



FL – 800 SERIES
FLOWMETER

M3234 / 0505



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INSTALLATION & OPERATION INSTRUCTIONS OF FL-800 SERIES FLOWMETER

The FL-800 flowmeters are available in various ranges in both SAE and SI units for air and water. These direct-reading scales are also available for other gases and liquids. If the flowmeter is used for fluids other than air and water, please consult chemical compatibility data for possible effects on the meter. When properly installed and maintained, this durable Polycarbonate flowmeter will provide years of trouble-free service.

UNPACKING

Precautions have been taken to prevent any damage from occurring during shipment. However, if the meter is damaged when received, **report it to the carrier immediately**. Before installing, verify that the model received is the model and flowrange that is required.

ACHIEVING ACCURATE FLOWRATES

To obtain an accurate flowrate, the float must be read correctly. If the meter has a ball float, the flowrate should be read from the center of the ball. If the meter has a bullet float, the flowrate should be read from the groove in the float. Additionally, the flowmeter should be installed vertically and in a manner, which minimizes both external vibrations and internal flow variations. Special care should be taken so that the connections to the meter's inlet and outlet fittings do not overly restrict the liquid or gas flow being metered. This could result in a reduced flow volume, preventing the meter from reaching its maximum flowrate. Furthermore, internal pressures could be affected, which can cause inaccurate flow readings. On start-up, slowly purge any air/gas trapped in the meter.

INSTALLATION

In order for flowmeter to function properly, it is important that the flowmeter is mounted vertically. When installing 1/8" FNPT fittings into the flowmeter, care should be taken not to over tighten them. **The fittings should be installed with a maximum torque of 60 inch-lbs.** Use pipe thread sealant or Teflon® tape to achieve a positive seal when connecting the flowmeter. The flowmeter is provided with two clips and two 10-32 screws, to be used in conjunction with the female threads on the backplate of the flowmeter. **These 10-32 screws should be installed with a maximum torque of 5 in-lbs. Caution! Exceeding these specifications may cause damage to the flowmeter.** (See Figure 1 for the location of the mounting holes.)

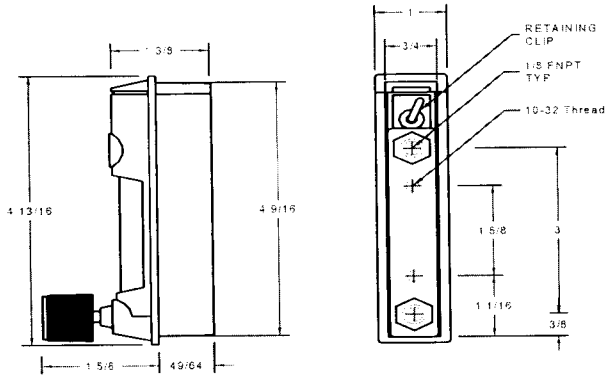
CAUTION

THIS FLOWMETER IS DESIGNED FOR USE WITH NON-HAZARDOUS FLUIDS AT PRESSURES UP TO 100 PSIG (690 kPa) AND TEMPERATURES UP TO 150 °F (65 °C). DO NOT USE HAZARDOUS FLUIDS AND DO NOT EXCEED TEMPERATURE OR PRESSURE LIMITS. USE WITH HAZARDOUS FLUIDS OR EXCEEDING THE PRESSURE OR TEMPERATURE LIMITS MAY CAUSE FAILURE WHICH COULD RESULT IN INJURY.

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MAINTENANCE

Occasional cleaning may become necessary if dirt appears in the flowmeter or if float movement is restricted. To clean, rotate "Retaining Clip" (See Figure 1) counter-clockwise, approximately 1/8 turn, to align clip with slot. Gently remove the retaining clip from the flowmeter. The top plug, ring and gasket can then be removed. Once the outlet fitting is removed from the back of the meter, the float can then be removed. It is not necessary to remove the flow tube from the flowmeter body. Wash flow tube, float, outlet fitting and top plug with clean water and a soft brush. Rinse all parts with clean water and dry thoroughly. To reassemble, simply reverse the disassembly process. **Do not use solvents or strong bases for cleaning.** If you have any questions regarding installation, maintenance or use of this flowmeter, please call Omega Customer Service.



MR3000 SERIES FLOW RATES			
RANGE	MODEL	RANGE	MODEL
SCFH OF AIR	CODE	LPM OF AIR	CODE
0.1-1	FL-801	0.05-0.5	FL-814
0.2-2.5	FL-802	0.1-1.5	FL-815
0.4-5	FL-803	0.4-5	FL-816
1-11	FL-804	0.2-2.5	FL-817
1-22	FL-805	1-10	FL-818
4-60	FL-806	2-30	FL-819
10-110	FL-807	4-50	FL-820
20-200	FL-808	10-100	FL-821
GPH OF WATER	CODE	CCM OF WATER	CODE
0.2-2.5	FL-809	4-50	FL-822
0.4-5	FL-810	5-110	FL-823
1-10	FL-811	20-300	FL-824
2-25	FL-812		
4-40	FL-813		

SPECIFICATIONS	
ACCURACY:	± 4% FULL SCALE
BODY & TUBE:	POLYCARBONATE
FLOATS:	BLACK GLASS, CARBIDE, STAINLESS STEEL, ALUMINUM
PRESSURE:	100 PSIG MAX
TEMPERATURE:	150° F/ 65° C MAX
SEALS:	BUNA N WITH BRASS FITTINGS & VITON WITH STAINLESS STEEL

CONTINUED PRODUCT IMPROVEMENT MAY RESULT IN SPECIFICATION REVISIONS
 WHEN ORDERING PARTS PLEASE INCLUDE PART DESCRIPTION, ITEM NUMBER AND TYPE OF MATERIAL REQUIRED.
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Customer Service: 1-800-922-2225 / 1-800-22-BEST
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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 (ARI) 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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CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 19 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

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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