

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

3300 XL

8 mm PROXIMITY TRANSDUCER SYSTEM

Reference package for procurement and maintenance review

BENTLY NEVADA

330101-00-20-90-12-05

3300 XL 8 mm STANDARD-MOUNT PROXIMITY PROBE

Used as the sensing component in a compatible 3300 XL Proximity Transducer System.

REFERENCE PACKAGE

Selected official pages follow this cover with source pagination retained.

OFFICIAL DOCUMENT

141194 Rev. AM

Effects of 60 Hz Magnetic Fields Up to 300 Gauss

Output Voltage in Mil pp/Gauss

Gap	5 or 1-meter Proximity Sensor	9 meter Proximity Sensor	Probe	Ext. Cable
10	0.0119	0.0247	0.0004	0.0004
50	0.0131	0.0323	0.0014	0.0014
90	0.0133	0.0348	0.0045	0.0045

Mechanical

Probe Tip Material	Polyphenylene sulfide (PPS).
Probe Case Material	AISI 303 or 304 stainless steel (SST).

Probe Cable Specifications

Standard cable	75Ω triaxial, fluoroethylene propylene (FEP) insulated probe cable in the following total probe lengths: 0.5, 1, 1.5, 2, 3, 5, or 9 meters.
Extended Temperature Range cable	75Ω triaxial, perfluoroalkoxy (PFA) insulated probe cable in the following total probe lengths: 0.5, 1, 1.5, 2, 5, or 9 meters.
Armor (optional on both)	Flexible AISI 302 or 304 SST with FEP outer jacket.
Tensile Strength (Maximum Rated)	330 N (75 lbf) probe case to probe lead. 270 N (60 lbf) at probe lead to extension cable connectors.

Connector Material

Gold-plated brass or gold-plated beryllium copper.

Probe Case Torque

Probe Type	Maximum Rated	Recommended
Standard forward mounted probes	33.9 N•m (300 in•lbf)	11.2 N•m (100 in•lbf)
Standard forward-mount probes – first three threads	22.6 N•m (200 in•lbf)	7.5 N•m (66 in•lbf)
Reverse-mount probes	22.6 N•m (200 in•lbf)	7.5 N•m (66 in•lbf)

Extension Cable Material

Standard cable	75 Q triaxial, fluoroethylene propylene (FEP) insulated
Extended Temperature Range cable	75Ω triaxial, perfluoroalkoxy (PFA) insulated.
Minimum Cable Bend Radius	25.4 mm (1.0 in)



3300 XL 8 mm components are both electrically and physically interchangeable with non-XL 3300 5 mm and 8 mm components when minimum permissible cable bend radius is observed.

Connector Material

Gold-plated brass or gold-plated beryllium copper.

Maximum Connector Torque

0.565 N•m (5 in•lbf)

Connector-to-Connector Recommended Torque	
Connector Type	Tightening Instructions
Two 3300 XL gold "click" type connectors	Finger tight
One non-XL stainless steel connector and one 3300 XL connector	Finger tight plus 1/8 turn using pliers
Materials	
Proximator Sensor Material	A308 aluminum
Connector Material	Gold-plated brass or gold-plated beryllium copper.
Length	
System Length	5 or 9 meters (including extension cable) or 1 meter (probe only).
Weight	
Total System Weight (Typical)	0.7 kg (1.5 lb m)
Probe	323 g/m (11.4 oz)
Extension Cable	34 g/m (0.4 oz/ft)
Armored Extension Cable	103 g/m (1.5 oz/ft)
Proximator Sensor	246 g (8.67 oz)

Thread Engagement Limits

Probe Case Thread	Maximum Length of Thread Engagement
3/8-24	0.563 in
M10x1	15 mm



Maximum thread engagement lengths are per the industry standard of 1.5 times the nominal thread diameter. A fit class matching that of the external probe thread is assumed for all internal threads. Applications with thread engagement lengths exceeding the values in the table above may exhibit binding during installation. Contact your Bently Nevada representative if you require probe thread engagement lengths exceeding the values above. Bently Nevada does not replace proximity probes under warranty due to excessive thread engagement lengths.

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.

Ordering Information for Probes

3300 XL 8 mm Proximity Probes:

330101 3300 XL 8 mm Probe, 3/8-24 UNF thread, without armor(2)

330102 3300 XL 8 mm Probe, 3/8-24 UNF thread, with armor(2)

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

A: Unthreaded Length Option



Unthreaded length must be at least 0.8 in. less than the case length.

Order in increments of 0.1 in.

Length configurations:

Maximum unthreaded length: 8.8 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.

Standard thread configurations:

Maximum case length: 9.6 in.

Minimum case length: 0.8 in.

Example: **2 4** = 2.4 in.

C: Total Length Option

05	0.5 meter (1.6 feet)
10	1.0 meter (3.3 feet)
15	1.5 meter (4.9 feet)

20	2.0 meters (6.6 feet)
30	3.0 meters (9.8 feet)
50	5.0 meters (16.4 feet)
90	9.0 meters (29.5 feet)



3-meter length option is only available on 330101 probes, and is designed for use with the 9 meter Proximitor sensor only.



5-meter probes are designed for use with the 5 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	CSA, ATEX, IECEx Approvals

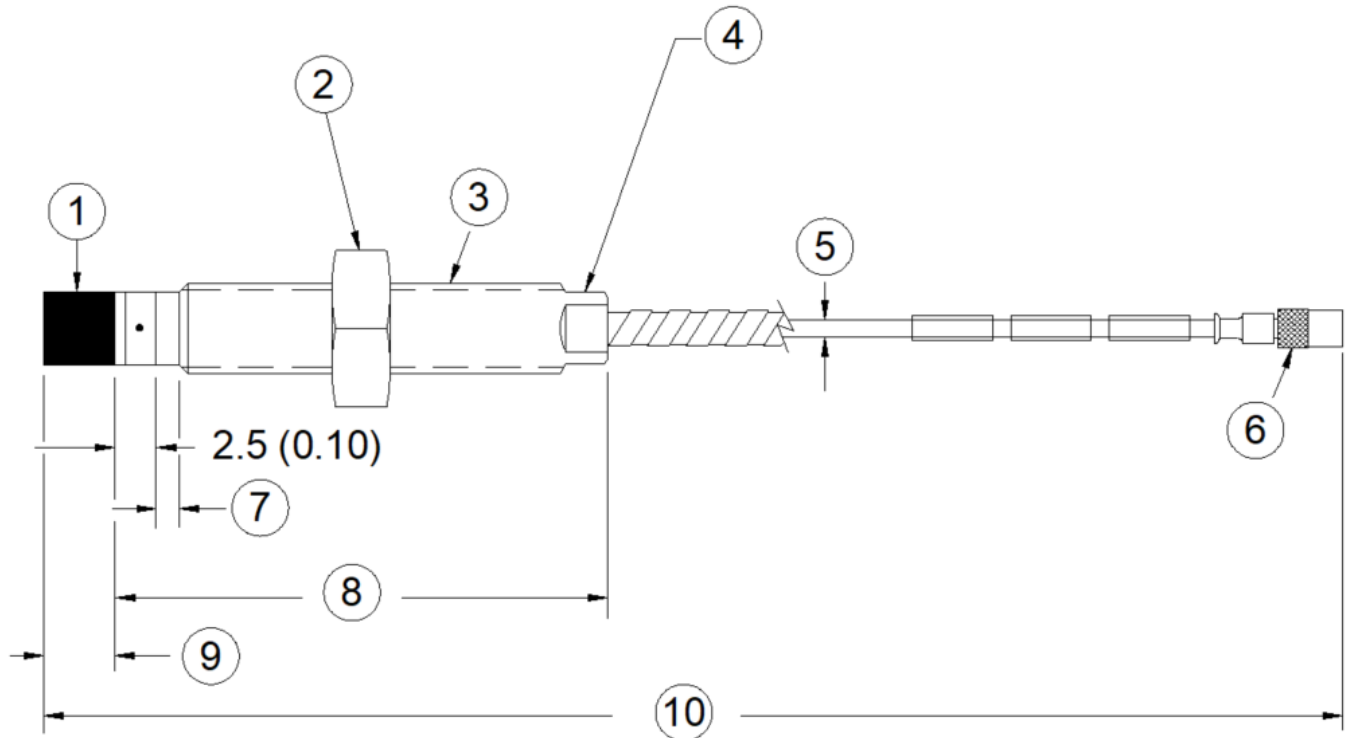
3300 XL 8 mm Proximity Probes, Metric:

330103 3300 XL 8 mm Probe, M10 x 1 thread, without armor (2)

330104 3300 XL 8 mm Probe, M10 x 1 thread, with armor (2)

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

A: Unthreaded Length Option



1. Probe tip, 8.0 mm (0.31 in) diameter
2. 9/16 in for 3/8-24 threads, M17 for M10 threads (see Note 2)
3. Case thread
4. 5/16 in wrench flats for 3/8-24 threads; 8mm wrench flats for M10 threads.
5. 75 Ω cable, 3.68 mm (0.145 in) maximum outside diameter, 3.94 mm (0.155 in) maximum outside diameter for FluidLoc cable, 7.67 mm (0.302 in) outside diameter of armor, 9.5 mm (0.38 in) maximum diameter of armor ferrule
6. Miniature male coaxial connector, 7.24 mm (0.285 in) maximum outside diameter "D"
7. Unthreaded length "A"
8. Case length "B"
9. 6.0 mm (0.235 in) maximum
10. Total length "C", +30%, -0%³

Figure 14: 3300 XL 8 mm Proximity Probes, Standard Mount

330101 and 330191, 3/8-24 UNF-2A, without armor ⁷

330102 and 330192, 3/8-24 UNF-2A, with armor ⁶

330103 and 330193, M10X1 thread, without armor ⁷

330104 and 330194, M10X1 thread, with armor ⁶