



Aircraft And Medical Instruments

UMA, Inc.

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T1A9-[] series TSU (Tach. Sending Unit)

T1A9-[] series Mag Pickup

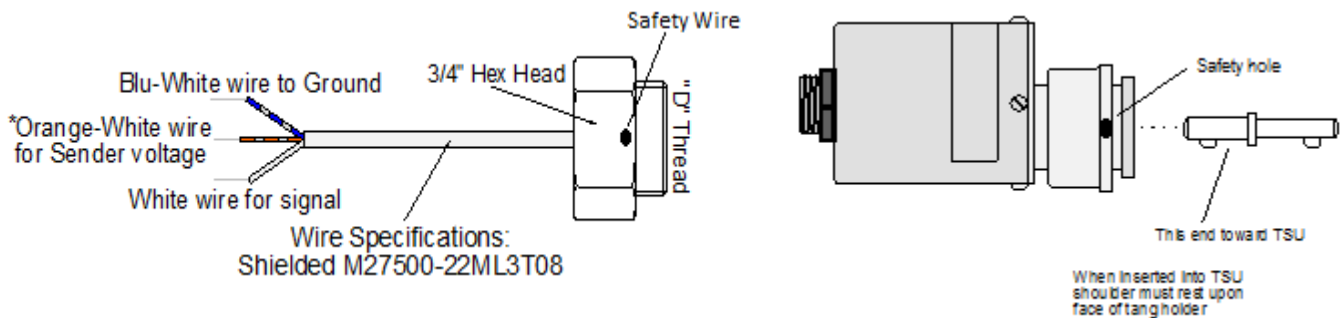
for use with UMA Tachometer T19-[] & 1D6 series harness or other indicating units

Meets: TSO-C49b Specifications.

Installation limitations:

-Fixed wing, reciprocating or turboprop, single or multi-engine¹ aircraft operating up to 25,000 ft MSL².

¹ RTCA/DO160-D sect.8 vibration tests. ² RTCA/DO160-D sect. 4Temp. & Alt. test.



Installation Instructions:

1. Insert the tang provided and mount to the engine tachometer drive port. It may be necessary to rotate the unit for clearance from other accessories mounted on the gear case. The center-line is offset for this purpose. Use locktite 242 on threads, tighten with pliers.
2. There is a safety wire hole for securing the unit.
3. Route wiring harness away from high temperature objects, ignition system wires and components and secure into place.
4. Attach the connector on the wiring harness from the tachometer
5. The remainder of the harness contains the shielded cable which should be connected to the Tachometer mounted in the instrument panel, and cockpit power.

Note: The TSU will operate effectively in either direction.

For T1A9-(1) or (2) Magneto Pick-up

- 1.) Mount the pick-up on either magneto in the threaded port on the magneto case. Use the port closest to the engine drive side. Hand tighten, then tighten **1/6 turn max.** more. Use removable thread locker, Loctite 242 or eqv. MIL-S-46163A
- 2.) Run the wire bundle to the cockpit and connect to tachometer. Install connector per diagram 1.

Ventilator Plug-in type:

There are two plugs found on each magneto 180° apart from each other. One is vented by means of a hole and the other is solid. Per Bendix Maintenance, Overhaul Manual No x42002-1: "If hole adjacent to rotating magnet in magneto housing is to be used for a tachometer pick-up in an **unpressurized** magneto, install ventilator plug in timing hole of distributor housing and discard solid plug." This is true for Slick Magnetos also. Replace the vent plug with the T1A9-2 Hall Effect sensor vent plug for Bendix and T1A9-1 for Slick magneto. Apply 10-15 in-lbs in torque.

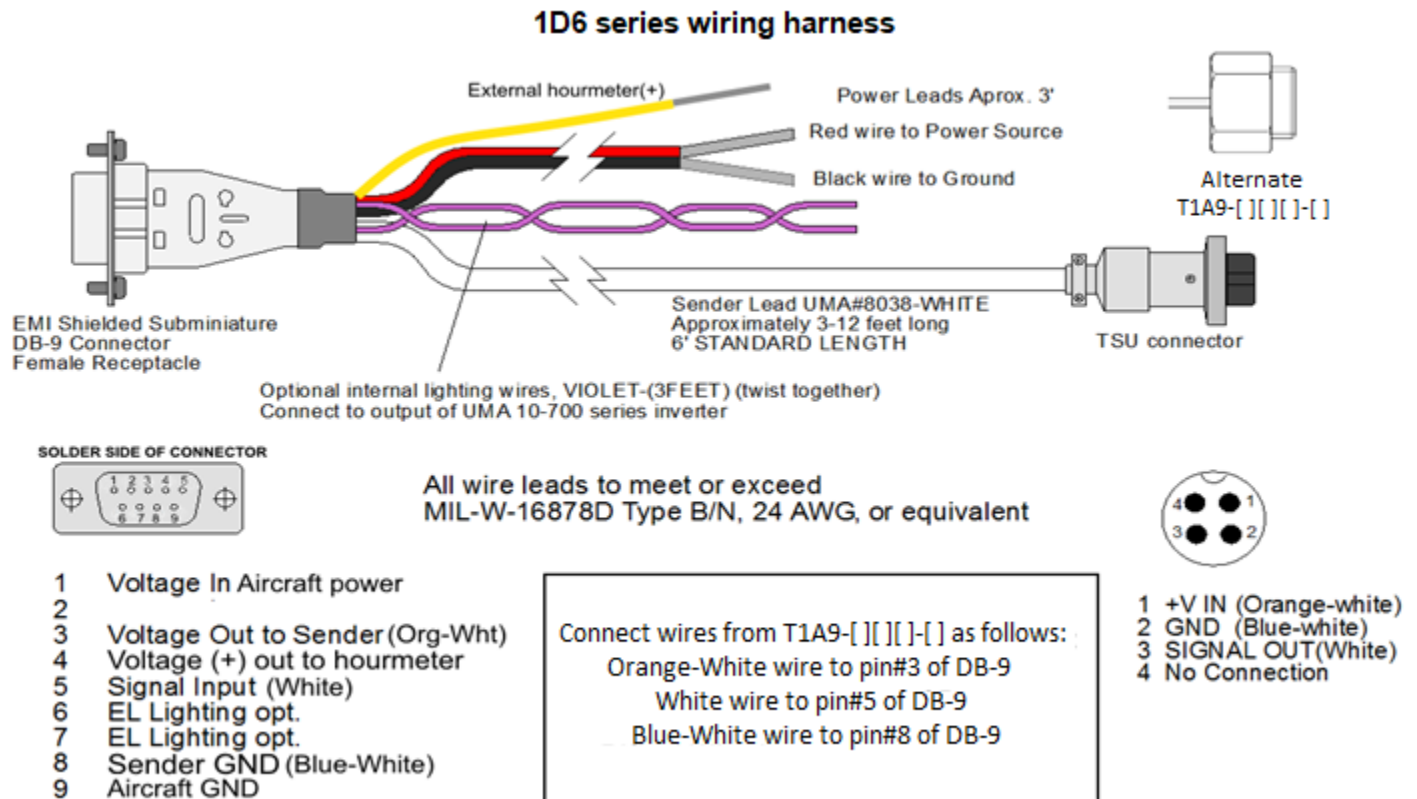
Specifications:

Weight: 3 oz.

Power: Regulated 12VDC from gauge, but works from 5-12V!

Temperature: -45 to 125°C (-50 to 260°F)

Tested to RTCA/DO160-D; Meets or exceeds AS 404 Rev. C



The conditions and tests required for TSO approval of this article are minimum performance standards. It is the responsibility of those installing the article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within TSO standards. TSO articles must have separate approval for installation in an aircraft. The article may be installed only if performed under 14 CFR article 43 or applicable airworthiness requirements.

Warranty

UMA, Inc. warrants all products to be free from defects in material and workmanship under normal use and operation. UMA does not warrant any product which has been damaged as the result of accident, abuse, negligence, improper operational voltage, lightning, fire, flood, or other acts of nature. Any indication that the unit has been opened can void warranty. Under no circumstances shall UMA be liable for any loss or damage, direct, consequential or incidental, arising from the use of or inability to use this product.

This warranty is limited to the rebuild or replacement, at the manufacturer's option, of any product or part thereof, which has been returned to UMA within the specified warranty period, and which after examination shall disclose to the customer service department's satisfaction that the product is defective. Transportation to the factory or authorized service center must be prepaid; the product after rebuild or replacement will be returned at the expense of the dealer or end customer. This warranty does not apply to any product or integral part thereof, which has been altered or serviced by other than the manufacturer or authorized service center.

The warranty period is twelve (12) months to the user.

This warranty supersedes all other warranties either expressed or implied and shall be governed and executed under the laws of the Commonwealth of Virginia, U.S.A.