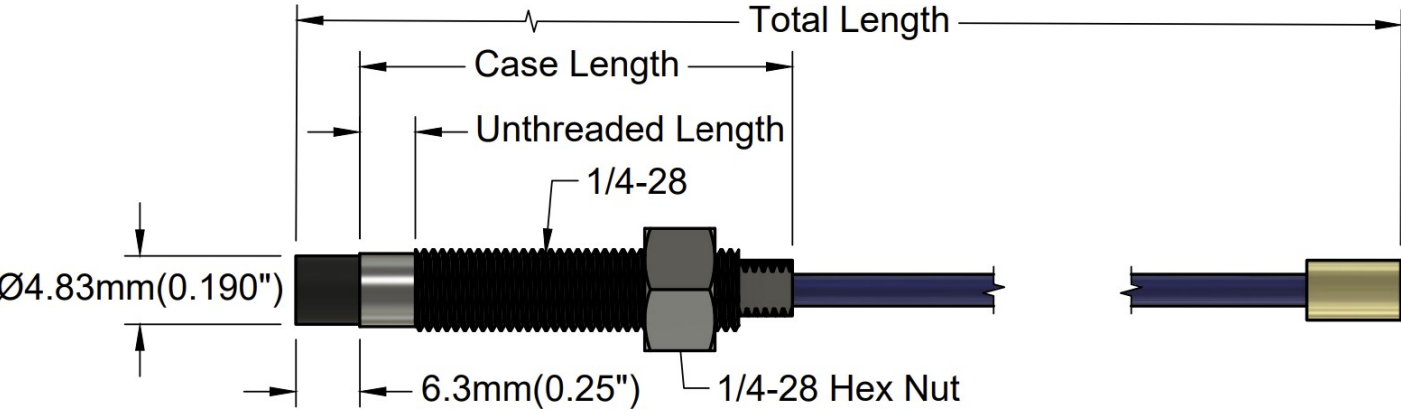
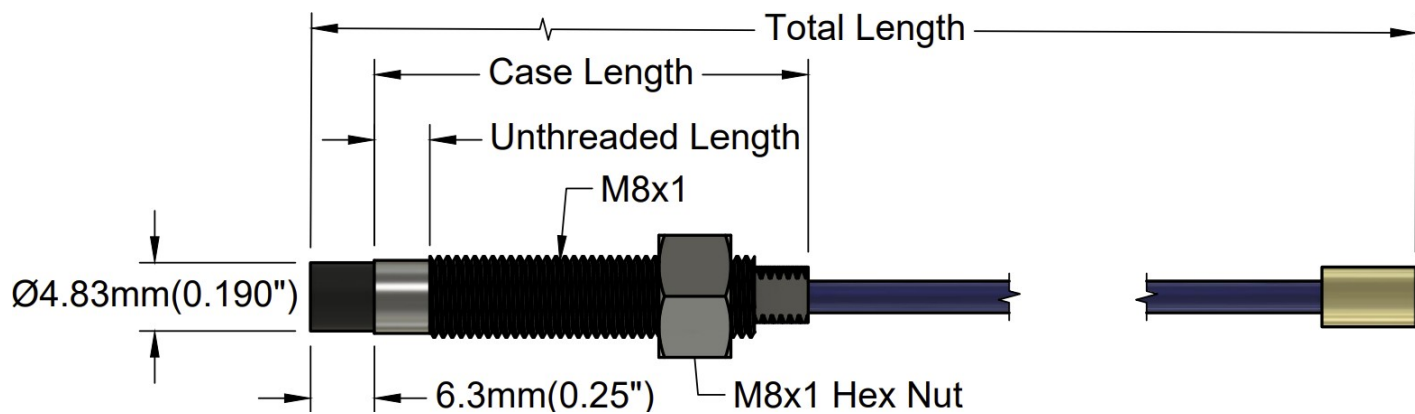


# 3000 Specifications and Dimensions

Probe Cable Specifications	50 ? coaxial, fluoroethylene propylene (FEP) insulated probe cable
Probe Case Material	AISI 303 or 304 stainless steel (SST).
Extension Cable Material	95 ? coaxial, fluoroethylene propylene (FEP) insulated extension cable
System Length	15 ft or 20 ft.
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)





**MS190 XX - AXX - BXX - CXX - DXX**

**MS19000** 1/4-28 UNF thread, no armor

**MS19001** 1/4-28 UNF thread, with armor

**MS19008** M8x1, with armor

#### Unthreaded Length

English  
Standard: 00 (0.0")

Increment: 05 (0.5")

Maximum: 10 (1.0")

Metric  
Standard: 00 (0 mm)

Increment: 01 (10 mm)

Maximum: 02 (20 mm)

#### Case Length in increments of 0.5"

English  
Standard: 30 (3.0")

Increment: 05 (0.5")

Minimum: 11 (1.1")

Maximum: 96 (9.6")

Metric  
Standard: 07 (70 mm)

Increment: 01 (10 mm)

Minimum: 02 (20 mm)

Maximum: 25 (250 mm)

#### Total Length

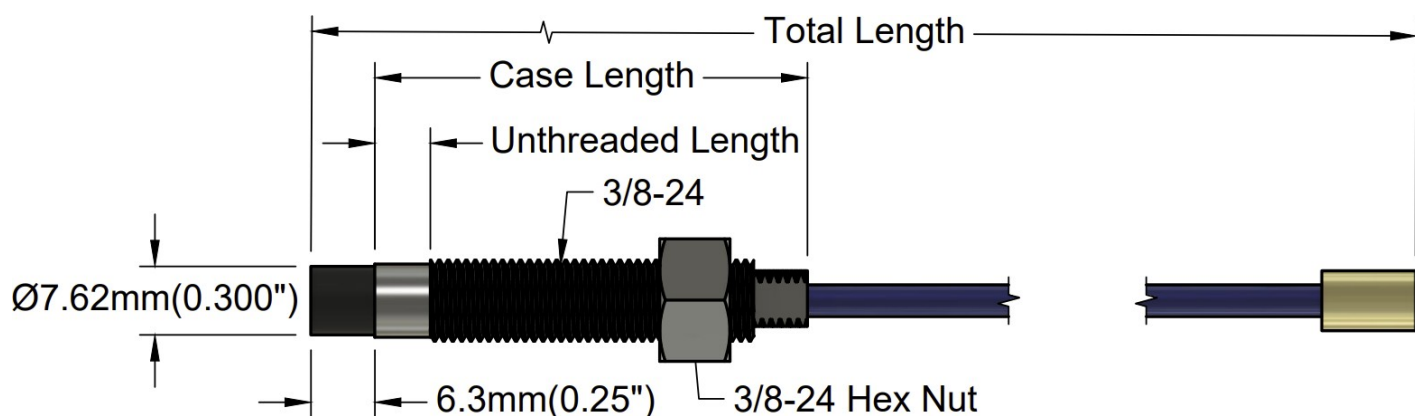
Minimum: 06  
6"

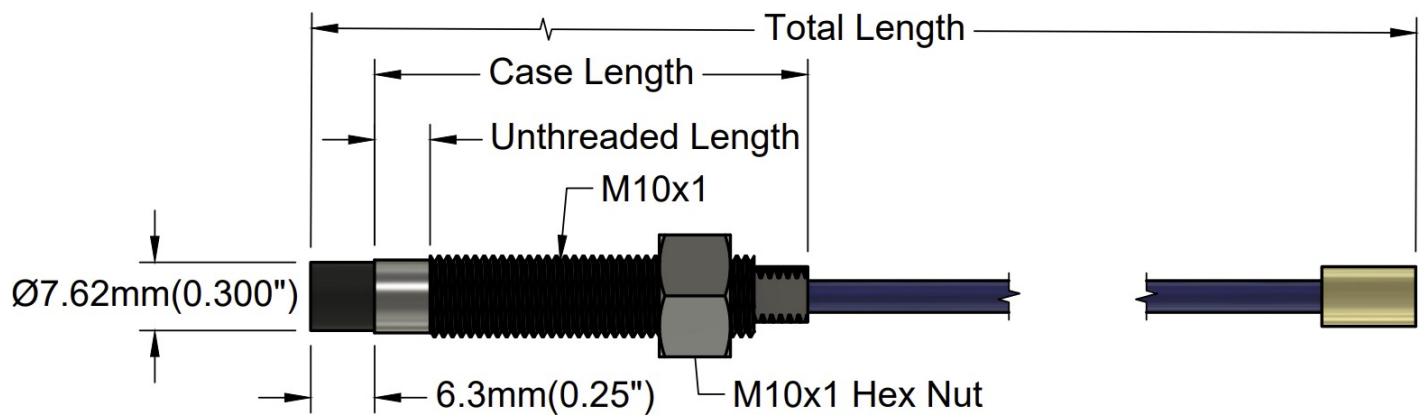
Maximum: 36  
36"

Order in  
increments of  
6"

#### Connector & Cable-Type

02  
with connector





MS30000 XX - AXX - BXX - CXX - DXX

**MS30000** 3/8-28 UNF thread, no armor

**MS30001** 3/8-24 UNF thread, with armor

**MS30011** M10x1, no armor

**MS30012** M10x1, with armor

#### Unthreaded Length

English  
Standard: 00 (0.0")  
Increment: 05 (0.5")  
Maximum: 10 (1.0")  
  
Metric  
Standard: 00 (0 mm)  
Increment: 01 (10 mm)  
Maximum: 02 (20 mm)

Maximum: 9.9"

#### Overall Case Length

English  
Standard: 30 (3.0")  
Increment: 05 (0.5")  
Minimum: 11 (1.1")  
Maximum: 96 (9.6")  
  
Metric  
Standard: 07 (70 mm)  
Increment: 01 (10 mm)  
Minimum: 02 (20 mm)  
Maximum: 25 (250 mm)

#### Total Length

Minimum: 06 6"  
Maximum: 36 36"

Order in increments of 6"

#### Connector & Cable-Type

02 with connector

## Electrical

### Linear Range:

0.190" 1.43 mm (45 mils) Linear range begins at 0.25 mm (10 mils) to 1.40 mm (55 mils)

0.300" 1.53 mm (60 mils) Linear range begins at 0.25 mm (10 mils) to 1.78 mm (70 mils)

### Incremental Scale Factor (ISF):

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

### Deviation from best fit straight line (DSL):

15 ft. system length is less than  $\pm 0.05$  mm ( $\pm 2$  mil).

20 ft. system length is less than  $\pm 0.076$  mm ( $\pm 3$  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:**

50  $\Omega$  coaxial, fluoroethylene propylene (FEP) insulated probe cable.

**Extension Cable Material:**

95  $\Omega$  coaxial, fluoroethylene propylene (FEP) insulated extension cable.

**System Length:**

15 ft or 20 ft.

**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 +125°C (-30°F to +257°F)

**Storage Temperature:**

-51°C to +125°C (-60°F to +257°F)

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

-51°C to +125°C (-60°F to +257°F).

**Storage Temperature:**

-51°C to +125°C (-60°F to +257°F).

## **Proximity Sensor Temperature Range**

### **Operating Temperature:**

-35°C to +125°C (-31°F to +257°F).

### **Storage Temperature:**

-51°C to +125°C (-60°F to +257°F).

### **Relative Humidity:**

100% condensing, non-submersible when connectors are protected.

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Revision #4

Created 6 July 2022 18:33:18 by Bach\_L

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