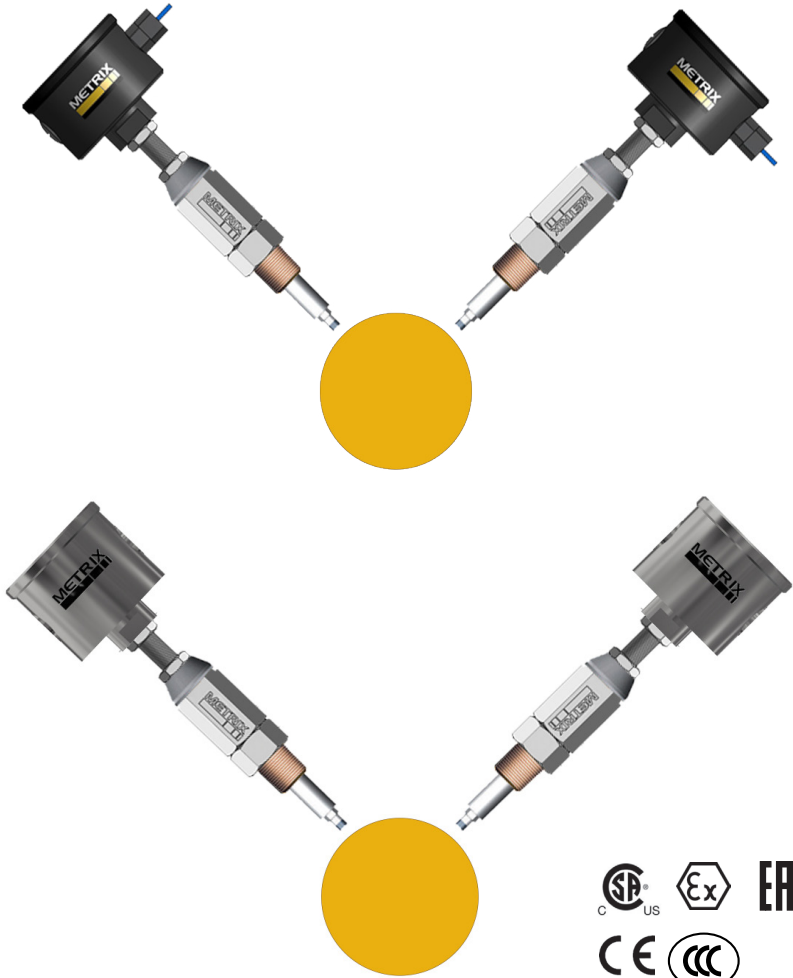




# 5497PM Probe Mount

## Installation Manual

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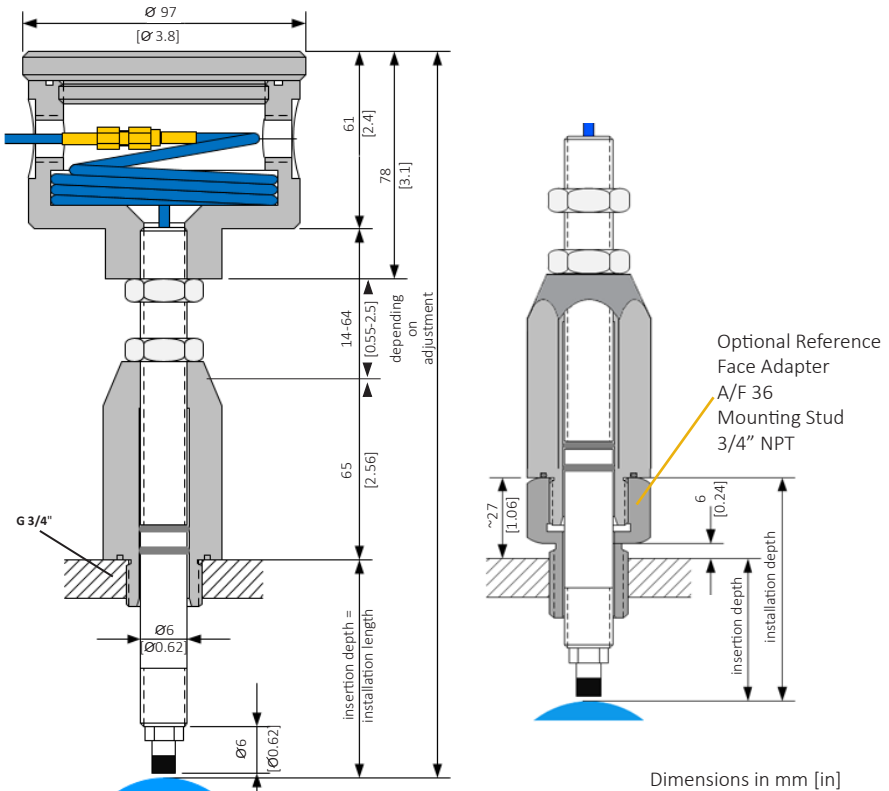
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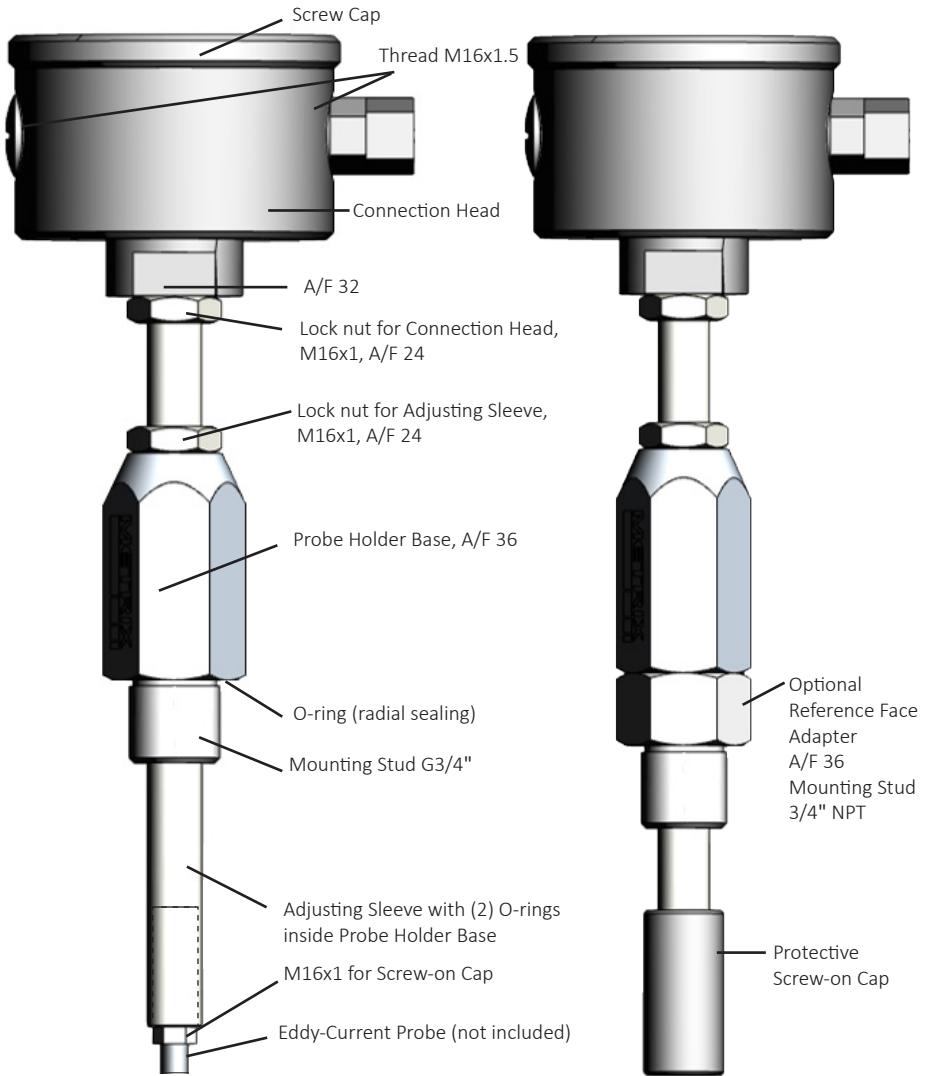
## Scope of Delivery

- 1x **Probe Holder Base** (stainless steel) including O-ring (28 x 2.0 mm) with mounting stud G3/4" male / wrench size (A/F) 36 mm / M16 x 1 mm female
- 1x If BX=1: **Reference Face Adapter** (stainless steel), 3/4" NPT male for the bearing housing, G3/4" female for the Probe Holder Base
- 1x **Adjusting Sleeve** (stainless steel) for length adaption, M16 x 1 mm male, including protective screw-on cap for the highly-sensitive probe tip, 2 O-rings (13.4 x 1.8 mm), 2 lock nuts (A/F 24).
- 1x **Connection Head or Hexagonal Adapter:**
  - If EX=1: Aluminum Connection Head with M16 x 1 mm female threads for the Adjusting Sleeve and two 3/4" NPT threads for cable glands or conduit fittings. Height: 97 mm (3.8"), Diameter 97 mm (3.8"), two 3/4" NPT threads.
  - If EX=2: Connection Head, consisting of rugged plastic housing, screw cap + O-ring (76 x 2.0 mm), with female thread (M16 x 1 mm) for the Adjusting Sleeve and 2 female threads M16 x 1.5 mm (including screw plugs) for cable glands or conduit fittings (not included). Height: 78 mm (3.1"); Diameter: 94 mm (3.8")

## Outline and Dimensions



# Design



## **In General**

Eddy-current proximity probes are used for the contactless measurement of vibration, axial position, absolute and relative motion and the detection of rotation pulses. The probes have to be adjusted to the proper gap away from the measured object. With respect to simplified spare part management, the use of reverse-mount probes is recommended for external installations.

The Metrix Probe Mount is designed for a fast, convenient and beneficial installation and adjustment of sensors with a tip diameter of 8 mm. Standard threads are M10 x 1 mm, 3/8" - 24 UNF.

The Probe Holder Base of the 5497PM system can be mounted directly on a plane machined surface of the bearing housing. Alternatively the optional Reference Face Adapter with a 3/4" NPT mounting stud has to be installed, which can be used even for a thin-walled housing.

## **Installation**

1. If there is a suitable, plane machined surface on the bearing housing available:  
A thread hole G3/4" in the bearing housing, exactly positioned to the measuring point, is required for the mounting stud of the Probe Holder Base.

If there is no suitable, plane machined surface on the bearing housing available:  
A threaded hole 3/4" NPT in the bearing housing, exactly positioned to the measuring point, is required for the mounting stud of the Reference Face Adapter.

The Reference Face Adapter has to be screwed into this threaded hole. The tapered thread forms an oil-tight bond. We recommend the use of a suitable thread-locking fluid (Loctite® Threadlocker 243™). The Reference Face Adapter once installed remains in place.

The next step is to measure the required installation length (distance from plane machined surface on the bearing housing to the rotor or, respectively, from upper edge of Reference Face Adapter to the rotor).

Now select the standard Adjusting Sleeve with the proper adjustable range:

Adjusting Sleeve	Installation length		Total length (mm)
	MIN (mm)	MAX (mm)	
CCC=090 "S"	40	90	171
CCC=140 "M"	90	140	221
CCC=190 "L"	140	190	271
CCC=240 "XL"	190	240	321

Roll the 2 O-rings (13.4 x 1.8 mm) along the Adjusting Sleeve into the prepared notches.

2. Now insert the probe cable into the Adjusting Sleeve and screw in the reverse-mount probe considering the manufacturer-recommended torque. Assure that the O-ring of the probe is placed between thread and hexagon nut.

3. Insert the Adjusting Sleeve through the mounting stud of the Probe Holder Base and preadjust it to the measured insertion depth less 1.5 mm (~40 mils). Then fix it with the lock nut.

**Note that all parts are made of stainless steel and it's highly recommendable to use a suitable anti-seize lubricant before assembling.**

With this adjustment you can be sure that, when fully screwing in the Probe Holder Base, the probe doesn't touch the rotor and it should already be within the linear range of the driver or transmitter.

4. Place the O-ring (28 x 2.0 mm) into the groove on the bottom of the Probe Holder Base.
5. Screw in the preadjusted unit directly into the bearing housing or into the Reference Face Adapter (whatever is applicable) with a torque of maximum 100 Nm (~75 ft lbs).

**Note that all parts are made of stainless steel and it's highly recommendable to use a suitable anti-seize lubricant before assembling.**

The GAP between probe and rotor should now be near 1.5 mm (~40 mils).

6. At first commissioning the GAP has to be adjusted by sensitive turning of the Adjusting Sleeve.

Screw the second lock nut and the open Connection Head (without screw cap) or the Hexagonal Adapter on the Adjusting Sleeve and tighten it.

Connect probe cable and extension cable outside of the Connection Head (or the Hexagonal Adapter) and power the driver / transmitter. At the corresponding terminals you will measure the distance-proportional GAP signal.

The fixed Connection Head (or the Hexagonal Adapter) conveniently serves as "hand-wheel" for the fine adjustment. Use a wrench in the other hand for loosening and re-tightening the lock nut of the sleeve at the final position.

7. Loosen the lock nut of the Connection Head, turn it to the desired position and tighten it again.
8. Release the connection between probe and extension cable.
9. Wind the excess length of the probe cable into the notch inside the Connection Head.
10. Install a cable gland or conduit fitting.  
The Connection Head provides two opposite thread holes. Insert the extension cable through gland or fitting into the Connection Head.  
Connect the extension cable with the probe cable considering the manufacturer-recommended torque.
11. Close the screw cap of the Connection Head.

Herewith, the installation and adjustment of the probe mount is completed.

## Disassembling / Reassembling

1. Screw off the screw cap of the Connection Head.
2. Release the plug connection between extension cable and probe cable.
3. Release the cable fitting and pull out the extension cable from the Connection Head.
4. Screw out the complete unit by means of the Probe Holder Base.  
**Attention: Do not touch the lock not of the Adjusting Sleeve. As long as the Adjusting Sleeve is kept in the same position, the GAP will be the same at reassembling.**
5. Screw the supplied screw-on cap onto the Adjusting Sleeve to protect the probe tip.
6. For reassembling remove the screw-on cap, renew the O-ring (28 x 2.0 mm) at the bottom of the Probe Holder Base and reinstall the whole unit on the reference face. Check whether the GAP voltage is still within the recommended range. **Normally no readjustment is necessary.**

## Warning

The enclosure is manufactured from ALUMINUM OR STAINLESS STEEL. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.

L'enclos est fabriqué à partir de ALUMINUM OR STAINLESS STEEL. Dans de rares cas, des sources d'inflammation dues à l'impact et aux étincelles de friction peuvent se produire. Ceci doit être pris en compte lors de l'installation.

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