



INSTALLATION & OPERATION INSTRUCTIONS
FOR FR4700 SERIES FLOWMETERS

The FR4700 series acrylic block flowmeters are available in various ranges in both SAE and SI units for air and water (see chart on other side). These direct reading meters are also available for other gases and liquids. If the meter will be used with fluids other than air or water, please consult chemical compatibility data for possible effects on the meter. When properly installed and maintained, these durable acrylic meters will provide years of trouble-free operation.

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 fluid trapped in the meter.

SPECIFICATIONS	
ACCURACY:	± 3% Full Scale
FLOATS:	St. Steel or Aluminum
METER BODY:	Clear Acrylic
FITTINGS:	½-14 FNPT PVC Fittings
ELASTOMERS:	Buna-N
MOUNTING INSERTS:	10-32 UNF x 3/8"
MAXIMUM TEMPERATURE:	150°F (65 °C)
MAXIMUM PRESSURE:	100 PSI (690 kPa)

INSTALLATION

These meters are supplied with round ½-14 FNPT inlet and outlet fittings. When installing the meter, securely hold the meter's fittings from rotating while connecting the flow lines. (Use pipe thread sealant or Teflon® tape to achieve a positive seal when connecting the flowmeter.) **Failure to hold the meter fittings or over-tightening may cause damage to the fitting, flowmeter or both; which will result in leaks or meter failure.** The meter is supplied with #10-32 UNF threaded inserts for mounting. When installing, use slotted screws and torque to a maximum of 35 in-lbs. Mounting dimensions are shown in the figure on the reverse side.

UNPACKING

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

ACHIEVING ACCURATE FLOWRATES

To obtain an accurate flowrate, the float must be read at the position indicated by the illustration on the meter. Additionally, the flowmeter should be installed in a

CLEANING AND DISASSEMBLY

Occasional cleaning may be required if dirt appears in the flow tube or if float movement becomes restricted. To clean, remove the outlet fitting and remove the rod guide assembly. Wash the tapered hole, float stops and top plug with a mild liquid detergent and soft brush. Rinse all parts with clean water and dry thoroughly with clean air or nitrogen. **Do not use solvents to clean this meter as they will attack the acrylic and destroy the meter.**

CAUTION

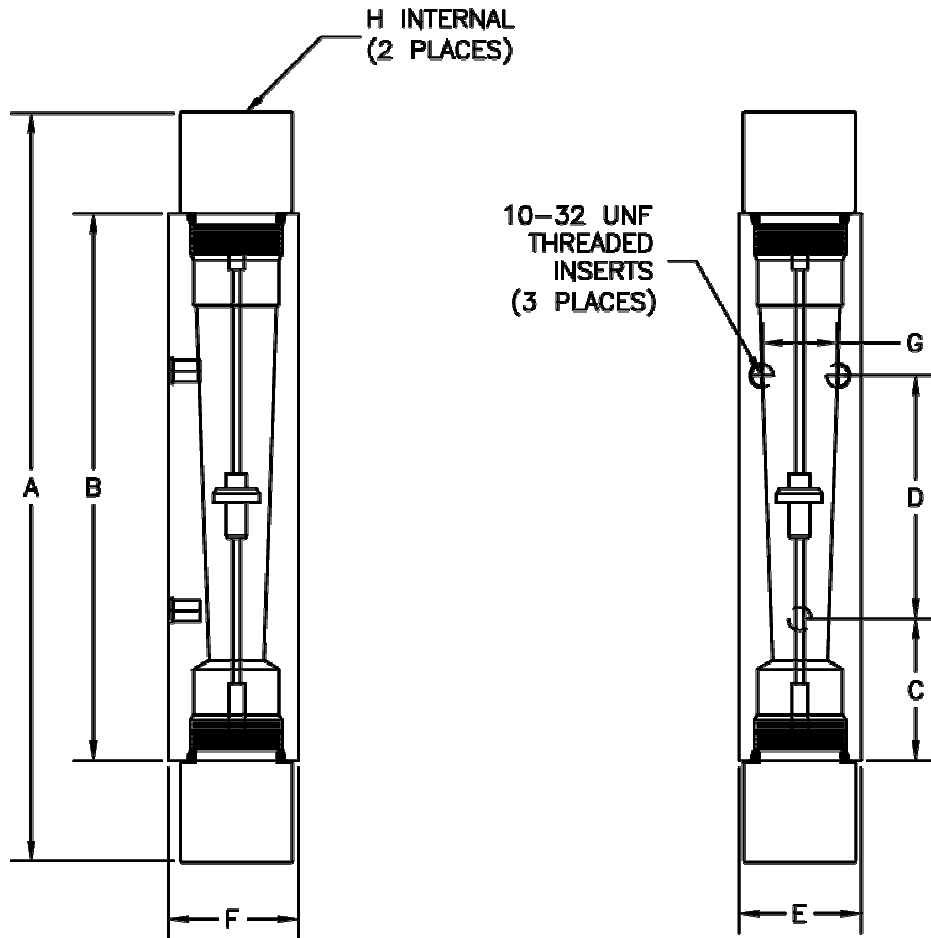
THIS FLOWMETER IS DESIGNED FOR USE WITH NON-HAZARDOUS FLUIDS AT PRESSURES UP TO 100 PSI (690 kPa) AND TEMPERATURES UP TO 150 °F (65 °C). DO NOT USE HAZARDOUS FLUIDS AND DO NOT EXCEED TEMPERATURE OR PRESSURE LIMITS. USE WITH HAZARDOUS FLUIDS OR EXCEEDING THE PRESSURE AND TEMPERATURE LIMITS MAY CAUSE FAILURE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

INLINE (PI) METER			
GPM OF WATER		SCFM OF AIR	
RANGE	MODEL	RANGE	MODEL
.5-2.5	47L00I	3-12	47A01I
.4-5	47L02I	3-25	47A03I
1-10	47L04I	5-50	47A05I
LPM OF WATER		LPM OF AIR	
RANGE	MODEL	RANGE	MODEL
2-10	47L06I	80-340	47A07I
2-20	47L08I	100-700	47A09I
4-40	47L10I	150-1500	47A11I

REASSEMBLY

Check to make sure that all parts are clean and dry. To lubricate the o-rings, apply a small amount of halocarbon grease prior to reassembly. Replace the float on the rod guide and reinstall the float stops. Reinstall the rod guide assembly into the flowmeter body. Make sure the rod guide is seated firmly in the body of the meter. Reinstall the top plug or the outlet fitting, making sure that the rod guide is properly aligned.

If you have any questions regarding the installation, maintenance or use of this flowmeter, please call the Customer Service Department at 1-800-356-7483.



FR4700-I	A	B	C	D	E	F	G	H
INCHES	8"	6-3/4"	1-7/8"	3"	1-1/2"	1-5/8"	1"	1/2-14 FNPT
MILLIMETERS	203.2	171.5	47.6	76.2	38.1	41.3	25.4	

CONTINUED PRODUCT IMPROVEMENT MAY RESULT IN SPECIFICATION REVISIONS
 WHEN ORDERING PARTS PLEASE INCLUDE PART DESCRIPTION, ITEM NUMBER AND TYPE OF MATERIAL REQUIRED.