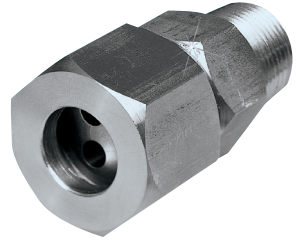


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MFT Series

Multiconductor Feedthroughs



INSTRUCTION
SHEET

M0152/0103

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INTRODUCTION

The OMEGA[®] MFT multiconductor feedthroughs are designed for use in applications that require several thermocouple sensors to pass through a wall or a bulkhead at one opening or within a small area. They are manufactured from 416 stainless steel. Their heavy duty construction allows the MFT fittings to be used in high pressure or vacuum applications (when used with stainless steel ferrules).

UNPACKING

Check to see that the following parts are in the package: MFT Housing, Pusher, Lock Pin, Nut, Ferrules, Blind Probes, Operator's Manual.

Remove the Packing List and verify that you have received all equipment. If you have any questions about the shipment, please call the OMEGA Customer Service Department at 1-800-622-2378 or 203-359-1660. We can also be reached on the Internet at omega.com e-mail: info@omega.com

When you receive the shipment, inspect the container and equipment for any signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

NOTE

The carrier will not honor any claims unless all shipping material is saved for their examination. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

FERRULES

All multiconductor feedthroughs are supplied in standard form with 300 series stainless steel ferrules (necessary in high pressure or vacuum applications). When the nut is tightened, these stainless steel ferrules deform and become permanent. Note that the probe sheath will become nicked as the ferrule forms around it.

If it is required that the probes be removed or replaced several times in the feedthrough, teflon ferrules should be used. Teflon ferrules will not deform the probe sheath, thus allowing the same probe to be re-used.

IMPORTANT NOTE

NEVER re-use ferrules! Once the pusher part of the MFT assembly has pressed against them, ferrules are deformed in some way (both steel and teflon ferrules). **ALWAYS** replace the ferrules when re-using the multiconductor feedthrough. Replacement part numbers are listed at the end of this manual.

MALE THREADED CAPS

An optional male threaded cap is also available for use when assembling the MFT for certain applications (Figure 2b). They are used **INSTEAD** of the nut (that is provided) when an external male NPT thread is needed. Using the threaded cap will allow for a conduit pipe to be threaded directly onto the MFT housing.

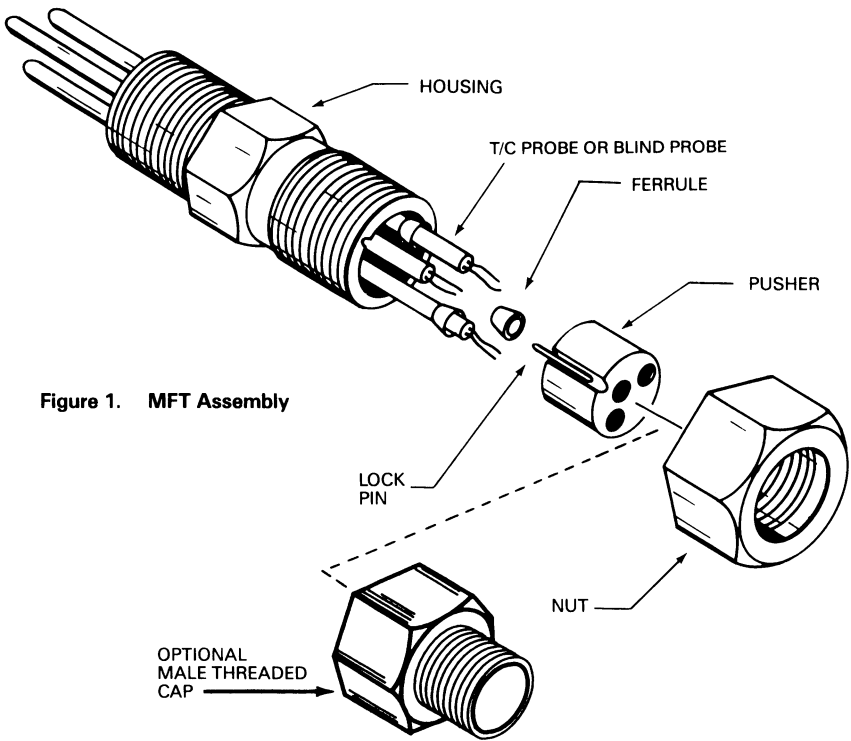


Figure 1. MFT Assembly

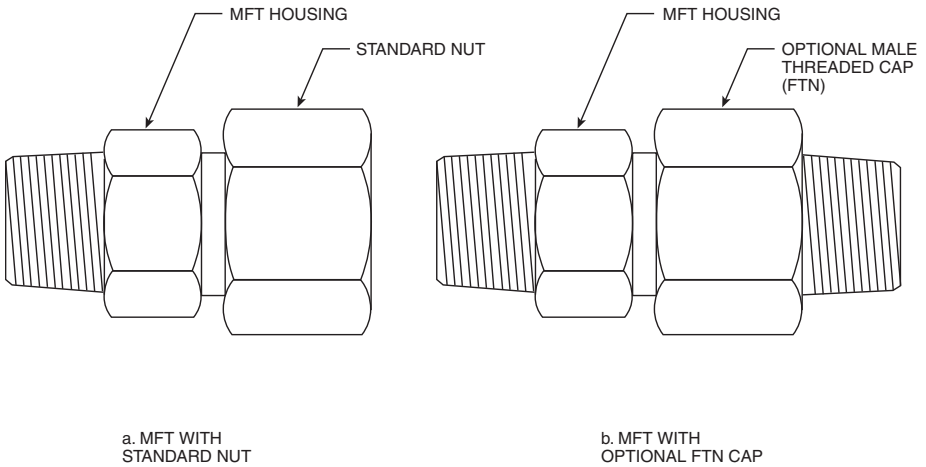


Figure 2. MFT, Side Views

MFT ASSEMBLY

Step 1.

Assemble the OMEGA Multiconductor Feedthrough and Probes as shown in Figure 1. Ensure that, all parts are clean. Dirt or foreign material in the fitting can cause leaks or failure. Make sure all unused holes are plugged. (Blind probes are provided). Teflon tape should be used on all pipe joints to provide a good seal and to prevent the thread parts from seizing each other on disassembly.

Step 2.

Tighten the nut or male threaded cap finger-tight. Scribe a reference mark on it along the top of the housing and the nut to mark the "zero" position. From that point, tighten the nut approximately $\frac{1}{8}$ -turn for all sizes but the $\frac{1}{4}$ " probes. (See Figure 3).

For the $\frac{1}{4}$ " probes, tighten the nut approximately $\frac{1}{2}$ -turn minimum. (See Figure 3).

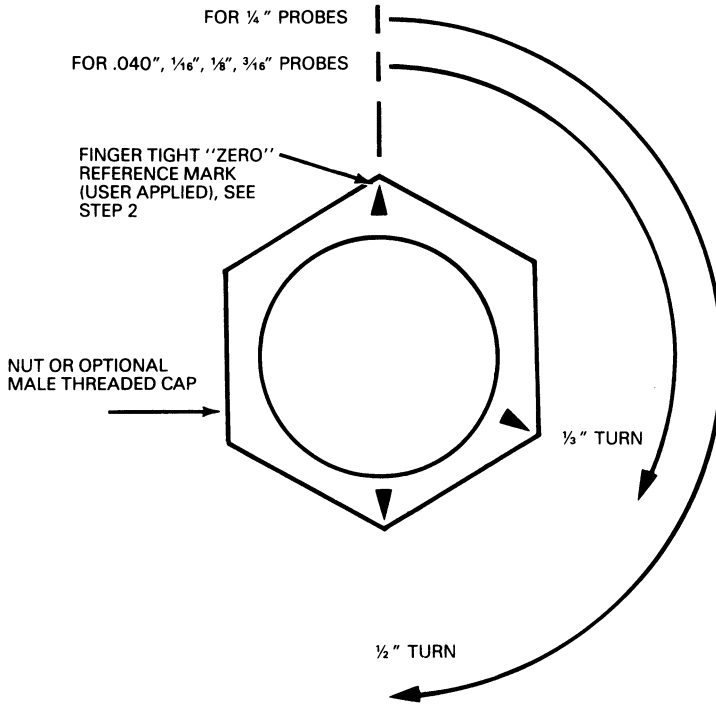


Figure 3. Tightening The Nut

PRESSURE OR VACUUM APPLICATIONS

If OMEGA feedthroughs are used in pressure or vacuum applications, read and follow the instructions carefully. After proper installation and tightening, bring the system pressure up (or down) slowly while testing for pressure. IF ANY LEAKAGE is detected, return pressure to atmosphere at once and repair or replace fittings. Do not mix or interchange parts of tube fittings made by other manufacturers. Use only OMEGA parts to prevent product failure. Do not attempt to re-use "used" ferrules.

REPLACEMENT PARTS AND OPTIONS

- 300 Series Stainless Steel Ferrules (pkg of 10):
OMEGA Part Number: SS-FER-*
- Teflon Ferrules (pkg of 10): OMEGA Part Number: T-FER-
(* Where the star is replaced by the sheath diameter in inches)
- Optional Male Threaded Cap (3 Sizes):
OMEGA Part Number: (for 1/4" NPT) FTN-1-14
(for 1/2" NPT) FTN-1-12
(for 3/4" NPT) FTN-1
- Teflon Tape, 1/2" by 260": OMEGA Part Number: Teflon Tape



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It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, human applications.

**WARRANTY/DISCLAIMER**

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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