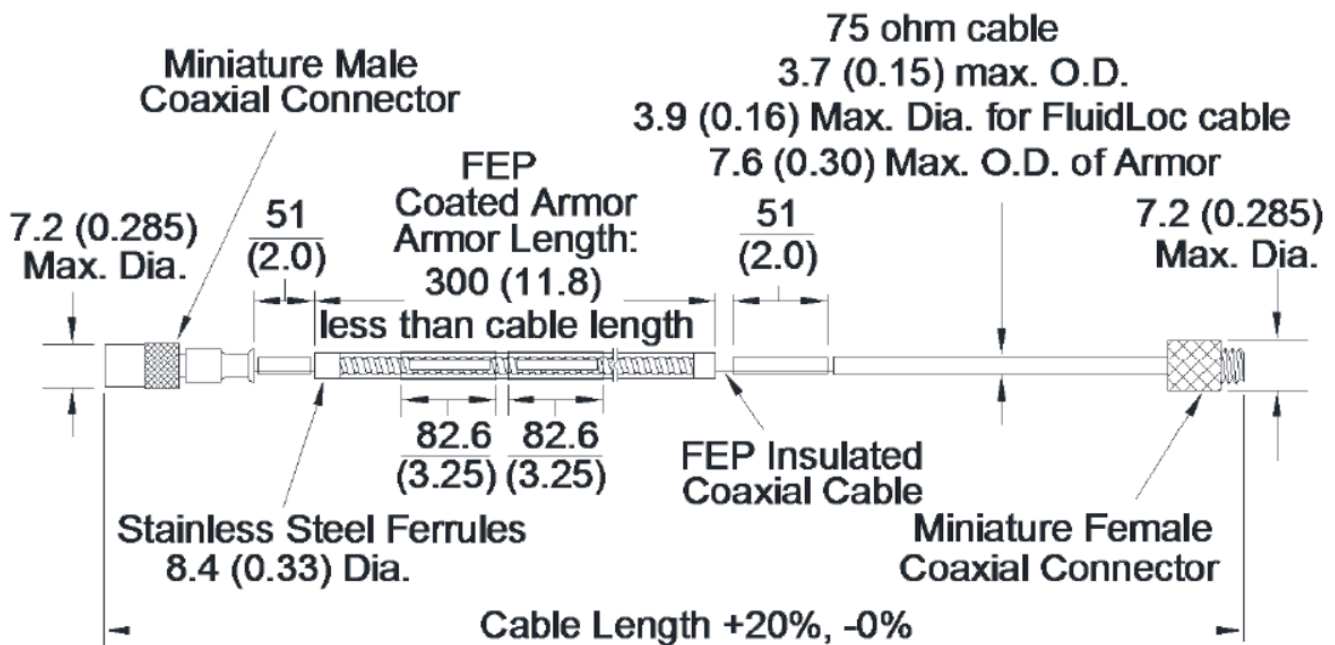


Figure 14: 330730, 3300 XL 11 mm Extension Cable

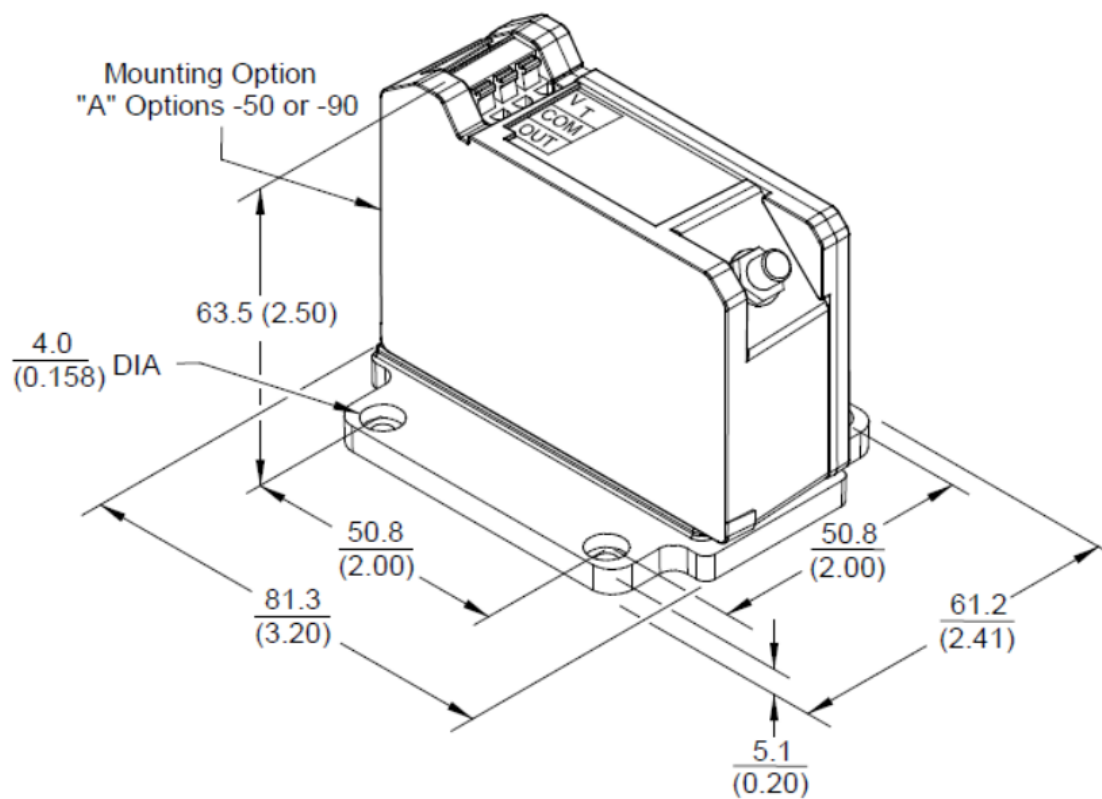


Figure 15: Panel Mount 3300 XL 11 mm Proximity Sensor