

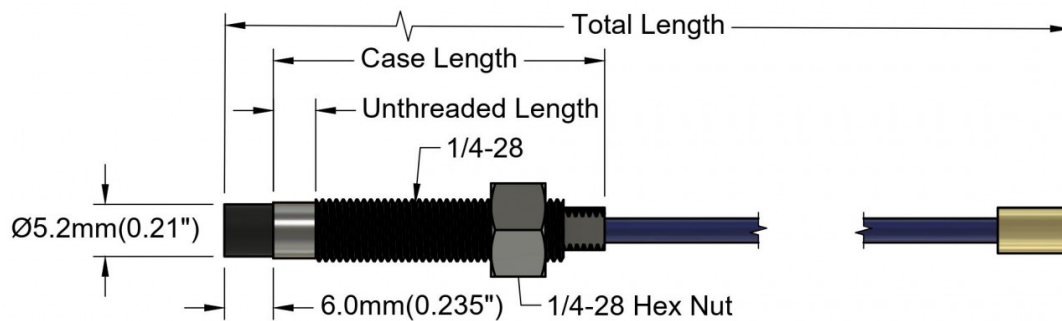
3300 Series

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3300 5mm Specifications and Dimensions

Extension Cable Armor (optional)	Flexible AISI 302 SST with/without FEP outer jacket
Tensile Strength (maximum rated)	220 N (50 lb) probe case to probe lead. 220 N (50 lb) at probe lead to extension cable connectors. 220 N (50 lb) probe case to stainless steel armor
Connector material	Gold-plated brass
Recommended Connector Torque	Hand tightened
Maximum torque	0.56 N•m (5 in•lb)
Minimum bend Radius (with or without SS armor)	25.4 mm (1.0 in)
Probe Temperature Range Operating Temperature	-34°C to +177°C (-30°F to +350°F)
Storage Temperature	-51°C to +177°C (-60°F to +350°F)
Extension Cable Operating and Storage Temperature	-51°C to +177°C (-60°F to +350°F)
Relative Humidity	100% condensing, non-submersible when connectors are protected

Imperial/US



PROJECT
3300_5MM

TITLE
MS330171/MS330172

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/10/2022

SIZE

A

SCALE

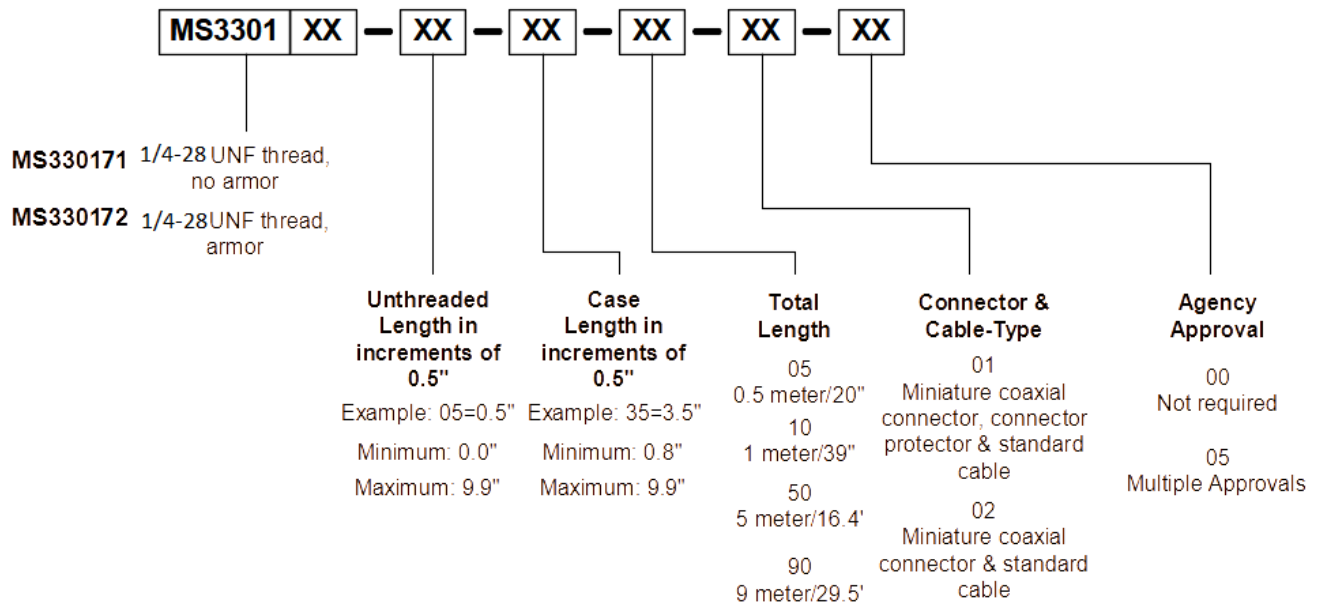
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DWG NO

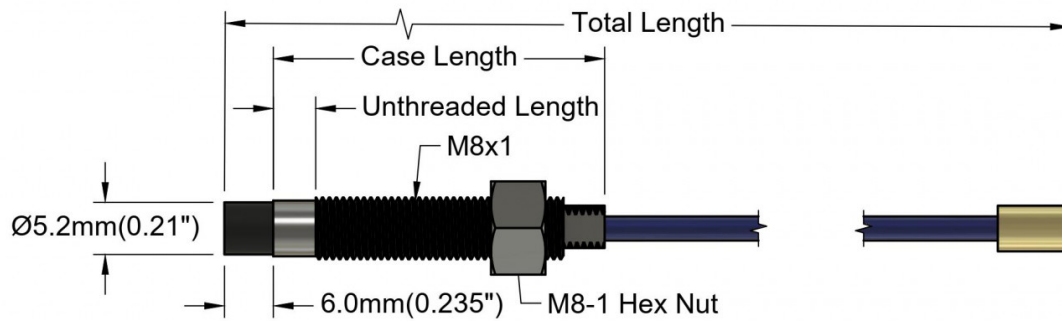
MS330171-MS330172

REV

1.01



Metric



PROJECT
3300_5MM

TITLE
MS330173/MS330174

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/10/2022

SIZE

A

SCALE

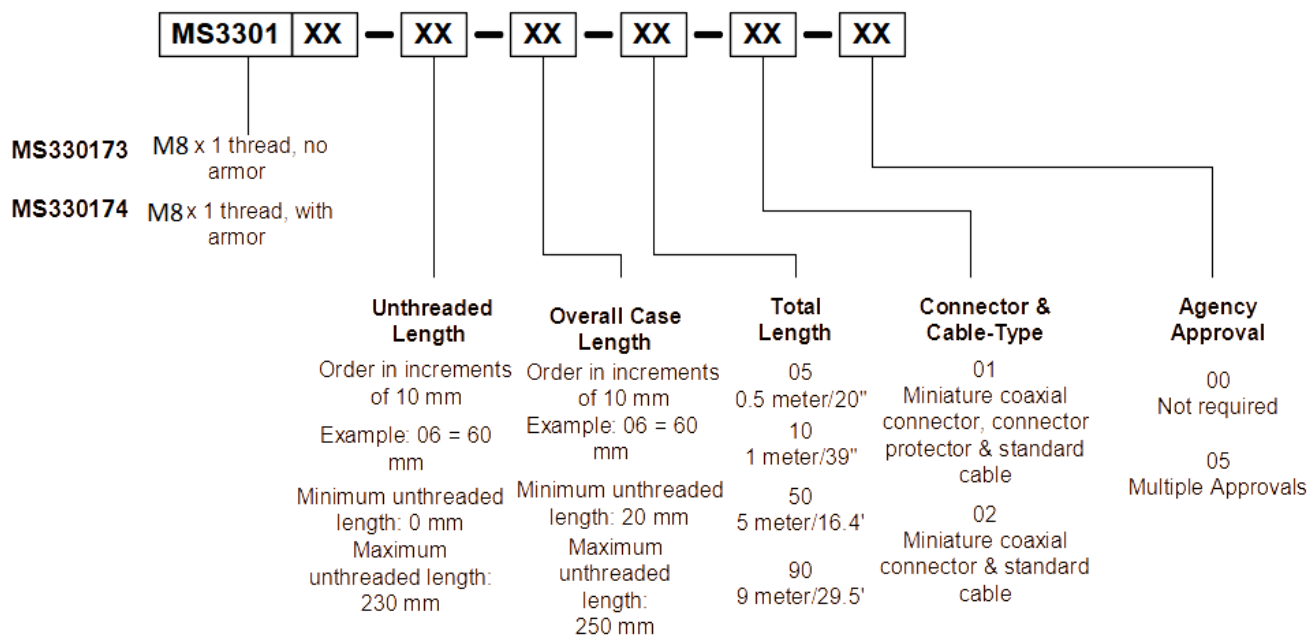
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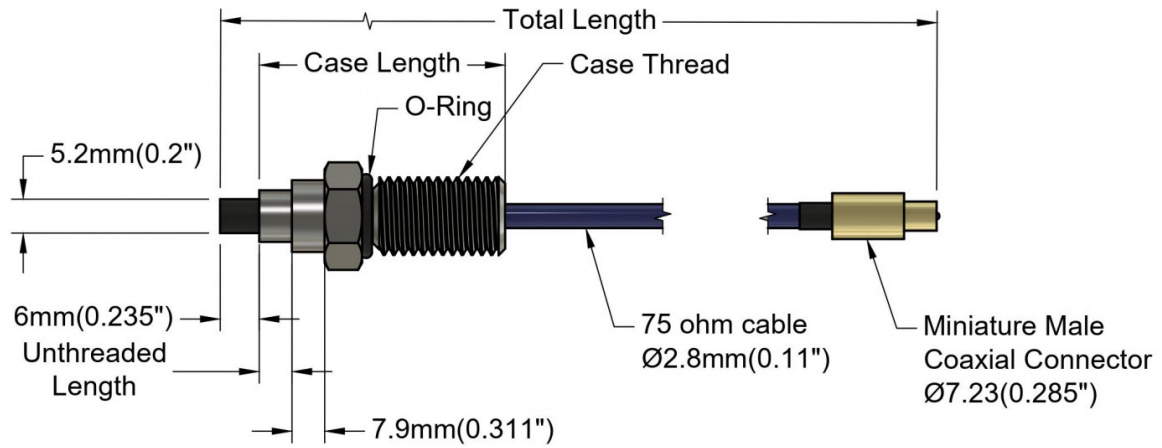
MS330173-MS330174

REV

1.01



Reverse Mount - Metric or Imperial



PROJECT
3300_5mm_Series_Proximity

TITLE
MS330175-330176

APPROVED Leo Bach 8/1/2022

CHECKED Bryson Carroll 8/1/2022

DRAWN Luke Benjamin 8/1/2022

SIZE

A

SCALE

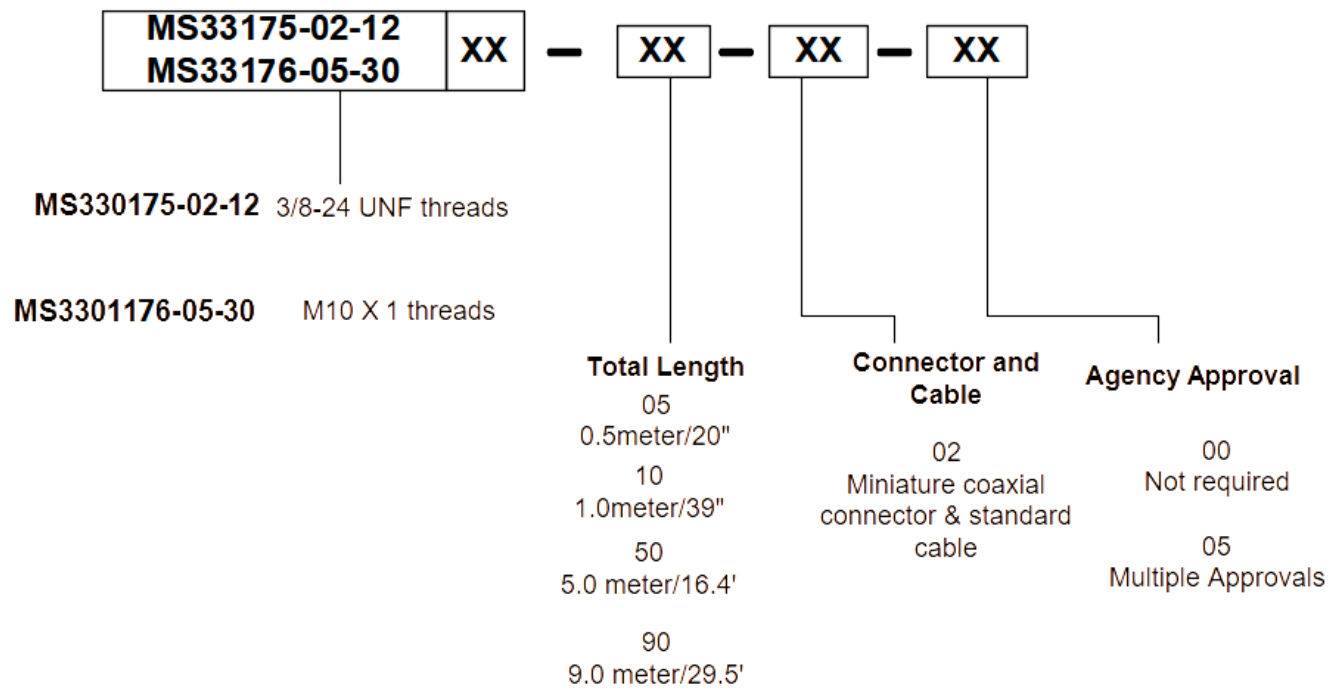
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DWG NO

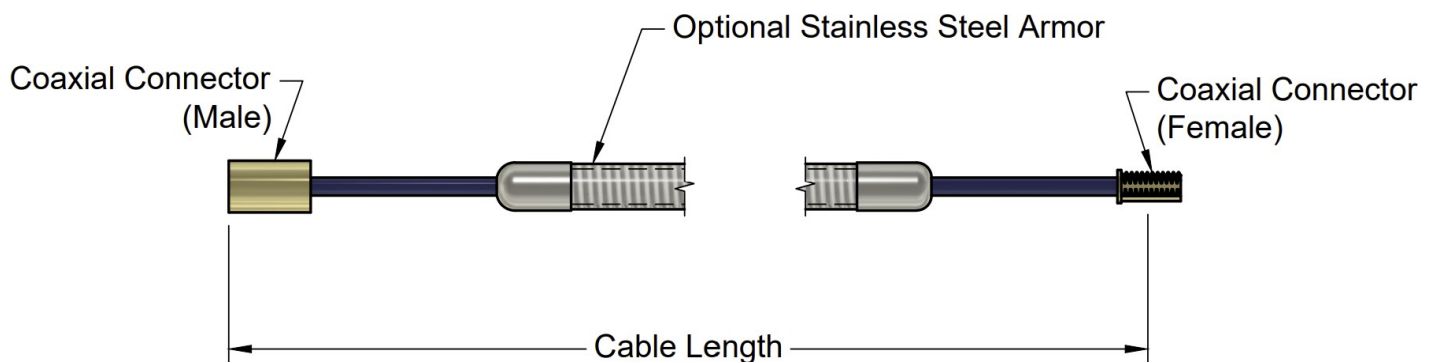
MS330175-MS330176

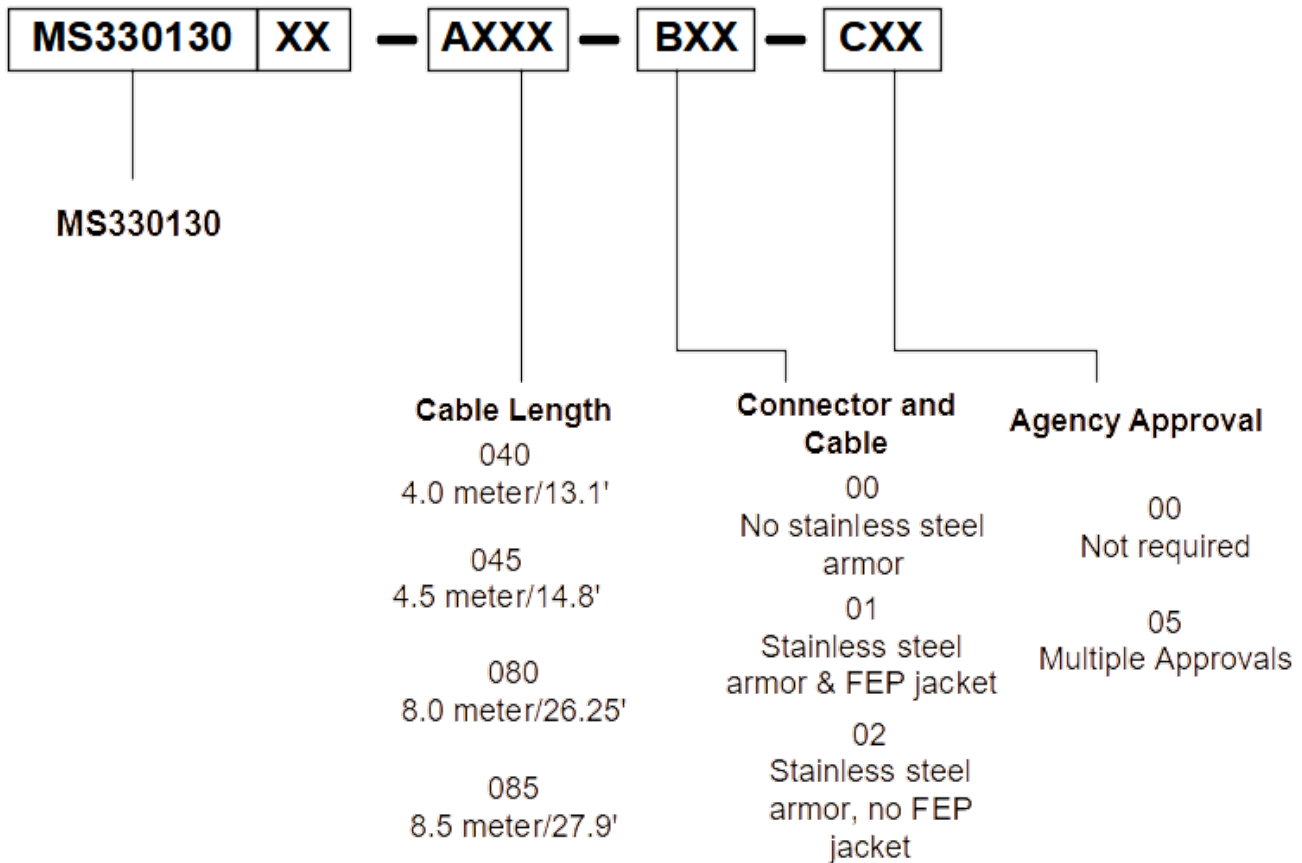
REV

1.01



Extension Cables





Electrical

Linear Range:

2.0 mm (80 mils). Linear range begins at 0.38 mm (15 mils) from target and is from 0.38 to 2.41mm (15 to 95 mils).

Incremental Scale Factor (ISF):

7.87 V/mm (200 mV/mil) +/-6.5% error (including interchangeability error) when measured in 10 mil increments when measured in increments of 0.25 mm (10 mils) over the 2.0 mm (80 mils) linear range.

Deviation from best fit straight line (DSL):

1 to 5 meter system length is less than ± 0.025 mm (± 1 mil).

9 meter system length is less than ± 0.038 mm (± 1.5 mil).

Frequency response:

0 to 10kHz (-3 dB) typical, with up to 100 meters (300 feet) of field wiring.

Target Size:

Minimum flat: 25 mm (1.0 in) diameter.

Minimum perpendicular to shaft 50mm (2 in.).

Recommended perpendicular to shaft 75mm (3 in.).

Mechanical

Probe Tip Material:

Polyphenylene sulfide (PPS).

Probe Case Material:

AISI 303 or 304 stainless steel (SST).

Probe Cable Specifications:

75 Ω coaxial, fluoroethylene propylene (FEP) insulated probe cable in the following total probe lengths: 0.5, 1, 5, or 9 meters.

Extension Cable Material:

75 Ω coaxial, fluoroethylene propylene (FEP) insulated.

System Length:

1 (probe only), 5 or 9 meters including extension cable

Extension Cable Armor (optional):

Flexible AISI 302 SST with/without FEP outer jacket.

Tensile Strength (maximum rated):

220 N (50 lb) probe case to probe lead. 220 N (50 lb) at probe lead to extension cable connectors.

220 N (50 lb) probe case to stainless steel armor.

Connector material:

Gold-plated brass

Recommended Connector Torque:

Hand tightened

Maximum torque:

0.56 N•m (5 in•lb)

Minimum bend Radius (with or without SS armor):

25.4 mm (1.0 in)

Environmental Limits

Probe Temperature Range

Operating Temperature:

-34°C to +177°C (-30°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Extension Cable Temperature Range

Operating and Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Proximity Sensor Temperature Range

Operating Temperature:

-35°C to +177°C (-31°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Relative Humidity:

100% condensing, non-submersible when connectors are protected

3300 5mm Ordering

Imperial/US

Standard Option Descriptions

Model	AA: Unthreaded Length	BB: Overall Case Length	CC: Total Length	DD: Connector & Cable Type	EE: Agency Approval
MS330171-AA-BB-CC-DD-EE 1/4-28 UNF thread, no armor	Order in increments of 0.5 in	Order in increments of 0.5 in	05 = 0.5 meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330172-AA-BB-CC-DD-EE 1/4-28 UNF thread, with armor	Example: 05 = 0.5 in	Example: 35 = 3.5 in	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
	Minimum unthreaded length: 0.0 in	Minimum unthreaded length: 0.8 in	50 = 5.0 meter/16.4 feet		
	Maximum unthreaded length: 9.9 in	Maximum unthreaded length: 9.9 in	90 = 9.0 meter/29.5 feet		

Metric

Standard Option Descriptions

Model	AA: Unthreaded Length	BB: Overall Case Length	CC: Total Length	DD: Connector & Cable Type	EE: Agency Approval
MS330173-AA-BB-CC-DD-EE M8 x 1 thread, no armor	Order in increments of 10 mm	Order in increments of 10 mm	05 = 0.5 Meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330174-AA-BB-CC-DD-EE M8 x 1 thread, with armor	Example: 06 = 60 mm	Example: 06 = 60 mm	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals

	Minimum unthreaded length: 0 mm	Minimum unthreaded length: 20 mm	50 = 5.0 meter/16.4 feet		
	Maximum unthreaded length: 230 mm	Maximum unthreaded length: 250 mm	90 = 9.0 meter/29.5 feet		

Reverse Mount

Model	AA: Total Length	BB: Connector & Cable Type	CC: Agency Approval
MS330175-02-12-AA-BB-CC ¾-24 UNF threads	05 0.5 meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330176-05-30-AA-BB-CC M10 X 1 threads	10 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
	50 5.0 meter/16.4 feet		
	90 9.0 meter/29.5 feet		

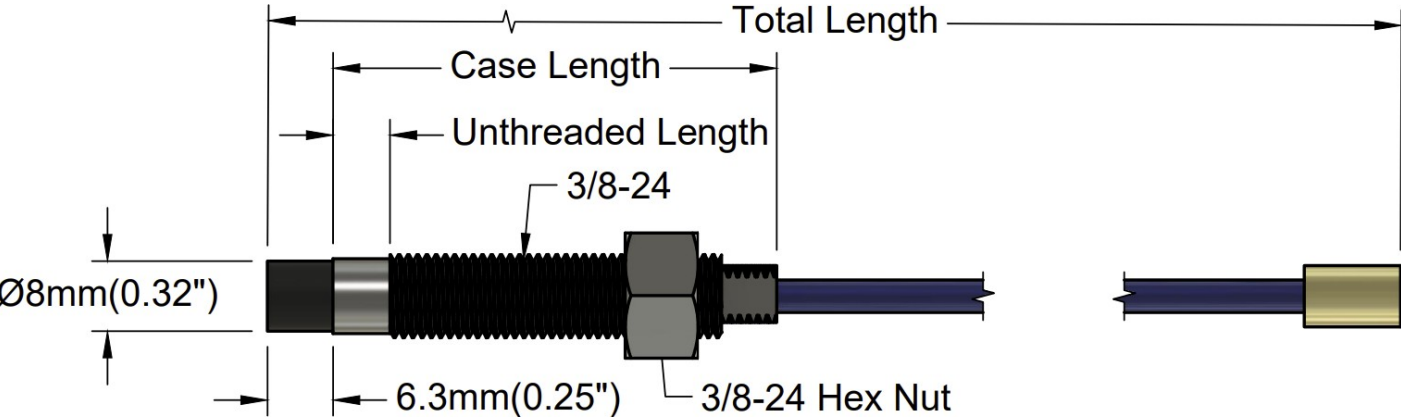
Extension Cable

Model	AA: Cable Length	BB: Connector & Cable Type	CC: Agency Approval
MS330130	05 0.5 meter/20 in	00 = No stainless steel armor.	00 = Not Required
	10 1.0 meter/39 in	01 = Stainless steel armor & FEP Jacket.	05 = Multiple Approvals
	50 5.0 meter/16.4 feet	02 = Stainless steel armor, no FEP Jacket	
	90 9.0 meter/29.5 feet		

3300 8mm Specifications and Dimensions

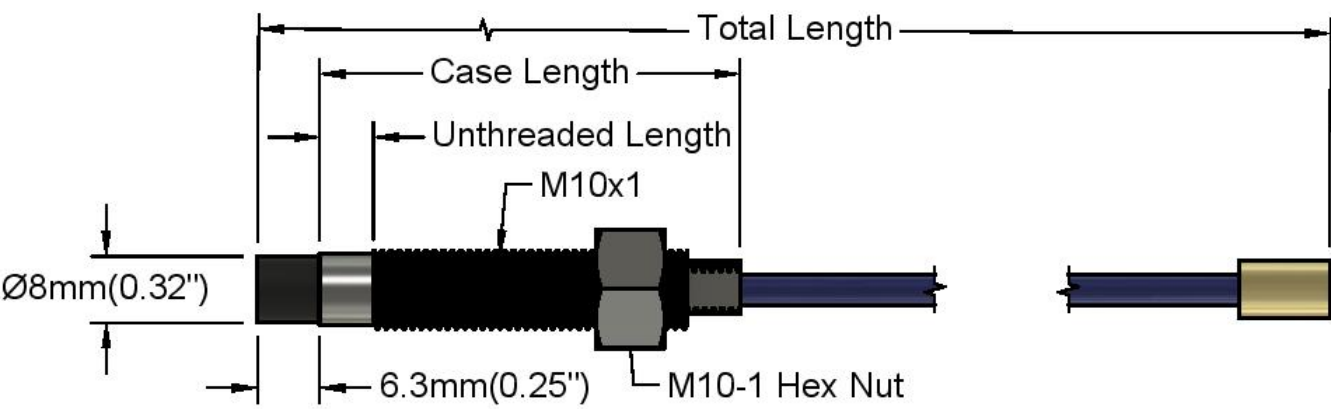
Extension Cable Armor (optional)	Flexible AISI 302 SST with/without FEP outer jacket
Tensile Strength (maximum rated)	220 N (50 lb) probe case to probe lead. 220 N (50 lb) at probe lead to extension cable connectors. 220 N (50 lb) probe case to stainless steel armor
Connector material	Gold-plated brass
Recommended Connector Torque	Hand tightened
Maximum torque	0.56 N•m (5 in•lb)
Minimum bend Radius (with or without SS armor)	25.4 mm (1.0 in)
Probe Temperature Range Operating Temperature	-34°C to +177°C (-30°F to +350°F)
Storage Temperature	-51°C to +177°C (-60°F to +350°F)
Extension Cable Operating and Storage Temperature	-51°C to +177°C (-60°F to +350°F)
Relative Humidity	100% condensing, non-submersible when connectors are protected

Imperial/US



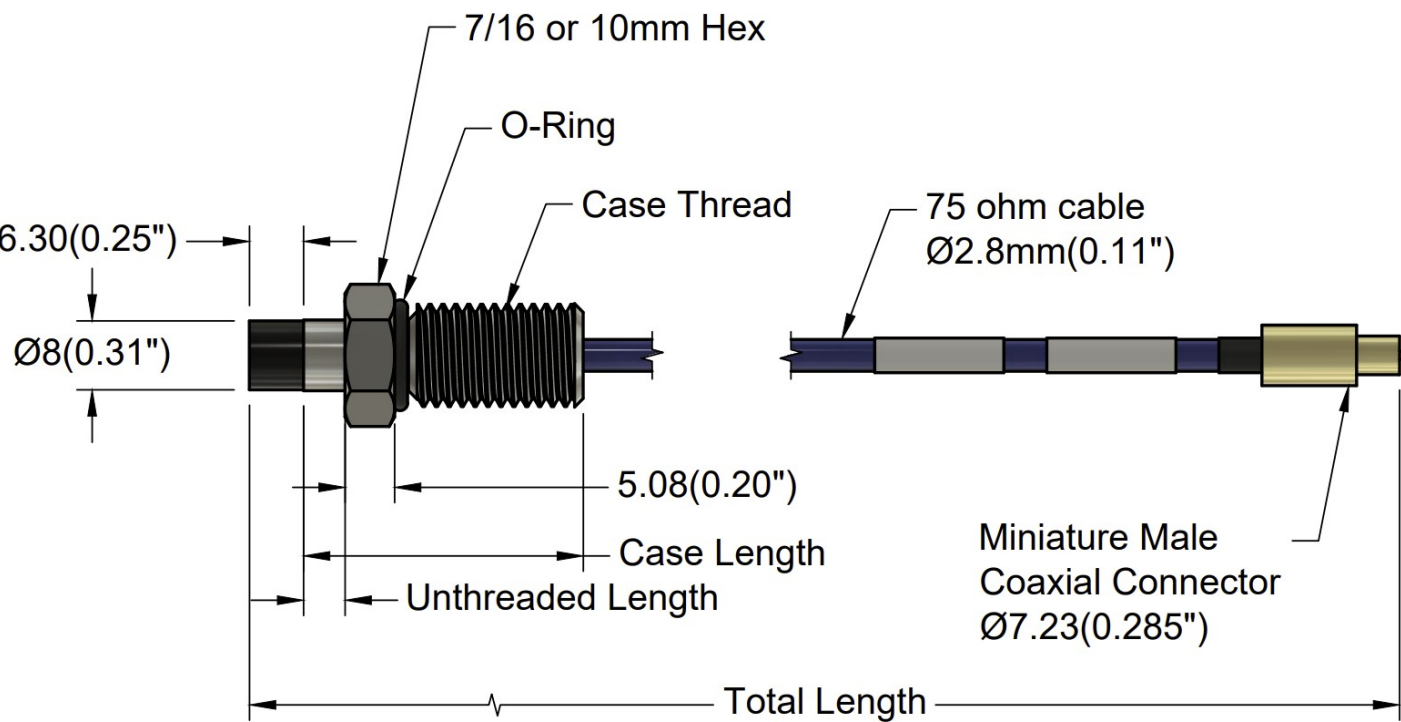
MS3301	XX	XX	XX	XX	XX	XX
MS330101	3/8-24 UNF thread, no armor					
MS330102	3/8-24 UNF thread, armor					
	Unthreaded Length in increments of 0.5"	Case Length in increments of 0.5"	Total Length	Connector & Cable-Type	Agency Approval	
	Example: 05=0.5"	Example: 35=3.5"	05 0.5 meter/20"	01 Miniature coaxial connector, connector protector & standard cable	00 Not required	
	Minimum: 0.0"	Minimum: 0.8"	10 1 meter/39"		05 Multiple Approvals	
	Maximum: 9.9"	Maximum: 9.9"	50 5 meter/16.4'	02 Miniature coaxial connector & standard cable		
			90 9 meter/29.5'			

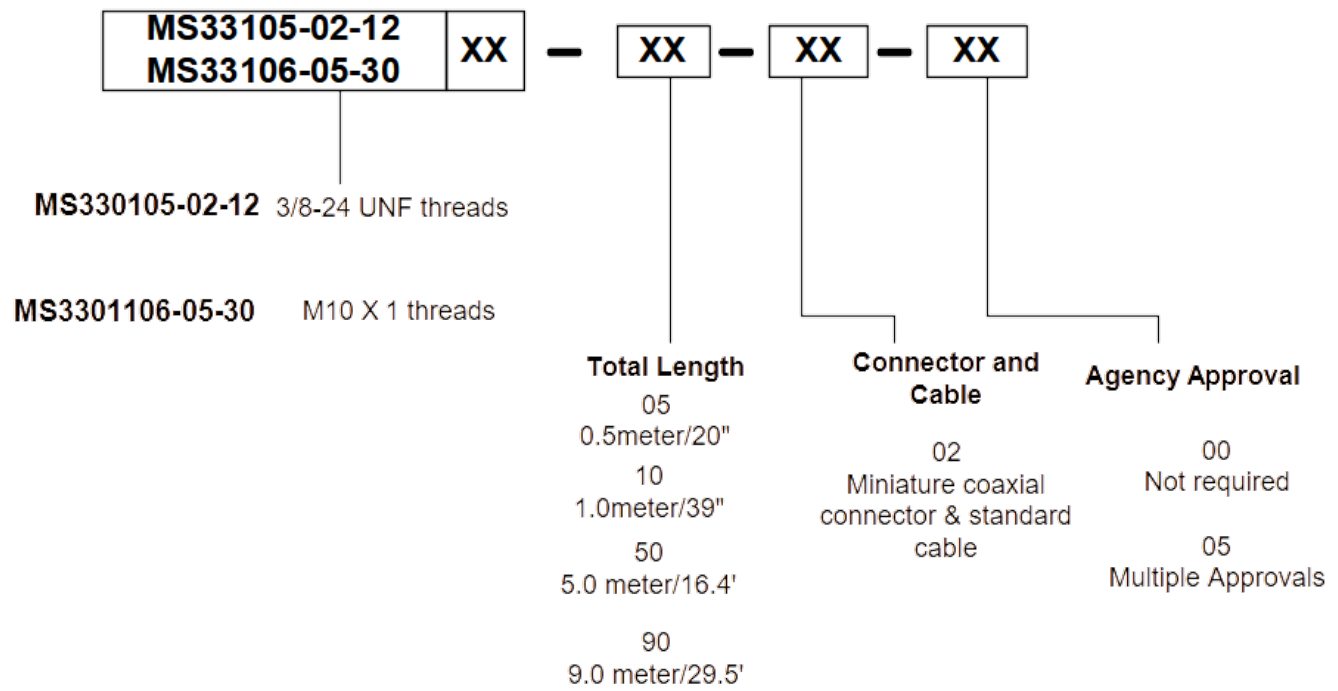
Metric



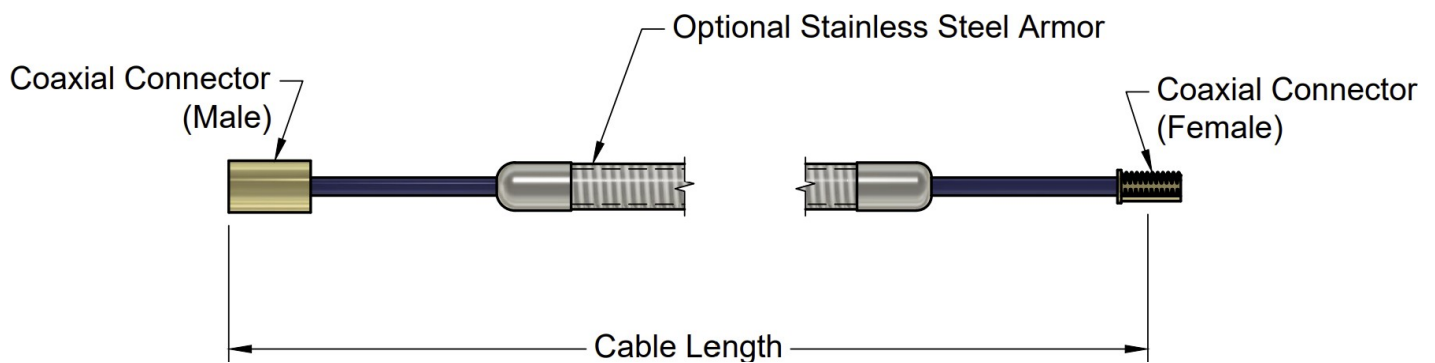
MS3301 XX - XX - XX - XX - XX - XX					
MS330103	M10 x 1 thread, no armor				
MS330104	M10 x 1 thread, with armor				
Unthreaded Length	Overall Case Length	Total Length	Connector & Cable-Type	Agency Approval	
Order in increments of 10 mm	Order in increments of 10 mm	05 0.5 meter/20"	01 Miniature coaxial connector, connector protector & standard cable	00 Not required	
Example: 06 = 60 mm	Example: 06 = 60 mm	10 1 meter/39"		05 Multiple Approvals	
Minimum unthreaded length: 0 mm	Minimum unthreaded length: 20 mm	50 5 meter/16.4'	02 Miniature coaxial connector & standard cable		
Maximum unthreaded length: 230 mm	Maximum unthreaded length: 250 mm	90 9 meter/29.5'			

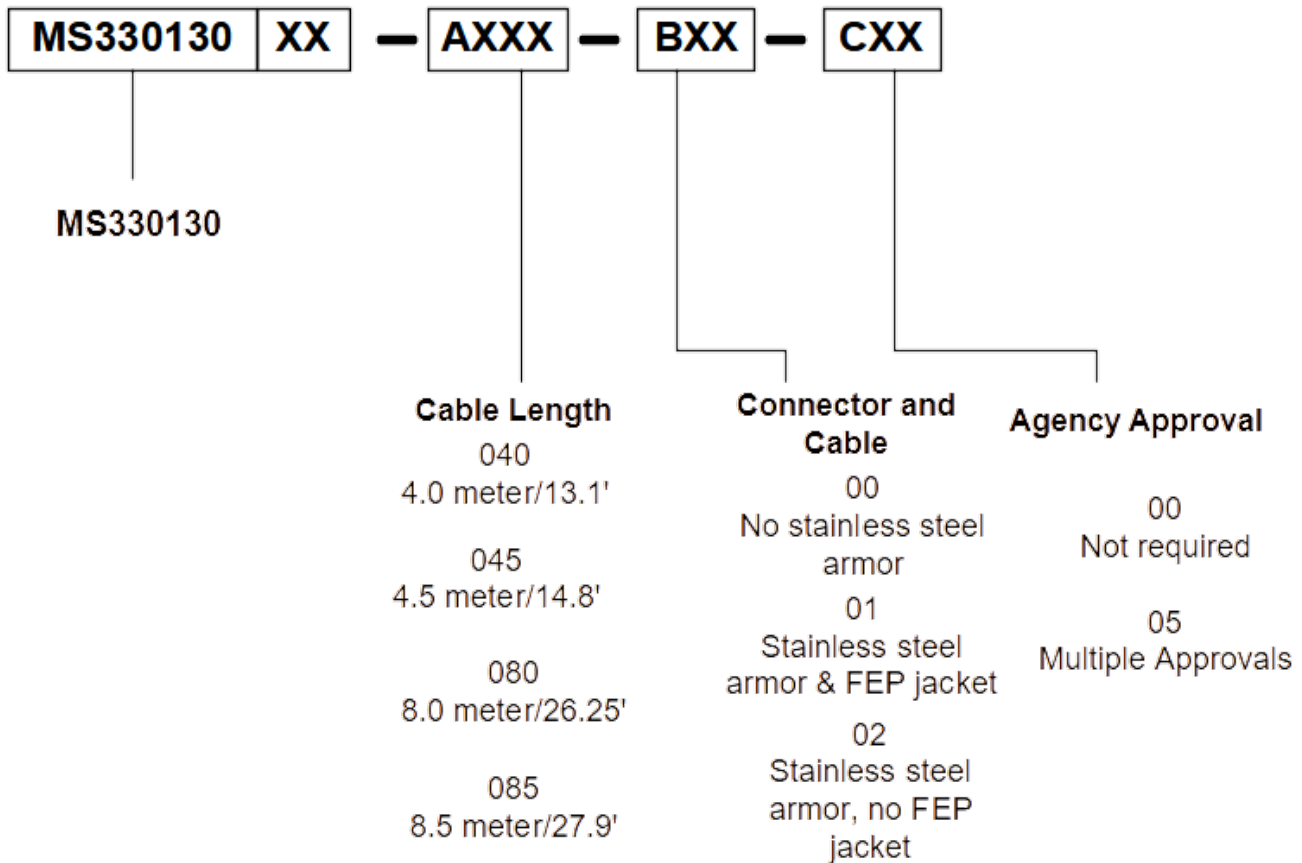
Reverse Mount - Metric or Imperial





Extension Cables





Electrical

Linear Range:

2.0 mm (80 mils). Linear range begins at 0.38 mm (15 mils) from target and is from 0.38 to 2.41 mm (15 to 95 mils).

Incremental Scale Factor (ISF):

7.87 V/mm (200 mV/mil) +/-6.5% error (including interchangeability error) when measured in 10 mil increments when measured in increments of 0.25 mm (10 mils) over the 2.0 mm (80 mils) linear range.

Deviation from best fit straight line (DSL):

1 to 5 meter system length is less than ± 0.025 mm (± 1 mil).

9 meter system length is less than ± 0.038 mm (± 1.5 mil).

Frequency response:

0 to 10kHz (-3 dB) typical, with up to 100 meters (300 feet) of field wiring.

Target Size:

Minimum flat: 25 mm (1.0 in) diameter.

Minimum perpendicular to shaft 50mm (2 in.).

Recommended perpendicular to shaft 75mm (3 in.).

Mechanical

Probe Tip Material:

Polyphenylene sulfide (PPS).

Probe Case Material:

AISI 303 or 304 stainless steel (SST).

Probe Cable Specifications:

75 Ω coaxial, fluoroethylene propylene (FEP) insulated probe cable in the following total probe lengths: 0.5, 1, 5, or 9 meters.

Extension Cable Material:

75 Ω coaxial, fluoroethylene propylene (FEP) insulated.

System Length:

1 (probe only), 5 or 9 meters including extension cable

Extension Cable Armor (optional):

Flexible AISI 302 SST with/without FEP outer jacket.

Tensile Strength (maximum rated):

220 N (50 lb) probe case to probe lead. 220 N (50 lb) at probe lead to extension cable connectors.

220 N (50 lb) probe case to stainless steel armor.

Connector material:

Gold-plated brass

Recommended Connector Torque:

Hand tightened

Maximum torque:

0.56 N•m (5 in•lb)

Minimum bend Radius (with or without SS armor):

25.4 mm (1.0 in)

Environmental Limits

Probe Temperature Range

Operating Temperature:

-34°C to +177°C (-30°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Extension Cable Temperature Range

Operating and Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Proximity Sensor Temperature Range

Operating Temperature:

-35°C to +177°C (-31°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Relative Humidity:

100% condensing, non-submersible when connectors are protected

3300 8mm Ordering

Imperial/US

Standard Option Descriptions

Model	AA: Unthreaded Length	BB: Overall Case Length	CC: Total Length	DD: Connector & Cable Type	EE: Agency Approval
MS330101-AA-BB-CC-DD-EE 3/8-24 UNF thread, no armor	Order in increments of 0.5 in	Order in increments of 0.5 in	05 = 0.5 meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330102-AA-BB-CC-DD-EE 3/8-24 UNF thread, with armor	Example: 05 = 0.5 in	Example: 35 = 3.5 in	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
	Minimum unthreaded length: 0.0 in	Minimum unthreaded length: 0.8 in	50 = 5.0 meter/16.4 feet		
	Maximum unthreaded length: 9.9 in	Maximum unthreaded length: 9.9 in	90 = 9.0 meter/29.5 feet		

Metric

Standard Option Descriptions

Model	AA: Unthreaded Length	BB: Overall Case Length	CC: Total Length	DD: Connector & Cable Type	EE: Agency Approval
MS330103-AA-BB-CC-DD-EE M10 x 1 thread, no armor	Order in increments of 10 mm	Order in increments of 10 mm	05 = 0.5 Meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330104-AA-BB-CC-DD-EE M10 x 1 thread, with armor	Example: 06 = 60 mm	Example: 06 = 60 mm	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals

	Minimum unthreaded length: 0 mm	Minimum unthreaded length: 20 mm	50 = 5.0 meter/16.4 feet		
	Maximum unthreaded length: 230 mm	Maximum unthreaded length: 250 mm	90 = 9.0 meter/29.5 feet		

Reverse Mount

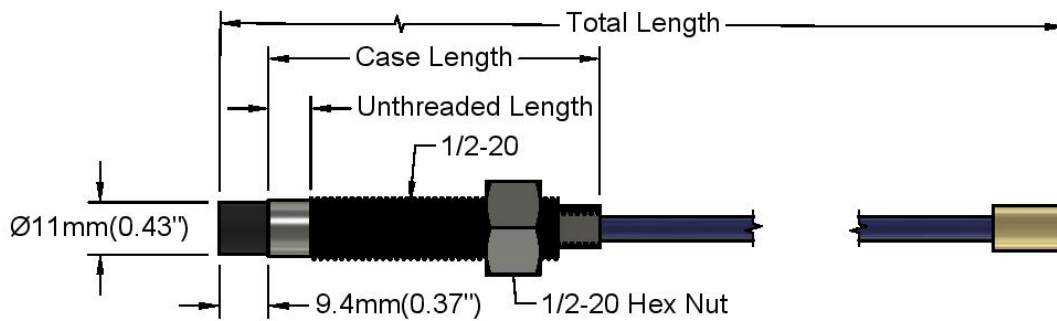
Model	AA: Total Length	BB: Connector & Cable Type	CC: Agency Approval
MS330105-02-12-AA-BB-CC 3⁄8-24 UNF threads	05 0.5 meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330106-05-30-AA-BB-CC M10 X 1 threads	10 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
	50 5.0 meter/16.4 feet		
	90 9.0 meter/29.5 feet		

Extension Cable

Model	AA: Cable Length	BB: Connector & Cable Type	CC: Agency Approval
MS330130	05 0.5 meter/20 in	00 = No stainless steel armor.	00 = Not Required
	10 1.0 meter/39 in	01 = Stainless steel armor & FEP Jacket.	05 = Multiple Approvals
	50 5.0 meter/16.4 feet	02 = Stainless steel armor, no FEP Jacket	
	90 9.0 meter/29.5 feet		

3300 11mm Specifications and Dimensions

Imperial



PROJECT
3300_11MM_Series_Proximity

TITLE
MS330701/MS330702

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/10/2022

SIZE

A

SCALE

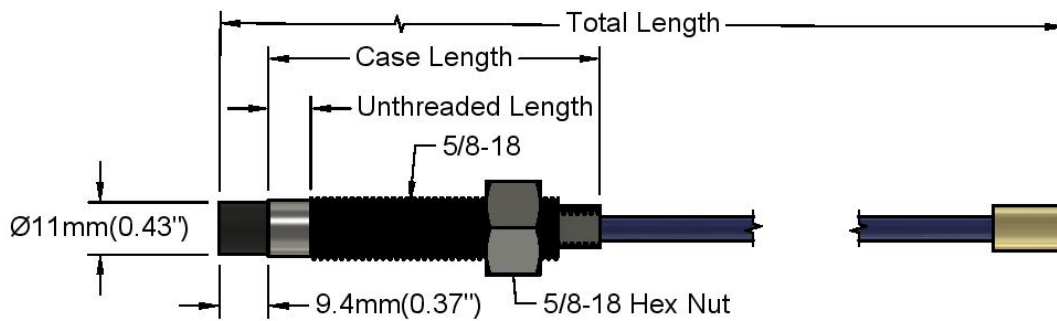
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DWG NO

MS330701-MS330702

REV

1.01



PROJECT
3300_11MM_Series_Proximity

TITLE
MS330707/MS330708

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/10/2022

SIZE

A

SCALE

1:1

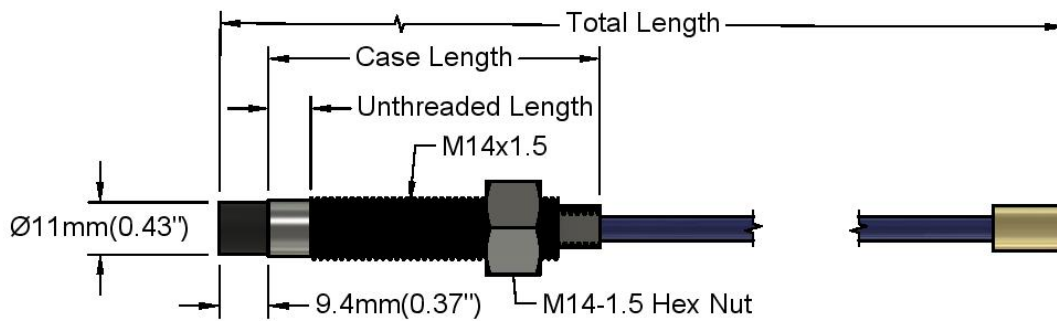
DWG NO

MS330707-MS330708

REV

1.01

Metric



PROJECT
3300_11MM_Series_Proximity

TITLE
MS330703/MS330704

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/10/2022

SIZE

A

SCALE

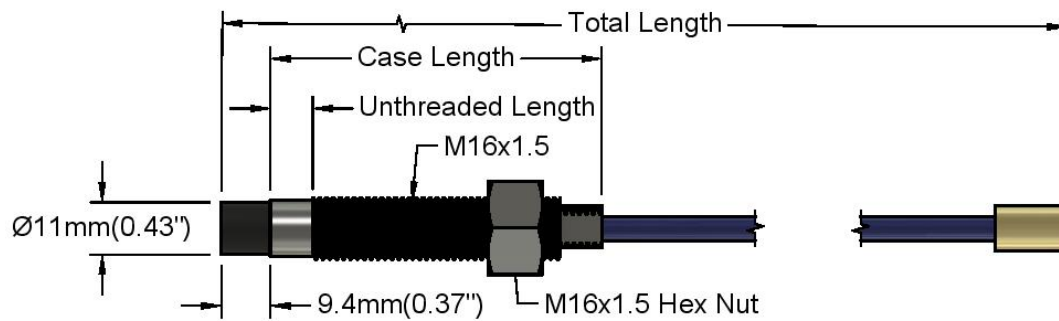
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DWG NO

MS330703-MS330704

REV

1.01



PROJECT
3300_11MM_Series_Proximity

TITLE
MS330709/MS330710

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/10/2022

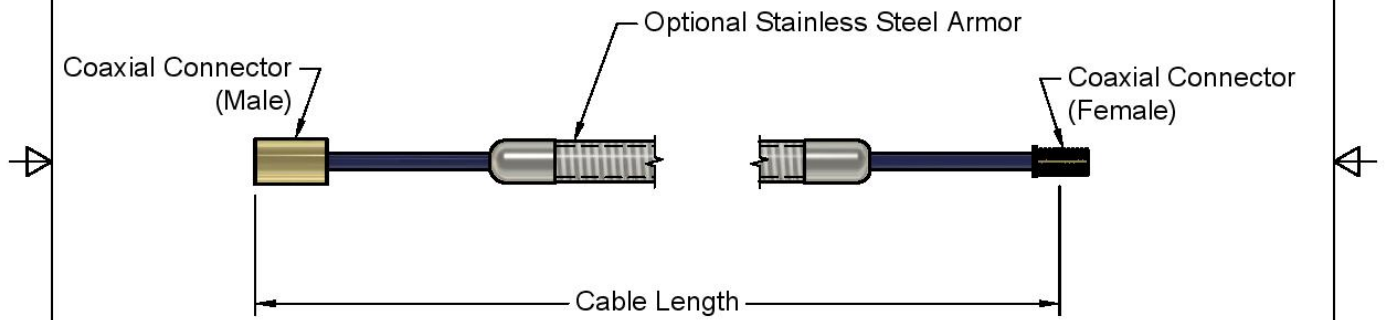
SIZE
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SCALE
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DWG NO
MS330709-MS330710

REV
1.01

Extension Cables



PROJECT
3300_11MM_Series_Proximity

TITLE
MS330730

APPROVED Leo Bach 5/10/2022

CHECKED Bryson Carroll 5/10/2022

DRAWN Luke Benjamin 5/12/2022

SIZE
A

SCALE
1:1

DWG NO
MS330730

REV
1.01

Electrical

Linear Range:

4.0 mm (160 mils). Linear range begins at 0.50 mm (20 mils) from target and is from 0.50 to 4.50 mm (20 to 180 mils)

Incremental Scale Factor (ISF):

3.94 V/mm (100 mV/mil) +/-10% error (including interchangeability error) when measured in 10 mil increments when measured in increments of 0.50 mm (20 mils) over the 4.0 mm (160 mils) linear range

Deviation from best fit straight line (DSL):

1 to 5 meter system length is less than ± 0.10 mm (± 4 mil).

9 meter system length is less than ± 0.15 mm (± 6 mil).

Frequency response:

0 to 10kHz (-3 dB) typical, with up to 100 meters (300 feet) of field wiring.

Target Size:

Minimum flat: 30.5 mm (1.2 in) diameter

Minimum perpendicular to shaft 150mm (6 in.)

Mechanical

Probe Tip Material:

Polyphenylene sulfide (PPS).

Probe Case Material:

AISI 303 or 304 stainless steel (SST).

Probe Cable Specifications:

75 Ω coaxial, fluoroethylene propylene (FEP) insulated probe cable in the following total probe lengths: 0.5, 1, 5, or 9 meters.

Extension Cable Material:

75 Ω coaxial, fluoroethylene propylene (FEP) insulated.

System Length:

1 (probe only), 5 or 9 meters including extension cable

Extension Cable Armor (optional):

Flexible AISI 302 SST with/without FEP outer jacket.

Tensile Strength (maximum rated):

220 N (50 lb) probe case to probe lead. 220 N (50 lb) at probe lead to extension cable connectors.
220 N (50 lb) probe case to stainless steel armor.

Connector material:

Gold-plated brass

Recommended Connector Torque:

Hand tightened

Maximum torque:

0.56 N•m (5 in•lb)

Minimum bend Radius (with or without SS armor):

25.4 mm (1.0 in)

Environmental Limits

Probe Temperature Range**Operating Temperature:**

-34°C to +177°C (-30°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Extension Cable Temperature Range**Operating and Storage Temperature:**

-51°C to +177°C (-60°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Proximity Sensor Temperature Range**Operating Temperature:**

-35°C to +177°C (-31°F to +350°F)

Storage Temperature:

-51°C to +177°C (-60°F to +350°F)

Relative Humidity:

100% condensing, non-submersible when connectors are protected

3300 11mm Ordering

Imperial/US

Standard Option Descriptions

Model	AA: Unthreaded Length	BB: Overall Case Length	CC: Total Length	DD: Connector & Cable Type	EE: Agency Approval
MS330701-AA-BB-CC-DD-EE 1/2-20 UNF thread, no armor	Order in increments of 0.5 in	Order in increments of 0.5 in	05 = 0.5 meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330702-AA-BB-CC-DD-EE 1/2-20 UNF thread, with armor	Example: 05 = 0.5 in	Example: 35 = 3.5 in	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
MS330707-AA-BB-CC-DD-EE 5/8-18 UNF thread, no armor	Minimum unthreaded length: 0.0 in	Minimum unthreaded length: 0.8 in	50 = 5.0 meter/16.4 feet		
MS330708-AA-BB-CC-DD-EE 5/8-18 UNF thread, with armor	Maximum unthreaded length: 9.9 in	Maximum unthreaded length: 9.9 in	90 = 9.0 meter/29.5 feet		

Metric

Standard Option Descriptions

Model	AA: Unthreaded Length	BB: Overall Case Length	CC: Total Length	DD: Connector & Cable Type	EE: Agency Approval
MS330703-AA-BB-CC-DD-EE M14 x 1.5 thread, no armor	Order in increments of 10 mm	Order in increments of 10 mm	05 = 0.5 Meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required

MS330704-AA-BB-CC-DD-EE M14 x 1.5thread, witharmor	Example: 06 = 60 mm	Example: 06 = 60 mm	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
MS330709-AA-BB-CC-DD-EE M16 x 1.5 thread, no armor	Minimum unthreaded length: 0 mm	Minimum unthreaded length: 20 mm	50 = 5.0 meter/16.4 feet		
MS330710-AA-BB-CC-DD-EE M16 x 1.5 thread, no armor	Maximum unthreaded length: 230 mm	Maximum unthreaded length: 250 mm	90 = 9.0 meter/29.5 feet		

Reverse Mount

Model	AA: Total Length	BB: Connector & Cable Type	CC: Agency Approval
MS330705-02-18-AA-BB-CC ¾-24 UNF threads	05 = 0.5 meter/20 in	01 = Miniature coaxial connector, connector protector & standard cable	00 = Not Required
MS330706-05-46-AA-BB-CC M10 X 1 threads	10 = 1.0 meter/39 in	02 = Miniature coaxial connector & standard cable	05 = Multiple Approvals
	50 = 5.0 meter/16.4 feet		
	90 = 9.0 meter/29.5 feet		

Extension Cable

Model	AA: Cable Length	BB: Connector & Cable Type	CC: Agency Approval
MS330730	05 0.5 meter/20 in	00 = No stainless steel armor.	00 = Not Required
	10 1.0 meter/39 in	01 = Stainless steel armor & FEP Jacket.	05 = Multiple Approvals
	50 5.0 meter/16.4 feet	02 = Stainless steel armor, no FEP Jacket	
	90 9.0 meter/29.5 feet		