Blue-White Industries, Ltd.

Technical Data Sheet

F-451 Series - Rod guided Polysulfone Variable Area Meter

F-451006LHN F-451006LHNC

INLINE MOUNT

F-451006LHNE F-451006LHNEC

PANEL MOUNT

F-451001LHBSN

SOLARMETERS®

F-451 Features:

- **Polysulfone meter body resists high temperatures and pressures.**
- **316 SS, Teflon or Hastelloy rod guided float.**
- **Direct reading permanent scale.**
- **1" and 1-1/2" Inline units.**
- **1" M/NPT panel mount units.**
- **1" F/NPT and 1" sweat brass units.**
- **Not recommended for direct sunlight.**
- **Available OEM options: Private labeling, custom calibrations and custom materials.**

F-451 Specifications:

Max. Working Pressure: ... 150 psig (10.3 bar) @ 70° F (21° C)
Max. Fluid Temperature:
Models for 1" pipe:..... 212° F (100° C) @ 0 PSI
Models for 1-1/2" pipe: .. 130° F (54° C) @ 0 PSI
SolarMeters® :..... 240° F (115° C) @ 0 PSI
Full scale accuracy: ..... +/- 3%
Meter body material: ..... Polysulfone
Adapter material:
Models for 1" pipe:..... Polysulfone
Models for 1-1/2" pipe: .. PVC
SolarMeters® :..... Brass
Union Nuts: ..... Glass fiber reinforced Nylon
Guide Rod Material: ..... 316 SS or Hastelloy C-276
O-ring Material: ..... Viton
Options: EPDM
Max. pressure drop: ..... 2 psi
Approximate shipping wt.. 3 lb. (1.36 kg)

Standard models for liquid

					INLINE MODELS		PANEL MOUNT MODELS		INLINE SOLARMETERS®	
					NON-SHIELDED	SHIELDED	NON-SHIELDED	SHIELDED	FEMALE NPT	SWEAT
Pipe Size	Dual Scale Range GPM	LPM	Float Material	Guiderod Material	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
1"	.5 to 6	2 to 22	Teflon	316 SS	F-451006LHN	F-451006LHNC	F-451006LHNE	F-451006LHNEC	F-451006LHBPN	F-451006LHBSN
1-1/2"	.5 to 6	2 to 22	Teflon	316 SS	F-451006LHN-24	F-451006LHNC-24				
1"	1.0 to 10	4 to 40	316 SS	316 SS	F-451001LHN	F-451001LHNC	F-451001LHNE	F-451001LHNEC	F-451001LHBPN	F-451001LHBSN
1-1/2"	1.0 to 10	4 to 40	316 SS	316 SS	F-451001LHN-24	F-451001LHNC-24				
1"	2.0 to 20	7.5 to 75	316 SS	316 SS	F-451002LHN	F-451002LHNC	F-451002LHNE	F-451002LHNEC	F-451002LHBPN	F-451002LHBSN
1-1/2"	2.0 to 20	7.5 to 75	316 SS	316 SS	F-451002LHN-24	F-451002LHNC-24				
1"	3.0 to 30	12 to 115	316 SS	316 SS	F-451003LHN	F-451003LHNC	F-451003LHNE	F-451003LHNEC	F-451003LHBPN	F-451003LHBSN
1-1/2"	3.0 to 30	12 to 115	316 SS	316 SS	F-451003LHN-24	F-451003LHNC-24				
1"	4.0 to 40	15 to 155	316 SS	316 SS	F-451004LHN	F-451004LHNC	F-451004LHNE	F-451004LHNEC	F-451004LHBPN	F-451004LHBSN
1-1/2"	4.0 to 40	15 to 155	316 SS	316 SS	F-451004LHN-24	F-451004LHNC-24				

Standard models for Air

					INLINE MODELS		PANEL MOUNT MODELS		INLINE SOLARMETERS®	
					NON-SHIELDED	SHIELDED	NON-SHIELDED	SHIELDED	FEMALE NPT	SWEAT
Pipe Size	Dual Scale Range SCFM	M^3HR	Float Material	Guiderod Material	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
1"	4 to 40	7 to 70	316 SS	316 SS	F-451001GHN	F-451001GHNC	F-451001GHNE	F-451001GHNEC	F-451001GHBPN	F-451001GHBSN
1-1/2"	4 to 40	7 to 70	316 SS	316 SS	F-451001GHN-24	F-451001GHNC-24				
1"	8 to 80	14 to 140	316 SS	316 SS	F-451002GHN	F-451002GHNC	F-451002GHNE	F-451002GHNEC	F-451002GHBPN	F-451002GHBSN
1-1/2"	8 to 80	14 to 140	316 SS	316 SS	F-451002GHN-24	F-451002GHNC-24				

K-Series - Specially Equipped models for liquid

K-Series models are specially equipped for highly corrosive applications.

					INLINE MODELS		PANEL MOUNT MODELS	
					NON-SHIELDED	SHIELDED	NON-SHIELDED	SHIELDED
Pipe Size	Dual Scale Range GPM	LPM	Float Material	Guiderod Material	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
1"	.5 to 6	2 to 22	Teflon	Hastelloy	F-451006LHKN	F-451006LHKNC	F-451006LHKNE	F-451006LHKNEC
1-1/2"	.5 to 6	2 to 22	Teflon	Hastelloy	F-451006LHKN-24	F-451006LHKNC-24		
1"	1.0 to 10	4 to 40	Hastelloy	Hastelloy	F-451001LHKN	F-451001LHKNC	F-451001LHKNE	F-451001LHKNEC
1-1/2"	1.0 to 10	4 to 40	Hastelloy	Hastelloy	F-451001LHKN-24	F-451001LHKNC-24		
1"	2.0 to 20	7.5 to 75	Hastelloy	Hastelloy	F-451002LHKN	F-451002LHKNC	F-451002LHKNE	F-451002LHKNEC
1-1/2"	2.0 to 20	7.5 to 75	Hastelloy	Hastelloy	F-451002LHKN-24	F-451002LHKNC-24		
1"	3.0 to 30	12 to 115	Hastelloy	Hastelloy	F-451003LHKN	F-451003LHKNC	F-451003LHKNE	F-451003LHKNEC
1-1/2"	3.0 to 30	12 to 115	Hastelloy	Hastelloy	F-451003LHKN-24	F-451003LHKNC-24		
1"	4.0 to 40	15 to 155	Hastelloy	Hastelloy	F-451004LHKN	F-451004LHKNC	F-451004LHKNE	F-451004LHKNEC
1-1/2"	4.0 to 40	15 to 155	Hastelloy	Hastelloy	F-451004LHKN-24	F-451004LHKNC-24		

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Blue-White Industries, Ltd.

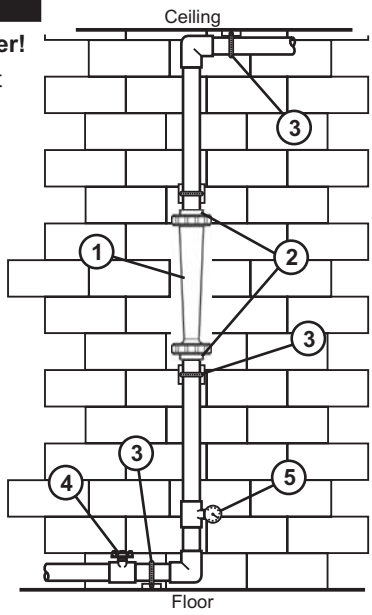
Installation Guideline

Caution: Follow these instructions to avoid failure.

Danger: Wear eye protection when installing or removing flowmeter.

1. Misalignment will damage the meter!

Flowmeter must be installed in an exact vertical plane to ensure accuracy. Be certain of proper plumbing alignments. Misalignment may cause the o-ring seals to leak. The meterbody material can be damaged by UV rays. **Do not install in direct sunlight.**

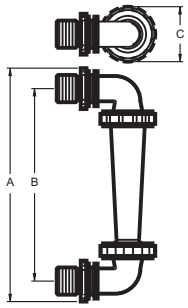


2. Pipe dope and glue will damage the meter!

Use only Teflon® tape on the threaded adapters. Polysulfone meter body and fittings cannot tolerate PVC Glue and/or pipe dope. Even fumes can cause severe damage. If you are installing your flowmeter to a glued pipe configuration, install the flowmeter *after* all glued fittings are dried and lines are purged of all fumes. **Never** hold the meter body with pliers or like tools. Union nuts should be hand tightened only. **DO NOT OVER-TIGHTEN!**

Dimensions
Inline Models

A	B
14-1/2"	3-5/16"



Dimensions
Panel Mount Models

A	B	C
17"	15"	3-5/16"

3. Vibration and heavy loads will damage the meter!

Wall, floor and ceiling mounts and supports must be carefully aligned with the meter body and sturdy enough to support the plumbing and prevent vibration. Never allow the flowmeter to support the weight of related piping.

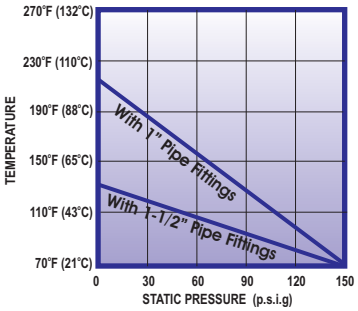
4. Solenoid valves will damage the meter!

Avoid a system that will impose a sudden burst of flow to the meter. Such a burst will cause the float to impact the float stop with destructive force. Solenoid valves, or other quick opening valves cannot be used unless meter is protected against sudden bursts of flow.

5. High pressures and temperatures will damage the meter!

The maximum acceptable temperature and pressure is interdependent. The maximum acceptable working pressure is dependant on the actual fluid temperature. The maximum acceptable fluid temperature is dependant on the actual working pressure. (see Temperature Vs. Pressure chart).

F-451 Standard Meters



F-451 SolarMeters®