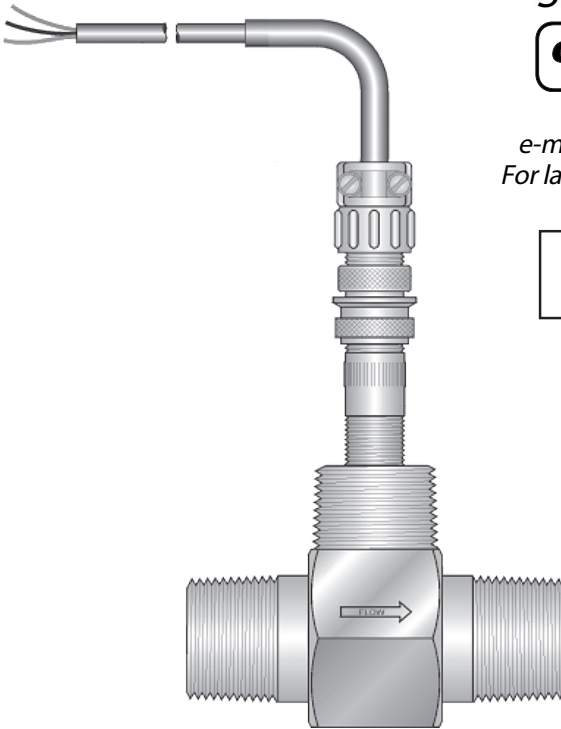




# User's Guide



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## FTB-14XX-AMP Magnetic Pick-up with Preamplifier



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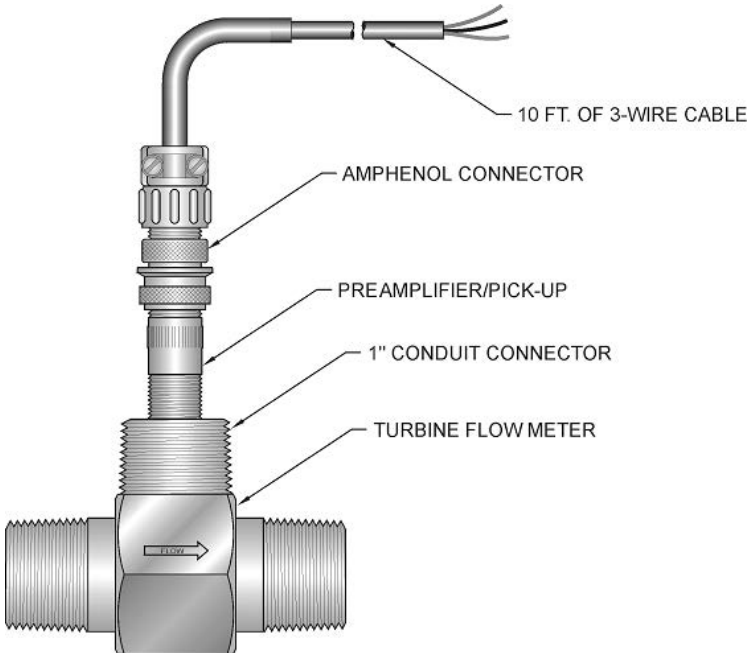
WARNING: These products are not designed for use in, and should not be used for, human applications.

# INTRODUCTION

The Omega FTB-14XX-AMP Magnetic Pick-up with Preamplifier was designed to directly replace a standard pick-up within a turbine flow meter when signal amplification is required. The pick-up is a combination of a standard Omega magnetic pick-up and a solid state electronic preamplifier in a single stainless steel housing.

# OPERATING PRINCIPLE

As fluid flows through the meter the turbine rotates at a speed proportional to the fluid velocity. As each turbine blade passes through the magnetic field at the base of the pickup, an AC voltage pulse is generated in the pick-up coil. The voltage signal generated by these pulses becomes amplified within the pick-up. The output signal generated from the pick-up is now in the form of a square wave. The frequency of this amplified signal is used to represent the flow rate of fluid passing through the turbine flow meter.



**Figure 1**  
*Model FTB-1400 flow meter  
with preamplifier pick-up and connecting cable*

# SPECIFICATIONS

**Supply Voltage:** +5 to 30 VDC

**Input Current:** 15 mA

**Current Sinking:** 25 mA maximum

**Pulse Out:** 0 to 10 V peak-to-peak

**Frequency Range:** 5Hz to 10kHz

**Transmit Distance:** 1500 feet maximum

**Temperature:** -20 °F to +160 °F (-29 °C to +71 °C)

**Housing:** Stainless steel and epoxy encapsulated

## Electrical

**Connection:** 3-pin straight Amphenol connector supplied with 10 feet of cable standard. (*Sold separately. Contact Omega.*)

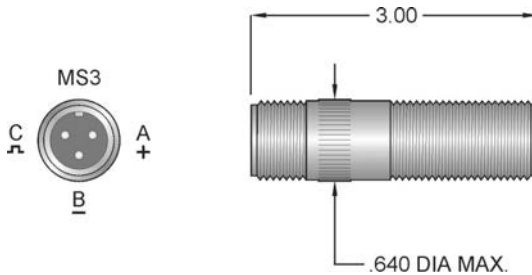
# INSTALLATION AND WIRING INSTRUCTIONS

The FTB-14XX-AMP is simply threaded into the hole ( $\frac{5}{8}$ "-18UNF) in the turbine meter until the pick-up bottoms out. Tighten the pick-up finger tight. Do not over tighten.

Install the 3-pin connector in the proper orientation and connect the wire ends of the cable using appropriate common wiring practices. Refer to **Table 1** and **Figure 2** for wiring specifications.

Pin	Description	Wire Color
A	Power: +5 to 30 VDC @ 15 mA	Red
B	Common: Power return	Black
C	Output Signal: 0 to 10 V (Square Wave)	Green or Clear

**Table 1**



**Figure 2**  
*Pin configuration*

# NOTES



## 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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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,
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