

**OVERVIEW**

The MX8030 probe series consist of 5mm and 8mm tip diameter probes with VibeLock<sup>®</sup> connectors and Triaxial Cables. These models are available with all standard thread sizes and body configurations required in API 670 Standard. Both probes offer a full 80 mil (2mm) range, and are designed to offer full API 670-compliant performance characteristics when used with a matching MX8031 extension cable and MX2033 driver. MX8030 probes are fully interchangeable with Bentley Nevada<sup>™</sup> (BN) 3300 and 3300 XL 5mm/8mm probes.

**NEW**



| MX8030-AA-BBB-CCC-DD-EE (5mm/8mm Proximity Probe with VibeLock <sup>™</sup> ) |       |       |              |              |  |   |  |  |  |  |
|---|-------|-------|--------------|--------------|--|---|--|--|--|--|
| MX8030 - AA   |       |       |              |              | BBB  | CCC   | DD   | EE                                     |  |  |
| AA  | Armor | Mount | Tip Diameter | Case Threads | Unthreaded Length  | Case Length   | Total Length   | Agency Approval                        |  |  |
| 01  | No    | FWD   | 8mm          | 3/8"-24      | BBB = BB.B"<br>Order in increments of 0.1"<br>Min: 000 = 00.0"<br>Max: case length minus 0.8"<br>Example: 024 = 2.4" | CCC = CC.C"<br>Order in increments of 0.1"<br>Min: 008 = 0.8"<br>Max: 096 = 9.6"<br>Example: 032 = 3.2"   | 05 = 0.5 m<br>10 = 1.0 m<br>15 = 1.5 m<br>20 = 2.0 m<br>50 = 5.0 m<br>90 = 9.0 m | 00 = None<br><br>05 = CSA, ATEX, IECEx |  |  |
| 02  | Yes   | FWD   | 8mm          | 3/8"-24      |  |   |  |  |  |  |
| 71  | No    | FWD   | 5mm          | 1/4"-28      |  |   |  |  |  |  |
| 72  | Yes   | FWD   | 5mm          | 1/4"-28      |  |   |  |  |  |  |
| 03  | No    | FWD   | 8mm          | M10x1        | BBB = BBB mm<br>Order in increments of 10mm<br>Min: 000 = 00mm<br>Max: case length minus 20mm<br>Example: 070 = 70mm | CCC = CCC mm<br>Order in increments of 10mm<br>Min: 020 = 20mm<br>Max: 250 = 250mm<br>Example: 090 = 90mm |  |  |  |  |
| 04  | Yes   | FWD   | 8mm          | M10x1        |  |   |  |  |  |  |
| 73  | No    | FWD   | 5mm          | M8x1         |  |   |  |  |  |  |
| 74  | Yes   | FWD   | 5mm          | M8x1         |  |   |  |  |  |  |
| 05  | No    | REV   | 8mm          | 3/8"-24      | 002 = 0.2" ONLY  | 012 = 1.2" ONLY   |  |  |  |  |
| 06  | No    | REV   | 8mm          | M10x1        | 005 = 5 mm ONLY  | 030 = 30 mm ONLY  |  |  |  |  |

**NOTE:** All Metrix<sup>®</sup> MX8030 series probes and extension cables are part of the 10000 series part number designation for agency approvals. The 10000 series p/n will appear on the product's label along with the MX8030 p/n. e.g. MX8030-AA-BBB-CCC-DD-EE = 103AA-BBB-CCC-DD-EE.

**SPECIFICATIONS**

**MECHANICAL**

**Probe Tip Material:** Polyphenylene Sulfide (PPS)  
**Probe Case Material:** FWD-mount probe: AISI 304 stainless steel  
 REV-mount probe: AISI 303 stainless steel  
**Probe Cable Type:** 75Ω coaxial, Tefzel<sup>®</sup> 750 insulation (ethylene – tetrafluoroethylene ETFE)  
**Extension Cable Type:** 75Ω coaxial, Tefzel<sup>®</sup> 750 insulation (ethylene – tetrafluoroethylene ETFE)  
**Optional Flexible Armor:** AISI 304 stainless steel (armor)  
 AISI 303 stainless steel (armor ferrule)

**Tensile Strength:** Probe body to probe cable: 245N (55 lb)  
 Cable to Connector: 245N (55 lb)  
**Connector Material:** Gold-plated brass  
**Connector Gender:** Probe: Male  
 Extension Cable: Female and Male  
 Driver or Transmitter: Female  
**Connector Type:** Miniature knurled  
**Connector Torque:** Maximum: 0.565 N-m (5 in-lb)  
 Recommended: finger tight  
**Min. Cable Bend Radius:** Without Armor: 25.4 mm (1.0 in)  
 With Armor: 25.4 mm (1.0 in)

**NOTE:** An ETFE outer jacket is not included on Metrix extension cable and probe armor as it tends to degrade, rather than enhance, moisture and corrosion resistance.

SPECIFICATIONS (Continued)

Probe Case Torque:

| PROBE TYPE    | MAX. RATED           | RECOMMENDED         |
|---------------|----------------------|---------------------|
| 8mm FWD mount | 33.9 N-m (300 in-lb) | 11.3N-m (100 in-lb) |
| 5mm FWD mount | 7.3 N-m (65 in-lb)   | 5.1 N-m (45 in-lb)  |
| 8mm REV mount | 22.6 N-m (200 in-lb) | 7.5 N-m (66 in-lb)  |

ENVIRONMENTAL

Operating and Storage Temperature:

- Probe: -51°C to +177°C (-60°F to +350 °F)
- Extension Cable: -51°C to +177°C (-60°F to +350°F)
- Driver or Transmitter: -40°C to +85°C (-40°F to +185°F)

Relative Humidity: 95%, non-condensing

Probe tip-to-case Pressure Rating: 13.6 bar (200 psi )

Patents: Digital performance curve technology in driver and transmitter: US patent number 7768258.

WEIGHT AND DIMENSIONS

- Weight: Probe: 298 g (10.5 oz)
- Extension cable: - 33 g/m (0.35 oz/ft) without armor
- 98 g/m 1.05 oz/ft) with armor

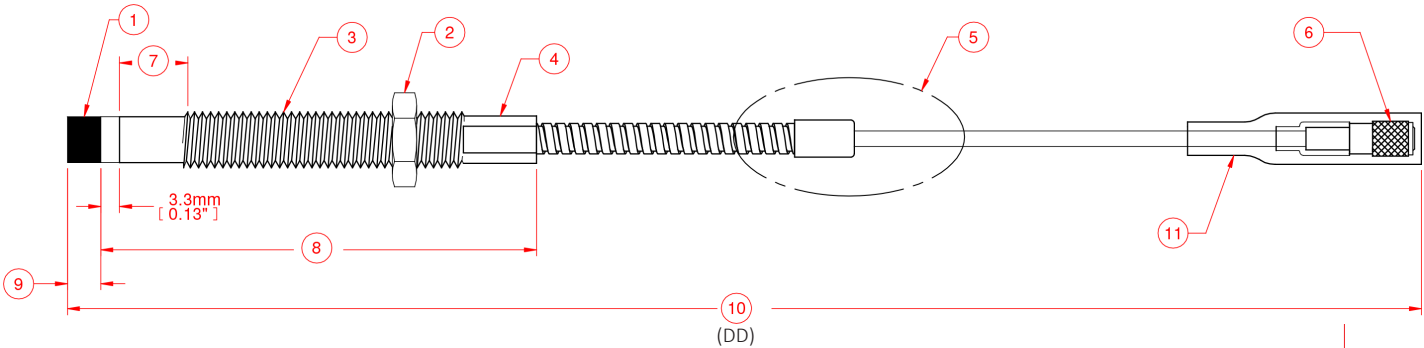


FIGURE 4: MX8030 8mm Forward-Mount Probe (AA=01 through 04)

NOTES:

- Probe tip, 8.0mm (0.31") diameter
- Forward-mount 8mm probes are supplied with locknut. Locknut is 9/16" for 3/8-24 case threads and M17 for M10 case threads. Locknut material is 18-8 stainless steel.
- Case threads. AA=01 and 02 have 3/8-24 UNF-2A threads. AA=03 and 04 have M10 x 1 threads.
- Wrench flats. 5/16" for 3/8-24 case threads; 8mm for M10 x 1 case threads.
- 75Ω triaxial cable with ethylene-tetrafluoroethylene (ETFE) jacket – 3.70mm (0.146") max. outside diameter. Optional cable protective armor shown (option AA=02 and 04). Armor is 304 stainless steel with 6.99mm (0.275") max. outside diameter. Armor length is 152mm (6.0") less than cable length. Armor ferrule is 303 stainless steel with 8.89mm (0.350") max. outside diameter.
- Miniature male VibeLock™ coaxial connector, round, knurled. 7.37mm (0.290") max. outside diameter.
- Unthreaded Length (option BBB).
- Case Length (option CCC).
- 6.0mm (0.235") max.
- Total Length (option DD), +30%, -0%.
- Fluorosilicone connector insulator boot. 11mm (0.43") max. outside diameter 25mm (1.00") max. length. Insulator boot is not designed to seal against moisture ingress. It is provided for electrical insulation of connectors from inadvertent contact with conduit, junction boxes, and other metal objects.

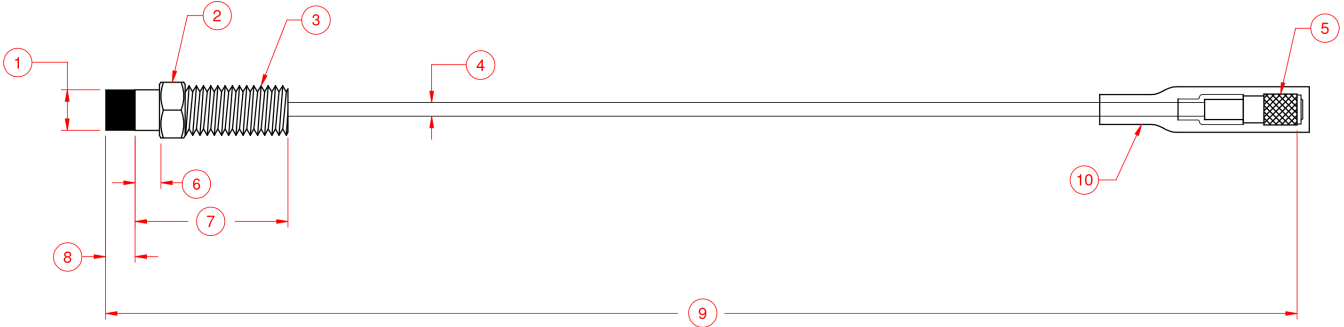


FIGURE 5: MX8030 8mm Reverse-Mount Probe (AA=05 and 06)

NOTES:

- 1. Probe tip, 8.0mm (0.31") diameter
- 2. 7/16" hexagonal
- 3. Case threads. AA=05 has 3/8-24 UNF-2A threads. AA=06 has M10 x 1 threads.
- 4. 75Ω triaxial cable with ethylene-tetrafluoroethylene (ETFE) jacket – 3.70mm (0.146") max. outside diameter.
- 5. Miniature male VibeLock™ coaxial connector, round, knurled. 7.37mm (0.290") max. outside diameter.
- 6. Unthreaded Length (option BBB). BBB must be 002 for AA=05. BBB must be 005 for AA=06.
- 7. Case Length (option CCC). CCC must be 012 for AA=05. CCC must be 030 for AA=06.
- 8. 6.0mm (0.235") max.
- 9. Total Length (option DD), +30%, -0%.
- 10. Fluorosilicone connector insulator boot. 11mm (0.43") max. outside diameter 25mm (1.00") max. length. Insulator boot is not designed to seal against moisture ingress. It is provided for electrical insulation of connectors from inadvertent contact with conduit, junction boxes, and other metal objects.

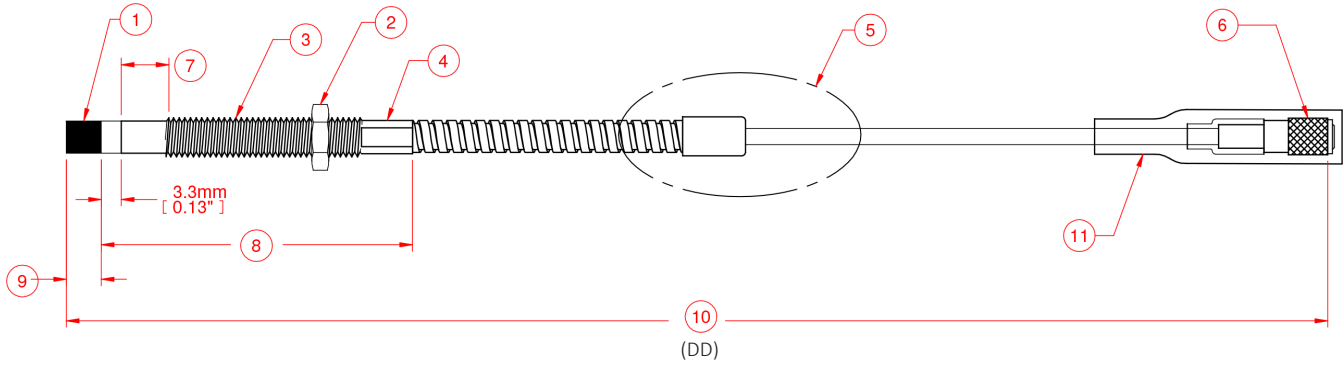


FIGURE 6: MX8030 5mm Forward-Mount Probe (AA=71 through 74)

NOTES:

- 1. Probe tip, 5.0mm (0.20") diameter
- 2. Forward-mount 5mm probes are supplied with locknut. Locknut is 7/16" for 1/4-28 case threads and M13 for M8 case threads. Locknut material is 18-8 stainless steel.
- 3. Case threads. AA=71 and 72 have 1/4-28 threads. AA=73 and 74 have M8 threads.
- 4. Wrench flats. 7/32" for 1/4-28 case threads; 7mm for M8 case threads.
- 5. 75Ω triaxial cable with ethylene-tetrafluoroethylene (ETFE) jacket – 3.70mm (0.146") max. outside diameter. Optional cable protective armor shown (option AA=72 and 74). Armor is 304 stainless steel with 6.99mm (0.275") max. outside diameter. Armor length is 152mm (6.0") less than cable length. Armor ferrule is 303 stainless steel with 8.89mm (0.350") max. outside diameter.
- 6. Miniature male VibeLock™ coaxial connector, round, knurled, 7.37mm (0.290") max. outside diameter.
- 7. Unthreaded Length (option BBB).
- 8. Case Length (option CCC).
- 9. 6.0mm (0.235") max.
- 10. Total Length (option DD), +30%, -0%.
- 11. Fluorosilicone connector insulator boot. 11mm (0.43") max. outside diameter 25mm (1.00") max. length. Insulator boot is not designed to seal against moisture ingress. It is provided for electrical insulation of connectors from inadvertent contact with conduit, junction boxes, and other metal objects.

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