

High Pressure - All-Metal Flowmeter and Switch



measuring
•
monitoring
•
analyzing

SM Series



- Accuracy: $\pm 5\%$ Full Scale
- Max. Pressure: 3600 / 5000 PSI
- Brass or Stainless Steel Versions
- Direct Reading Scales for Water or Air
- Small, Compact Design
- Easy to Install



KOBOLD companies worldwide:

ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECH REPUBLIC, EGYPT, FRANCE, GERMANY, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, ROMANIA, SINGAPORE, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, UNITED KINGDOM, USA, VIETNAM

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Description

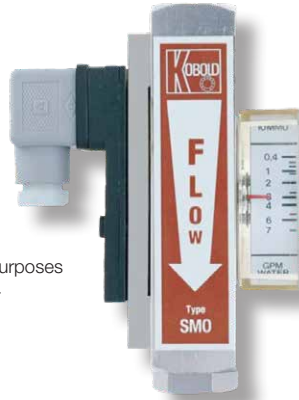
The SM Series flowmeters can be ordered with set point switches to actuate at a specific flow rate. The switches are mounted externally in a protective housing and are actuated by a magnet within the float. This same magnet can also be used to couple to an external flow indicator, allowing for reading of the flow rate without requiring visibility of the float. The SM offers all of the benefits inherent in an all-metal design, such as high pressure and shock resistance. They are designed to handle flow rates much larger than their stated maximum range without damage. At excessive flow rates, however, there is a larger pressure drop.

Applications

- Lubrication Circuits
- Paper-making Machines
- Machine Tools
- Glass-melting Tanks
- Cooling Circuits
- Welding Machines
- Induction Furnaces
- Pumps

Specifications for all SM Models

Accuracy:	± 5% of Full Scale
Media:	Liquids or Gases
Installation	
SMV:	Vertical, Flow Bottom to Top
SMO:	Vertical, Flow Top to Bottom
SMW:	Horizontal, Flow Left to Right or Flow Right to Left
SMF:	Vertical, Flow Bottom to Top
Measuring Principle	
SMV:	Float and Cylindrical Control Tube
SMO, SMW, SMF:	Float Return Spring and Cylindrical Control Tube
Mode of Operation:	Dependent on Flow (not Pressure)
Max. Temperature:	212 °F (PP Float 160 °F)
Max Pressure	
Brass Units:	3600 PSIG
Stainless Steel Units:	5000 PSIG
Units with PP Floats:	230 PSIG
Materials of Construction	
Body:	Ni-plated Brass or 304 Stainless Steel
Slotted Nozzle:	Ni-plated Brass or Stainless Steel
Float:	Ni-plated Brass, Hard Anodized Aluminum, Polypropylene, or SS
Spring:	301 Stainless Steel
Fittings:	Ni-plated Brass, or 304 Stainless Steel
Seals	
Brass Units:	NBR
SS Units:	FKM
Switch Housing:	Plastic
Pointer Indication:	Ni-plated Brass, Polycarbonate Lens (Magnetically Operated)
Reed Contact (cCSAus)	
N/O & SPDT:	max. 230 Vdc/0.26A/60W 60 Vdc/1A/60W max. 240 Vac/0.42A/100W 100 Vac/1A/100W
Ingress Protection:	IP54 (Side Indicator) IP65 (Electrical Switch)



Switch shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

Order Details - Flow Direction of Top to Bottom - SMO: (Example: **SMO-6105B**)

Range Water (GPM)	Stand. Conn. (NPT)	Pressure Drop Max. (PSI)	Float	Flow Switch 1 N/O Contact Water Scale		Flowmeter Water Scale		Flowmeter and Switch 1 N/O Contact Water Scale	
				Brass	Stainless Steel	Brass	Stainless Steel	Brass	Stainless Steel
0.04...0.6	1/4"	2.90	PP	SMO-5101	SMO-5201	SMO-6101	SMO-6201	SMO-7101	SMO-7201
0.2...1.2	1/4"	2.61	PP	SMO-5102	SMO-5202	SMO-6102	SMO-6202	SMO-7102	SMO-7202
0.2...1.1	1/4"	2.90	AL	SMO-5104	SMO-5204	SMO-6104	SMO-6204	SMO-7104	SMO-7204
0.04...0.6	1/4"	2.90	SS	SMO-5105	SMO-5205	SMO-6105	SMO-6205	SMO-7105	SMO-7205
0.1...1.0	1/4"	2.90	SS	SMO-5108	SMO-5208	SMO-6108	SMO-6208	SMO-7108	SMO-7208
0.2...2.0	1/4"	4.35	AL	SMO-5110	SMO-5210	SMO-6110	SMO-6210	SMO-7110	SMO-7210
0.1...1.8	1/4"	4.35	Brass*	SMO-5111	SMO-5211	SMO-6111	SMO-6211	SMO-7111	SMO-7211
0.1...2.2	1/4"	4.35	SS	SMO-5112	SMO-5212	SMO-6112	SMO-6212	SMO-7112	SMO-7212
0.2...6.0	1/4"	5.80	PP	SMO-5113	SMO-5213	SMO-6113	SMO-6213	SMO-7113	SMO-7213
0.2...6.0	1/4"	5.80	AL	SMO-5114	SMO-5214	SMO-6114	SMO-6214	SMO-7114	SMO-7214
0.4...7.0	1/4"	2.90	PP	SMO-5115	SMO-5215	SMO-6115	SMO-6215	SMO-7115	SMO-7215
0.1...5.0	1/4"	5.80	Brass*	SMO-5116	SMO-5216	SMO-6116	SMO-6216	SMO-7116	SMO-7216
0.1...6.0	1/4"	2.90	SS	SMO-5117	SMO-5217	SMO-6117	SMO-6217	SMO-7117	SMO-7217
0.4...7.0	1/4"	4.35	AL	SMO-5118	SMO-5218	SMO-6118	SMO-6218	SMO-7118	SMO-7218
1.0...9.0	1/4"	5.80	PP	SMO-5119	SMO-5219	SMO-6119	SMO-6219	SMO-7119	SMO-7219
1.0...9.0	1/4"	5.80	AL	SMO-5120	SMO-5220	SMO-6120	SMO-6220	SMO-7120	SMO-7220
0.4...7.0	1/2"	5.80	SS	SMO-5121	SMO-5221	SMO-6121	SMO-6221	SMO-7121	SMO-7221
2.0...8.0	1/2"	5.80	SS	SMO-5123	SMO-5223	SMO-6123	SMO-6223	SMO-7123	SMO-7223
0.5...18	3/4"	7.25	PP	SMO-5125	SMO-5225	SMO-6125	SMO-6225	SMO-7125	SMO-7225
1.0...20	3/4"	7.25	PP	SMO-5126	SMO-5226	SMO-6126	SMO-6226	SMO-7126	SMO-7226
0.5...18	3/4"	7.25	AL	SMO-5127	SMO-5227	SMO-6127	SMO-6227	SMO-7127	SMO-7227
1.0...20	3/4"	7.25	AL	SMO-5129	SMO-5229	SMO-6129	SMO-6229	SMO-7129	SMO-7229

****Items highlighted in gray are the high pressure design****

Options (Add Suffix to Model Number)	
Range Air (SCFM) Suffix ..L	Special Conn. (NPT) Suffix ..B
0.2...3.5	1/2"
0.4...4.0	1/2"
0.4...4.5	1/2"
0.2...3.0	1/2"
0.2...3.5	1/2"
1.0...8.0	1/2"
0.5...8.0	1/2"
1.5...8.0	1/2"
1.5...14	1/2"
2.0...14	1/2"
2.0...24	1/2"
2.0...14	1/2"
1.0...18	1/2"
1.0...24	1/2"
4.0...30	1/2"
2.0...30	1/2"
2.0...22	---
4.0...24	---
10...80	---
30...110	---
10...80	---
30...100	---

Additional Switch Options (Add Suffix to Model Number)	
Suffix ..C	1/2" NPT Conduit Electrical Connection (SMO-5xxx & SMO-7xxx Only)
Suffix ..R	Additional Contact (SMO-5xxx & SMO-7xxx Only)
Suffix ..U	SPDT Contact (SMO-5xxx & SMO-7xxx Only)

* With Stainless Steel Units the Float is also Stainless Steel



High Pressure - All-Metal Flowmeter and Switch SM Series



Switch shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

Order Details - Flow Direction of Bottom to Top - SMV: (Example: SMV-6114BL)

Range Water (GPM)	Stand. Conn. (NPT)	Pressure Drop Max. (PSI)	Float	Flow Switch 1 N/O Contact Water Scale		Flowmeter Water Scale		Flowmeter and Switch 1 N/O Contact Water Scale		Options (Add Suffix to Model Number)	
				Brass	Stainless Steel	Brass	Stainless Steel	Brass	Stainless Steel	Range Air (SCFM) Suffix ..L	Special Conn. (NPT) Suffix ..B
0.05...0.15	1/4"	0.29	PP	SMV-5101	SMV-5201	SMV-6101	SMV-6201	SMV-7101	SMV-7201	0.25...1.2	1/2"
0.075...0.25	1/4"	0.29	PP	SMV-5102	SMV-5202	SMV-6102	SMV-6202	SMV-7102	SMV-7202	0.2...1.1	1/2"
0.1...0.3	1/4"	0.58	SS	SMV-5105	SMV-5205	SMV-6105	SMV-6205	SMV-7105	SMV-7205	0.3...2.0	1/2"
0.09...0.5	1/4"	0.58	Brass*	SMV-5106	SMV-5206	SMV-6106	SMV-6206	SMV-7106	SMV-7206	0.4...2.0	1/2"
0.2...0.5	1/4"	0.29	SS	SMV-5108	SMV-5208	SMV-6108	SMV-6208	SMV-7108	SMV-7208	0.5...2.4	1/2"
0.1...0.7	1/4"	0.44	AL	SMV-5110	SMV-5210	SMV-6110	SMV-6210	SMV-7110	SMV-7210	0.5...3.0	1/2"
0.2...1.0	1/4"	0.58	SS	SMV-5112	SMV-5212	SMV-6112	SMV-6212	SMV-7112	SMV-7212	0.75...4.5	1/2"
0.15...1.3	1/4"	1.45	AL	SMV-5113	SMV-5213	SMV-6113	SMV-6213	SMV-7113	SMV-7213	0.4...5.5	1/2"
0.15...1.9	1/4"	1.45	AL	SMV-5114	SMV-5214	SMV-6114	SMV-6214	SMV-7114	SMV-7214	0.6...6.0	1/2"
0.2...2.0	1/4"	0.29	PP	SMV-5115	SMV-5215	SMV-6115	SMV-6215	SMV-7115	SMV-7215	1.0...8.0	1/2"
0.5...3.0	1/4"	0.58	PP	SMV-5119	SMV-5219	SMV-6119	SMV-6219	SMV-7119	SMV-7219	2.0...11	1/2"
0.75...3.5	1/4"	2.61	SS	SMV-5121	SMV-5221	SMV-6121	SMV-6221	SMV-7121	SMV-7221	2.0...14	1/2"
1.0...5.0	1/4"	0.87	SS	SMV-5123	SMV-5223	SMV-6123	SMV-6223	SMV-7123	SMV-7223	3.0...18	1/2"
0.5...8.0	3/4"	1.45	PP	SMV-5125	SMV-5225	SMV-6125	SMV-6225	SMV-7125	SMV-7225	2.5...28	---
0.5...9.0	3/4"	2.32	AL	SMV-5127	SMV-5227	SMV-6127	SMV-6227	SMV-7127	SMV-7227	2.5...35	---
2.0...12	3/4"	2.90	SS	SMV-5128	SMV-5228	SMV-6128	SMV-6228	SMV-7128	SMV-7228	3.4...40	---
1.0...14	3/4"	3.19	SS	SMV-5130	SMV-5230	SMV-6130	SMV-6230	SMV-7130	SMV-7230	5.0...45	---
4.0...18	1-1/4"	3.18	PP	SMV-5132	SMV-5232	SMV-6132	SMV-6232	SMV-7132	SMV-7232	5.0...60	---
4.0...24	1-1/4"	2.90	AL	SMV-5134	SMV-5234	SMV-6134	SMV-6234	SMV-7134	SMV-7234	5.0...70	---
4.0...30	1-1/4"	4.35	SS	SMV-5137	SMV-5237	SMV-6137	SMV-6237	SMV-7137	SMV-7237	5.0...110	---
4.0...40	1-1/4"	3.63	SS	SMV-5138	SMV-5238	SMV-6138	SMV-6238	SMV-7138	SMV-7238	5.0...130	---

****Items highlighted in gray are the high pressure design****

Additional Switch Options (Add Suffix to Model Number)	
Suffix ..C	1/2" NPT Conduit Electrical Connection (SMV-5xxx & SMV-7xxx Only)
Suffix ..R	Additional Contact (SMV-5xxx & SMV-7xxx Only)
Suffix ..U	SPDT Contact (SMV-5xxx & SMV-7xxx Only)

* With Stainless Steel Units the Float is also Stainless Steel



Switch shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

Order Details - Flow Direction of Right to Left or Left to Right - SMW: (Example: **SMW-7220C****)

Range Water (GPM)	Stand. Conn. (NPT)	Pressure Drop Max. (PSI)	Float	Flow Switch 1 N/O Contact Water Scale		Flowmeter Water Scale		Flowmeter and Switch 1 N/O Contact Water Scale		Options (Add Suffix to Model Number)	
				Brass	Stainless Steel	Brass	Stainless Steel	Brass	Stainless Steel	Range Air (SCFM) Suffix ..L	Special Conn. (NPT) Suffix ..B
0.06...0.8	1/4"	3.48	PP	SMW-5101	SMW-5201	SMW-6101	SMW-6201	SMW-7101	SMW-7201	0.6...4.0	1/2"
0.25...1.2	1/4"	3.19	PP	SMW-5102	SMW-5202	SMW-6102	SMW-6202	SMW-7102	SMW-7202	0.6...5.0	1/2"
0.06...0.8	1/4"	2.90	SS	SMW-5105	SMW-5205	SMW-6105	SMW-6205	SMW-7105	SMW-7205	0.4...4.0	1/2"
0.3...1.2	1/4"	3.19	Brass*	SMW-5107	SMW-5207	SMW-6107	SMW-6207	SMW-7107	SMW-7207	1.0...5.0	1/2"
0.25...1.2	1/4"	3.19	SS	SMW-5108	SMW-5208	SMW-6108	SMW-6208	SMW-7108	SMW-7208	0.8...4.5	1/2"
0.3...2.6	1/4"	4.35	PP	SMW-5109	SMW-5209	SMW-6109	SMW-6209	SMW-7109	SMW-7209	1.0...10	1/2"
0.25...2.6	1/4"	5.80	SS	SMW-5112	SMW-5212	SMW-6112	SMW-6212	SMW-7112	SMW-7212	2.0...10	1/2"
0.3...6.0	1/4"	7.25	PP	SMW-5113	SMW-5213	SMW-6113	SMW-6213	SMW-7113	SMW-7213	2.0...14	1/2"
0.3...6.0	1/4"	4.35	SS	SMW-5117	SMW-5217	SMW-6117	SMW-6217	SMW-7117	SMW-7217	3.0...24	1/2"
1.0...8.0	1/4"	4.35	AL	SMW-5118	SMW-5218	SMW-6118	SMW-6218	SMW-7118	SMW-7218	2.5...18	1/2"
2.0...10	1/4"	5.80	PP	SMW-5119	SMW-5219	SMW-6119	SMW-6219	SMW-7119	SMW-7219	2.0...30	1/2"
2.0...10	1/4"	5.80	AL	SMW-5120	SMW-5220	SMW-6120	SMW-6220	SMW-7120	SMW-7220	4.0...30	1/2"
1.0...8.0	1/2"	5.80	SS	SMW-5121	SMW-5221	SMW-6121	SMW-6221	SMW-7121	SMW-7221	4.0...24	---
2.0...10	1/2"	5.80	SS	SMW-5123	SMW-5223	SMW-6123	SMW-6223	SMW-7123	SMW-7223	4.0...30	---
0.5...20	3/4"	7.25	PP	SMW-5125	SMW-5225	SMW-6125	SMW-6225	SMW-7125	SMW-7225	10...80	---
8.0...31	3/4"	7.25	PP	SMW-5126	SMW-5226	SMW-6126	SMW-6226	SMW-7126	SMW-7226	30...120	---
1.0...20	3/4"	7.25	AL	SMW-5127	SMW-5227	SMW-6127	SMW-6227	SMW-7127	SMW-7227	10...80	---
8.0...34	3/4"	8.70	SS	SMW-5130	SMW-5230	SMW-6130	SMW-6230	SMW-7130	SMW-7230	30...130	---
8.0...22	3/4"	8.70	Brass*	SMW-5131	SMW-5231	SMW-6131	SMW-6231	SMW-7131	SMW-7231	10...90	---
8.0...34	3/4"	8.70	Brass*	SMW-5132	SMW-5232	SMW-6132	SMW-6232	SMW-7132	SMW-7232	30...130	---

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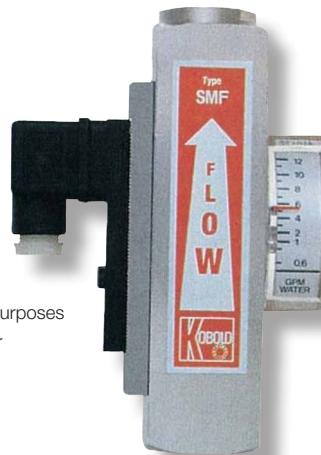
Additional Switch Options (Add Suffix to Model Number)	
Suffix ..C	1/2" NPT Conduit Electrical Connection (SMW-5xxx & SMW-7xxx Only)
Suffix ..R	Additional Contact (SMW-5xxx & SMW-7xxx Only)
Suffix ..U	SPDT Contact (SMW-5xxx & SMW-7xxx Only)

* With Stainless Steel Units the Float is also Stainless Steel

** Additional Information for Ordering: Please Specify Flow Direction as "L to R" or "R to L"



High Pressure - All-Metal Flowmeter and Switch SM Series



Switch shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

Order Details - Flow Direction of Bottom to Top - SMF: (Example: SMF-5123RU)

Range Water (GPM)	Stand. Conn. (NPT)	Pressure Drop Max. (PSI)	Float	Flow Switch 1 N/O Contact Water Scale		Flowmeter Water Scale		Flowmeter and Switch 1 N/O Contact Water Scale		Options (Add Suffix to Model Number)	
				Brass	Stainless Steel	Brass	Stainless Steel	Brass	Stainless Steel	Range Air (SCFM) Suffix "L"	Special Conn. (NPT) Suffix "B"
0.1...0.9	1/4"	2.32	PP	SMF-5101	SMF-5201	SMF-6101	SMF-6201	SMF-7101	SMF-7201	0.2...1.0	1/2"
0.3...1.3	1/4"	1.89	PP	SMF-5102	SMF-5202	SMF-6102	SMF-6202	SMF-7102	SMF-7202	0.8...5.0	1/2"
0.1...0.9	1/4"	2.32	SS	SMF-5105	SMF-5205	SMF-6105	SMF-6205	SMF-7105	SMF-7205	0.4...4.0	1/2"
0.3...1.3	1/4"	2.61	SS	SMF-5108	SMF-5208	SMF-6108	SMF-6208	SMF-7108	SMF-7208	1.0...5.0	1/2"
0.4...3.0	1/4"	2.61	PP	SMF-5109	SMF-5209	SMF-6109	SMF-6209	SMF-7109	SMF-7209	1.0...9.0	1/2"
0.4...3.0	1/4"	2.90	SS	SMF-5112	SMF-5212	SMF-6112	SMF-6212	SMF-7112	SMF-7212	2.5...10	1/2"
0.4...7.0	1/4"	4.35	PP	SMF-5113	SMF-5213	SMF-6113	SMF-6213	SMF-7113	SMF-7213	2.5...20	1/2"
1.0...8.0	1/4"	5.80	PP	SMF-5115	SMF-5215	SMF-6115	SMF-6215	SMF-7115	SMF-7215	4.0...28	1/2"
0.4...6.0	1/4"	5.80	Brass*	SMF-5116	SMF-5216	SMF-6116	SMF-6216	SMF-7116	SMF-7216	4.0...20	1/2"
0.4...7.0	1/4"	4.35	SS	SMF-5117	SMF-5217	SMF-6117	SMF-6217	SMF-7117	SMF-7217	2.5...22	1/2"
1.0...10	1/4"	2.90	PP	SMF-5119	SMF-5219	SMF-6119	SMF-6219	SMF-7119	SMF-7219	4.0...30	1/2"
1.0...11	1/4"	4.35	AL	SMF-5120	SMF-5220	SMF-6120	SMF-6220	SMF-7120	SMF-7220	4.0...34	1/2"
1.0...9.0	1/4"	4.35	SS	SMF-5121	SMF-5221	SMF-6121	SMF-6221	SMF-7121	SMF-7221	6.0...28	1/2"
2.0...12	1/4"	4.35	SS	SMF-5123	SMF-5223	SMF-6123	SMF-6223	SMF-7123	SMF-7223	7.0...35	1/2"
1.0...20	3/4"	5.80	PP	SMF-5125	SMF-5225	SMF-6125	SMF-6225	SMF-7125	SMF-7225	10...80	---
3.0...30	3/4"	5.80	PP	SMF-5126	SMF-5226	SMF-6126	SMF-6226	SMF-7126	SMF-7226	30...115	---
2.0...22	3/4"	7.25	SS	SMF-5128	SMF-5228	SMF-6128	SMF-6228	SMF-7128	SMF-7228	10...90	---

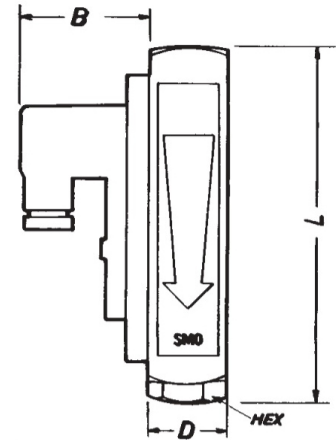
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Additional Switch Options (Add Suffix to Model Number)	
Suffix ..C	1/2" NPT Conduit Electrical Connection (SMF-5xxx & SMF-7xxx Only)
Suffix ..R	Additional Contact (SMF-5xxx & SMF-7xxx Only)
Suffix ..U	SPDT Contact (SMF-5xxx & SMF-7xxx Only)

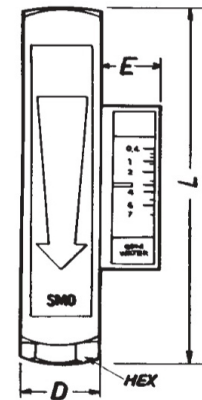
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Dimensions

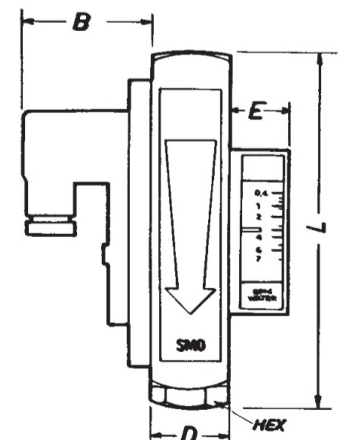
SMO-5...: Flow Switch with 1 N/O Contact, Flow Top to Bottom								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMO-5101 to SMO-5118	SMO-5201 to SMO-5218	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	2.20
SMO-5119 to SMO-5120	SMO-5219 to SMO-5220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	2.20
SMO-5121	SMO-5221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	2.20
SMO-5123	SMO-5223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	2.20
SMO-5125 to SMO-5129	SMO-5225 to SMO-5229	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	3.75
U.S. Patent Number 4,567,777								



SMO-6...: Flowmeter, Flow Top to Bottom								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMO-6101 to SMO-6118	SMO-6201 to SMO-6218	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	2.20
SMO-6119 to SMO-6120	SMO-6219 to SMO-6220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.20
SMO-6121	SMO-6221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	2.20
SMO-6123	SMO-6223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.20
SMO-6125 to SMO-6129	SMO-6225 to SMO-6229	0.63"	---	1.58" x 1.58"	5.91"	---	0.87"	3.75
U.S. Patent Number 4,567,777								



SMO-7...: Flowmeter and Switch with 1 N/O Contact, Flow Top to Bottom									
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B			
SMO-7101 to SMO-7118	SMO-7201 to SMO-7218	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	2.20
SMO-7119 to SMO-7120	SMO-7219 to SMO-7220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.20
SMO-7121	SMO-7221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	2.20
SMO-7123	SMO-7223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.20
SMO-7125 to SMO-7129	SMO-7225 to SMO-7229	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	0.87"	3.75
U.S. Patent Number 4,567,777									

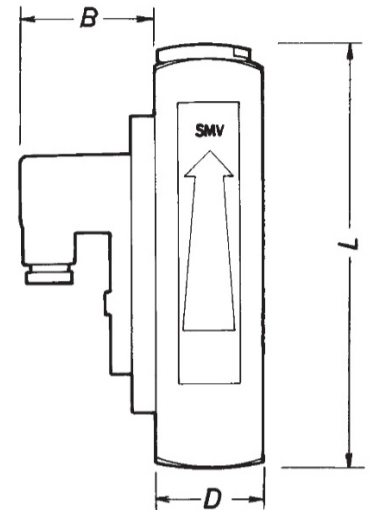


Note: Switches shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

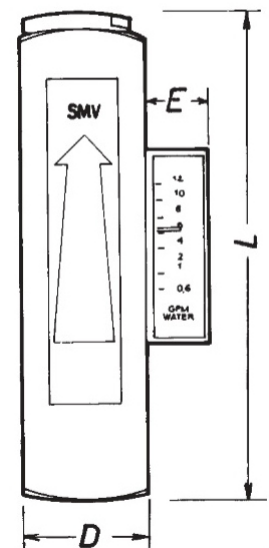


High Pressure - All-Metal Flowmeter and Switch SM Series

SMV-5...: Flow Switch with 1 N/O Contact, Flow Bottom to Top								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMV-5101 to SMV-5117	SMV-5201 to SMV-5217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	1.98
SMV-5119	SMV-5219	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	2.20
SMV-5121	SMV-5221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	1.98
SMV-5123	SMV-5223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	2.02
SMV-5125 to SMV-5130	SMV-5225 to SMV-5230	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	3.75
SMV-5132	SMV-5232	0.79"	---	1.97" x 1.97"	6.50"	---	2.09"	6.39
SMV-5134	SMV-5234	0.79"	---	1.97" x 1.97"	6.50"	---	2.09"	6.39
SMV-5136	SMV-5236	0.79"	---	1.97" x 1.97"	7.09"	---	2.09"	6.61
SMV-5137	SMV-5237	0.79"	---	1.97" x 1.97"	6.50"	---	2.09"	6.39
SMV-5138	SMV-5238	0.79"	---	1.97" x 1.97"	7.09"	---	2.09"	6.61
U.S. Patent Number 4,567,777								

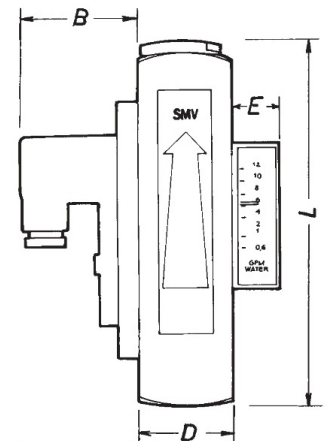


SMV-6...: Flowmeter, Flow Bottom to Top								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMV-6101 to SMV-6117	SMV-6201 to SMV-6217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	1.98
SMV-6119	SMV-6219	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.20
SMV-6121	SMV-6221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	1.98
SMV-6123	SMV-6223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.02
SMV-6125 to SMV-6130	SMV-6225 to SMV-6230	0.63"	---	1.58" x 1.58"	5.91"	---	0.87"	3.75
SMV-6132	SMV-6232	0.79"	---	1.97" x 1.97"	6.50"	---	0.87"	6.39
SMV-6134	SMV-6234	0.79"	---	1.97" x 1.97"	6.50"	---	0.87"	6.39
SMV-6136	SMV-6236	0.79"	---	1.97" x 1.97"	7.09"	---	0.87"	6.61
SMV-6137	SMV-6237	0.79"	---	1.97" x 1.97"	6.50"	---	0.87"	6.39
SMV-6138	SMV-6238	0.79"	---	1.97" x 1.97"	7.09"	---	0.87"	6.61
U.S. Patent Number 4,567,777								

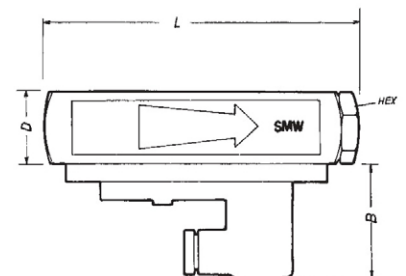


Note: Switches shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

SMV-7...: Flowmeter and Switch with 1 N/O Contact, Flow Bottom to Top									
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B			
SMV-7101 to SMV-7117	SMV-7201 to SMV-7217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMV-7119	SMV-7219	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.20
SMV-7121	SMV-7221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMV-7123	SMV-7223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMV-7125 to SMV-7130	SMV-7225 to SMV-7230	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	0.87"	3.75
SMV-7132	SMV-7232	0.79"	---	1.97" x 1.97"	6.50"	---	2.09"	0.87"	6.39
SMV-7134	SMV-7234	0.79"	---	1.97" x 1.97"	6.50"	---	2.09"	0.87"	6.39
SMV-7136	SMV-7236	0.79"	---	1.97" x 1.97"	7.09"	---	2.09"	0.87"	6.61
SMV-7137	SMV-7237	0.79"	---	1.97" x 1.97"	6.50"	---	2.09"	0.87"	6.39
SMV-7138	SMV-7238	0.79"	---	1.97" x 1.97"	7.09"	---	2.09"	0.87"	6.61
U.S. Patent Number 4,567,777									



SMW-5...: Flow Switch with 1 N/O Contact, Flow Left to Right or Right to Left								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMW-5101 to SMW-5117	SMW-5201 to SMW-5217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	1.98
SMW-5119 to SMW-5120	SMW-5219 to SMW-5220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	2.02
SMW-5121	SMW-5221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	1.98
SMW-5123	SMW-5223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	2.02
SMW-5125 to SMW-5132	SMW-5225 to SMW-5232	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	3.75
U.S. Patent Number 4,567,777								

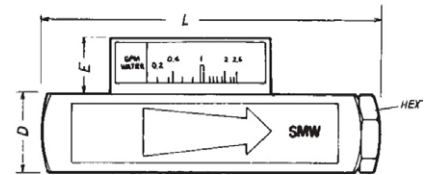


Note: Switches shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

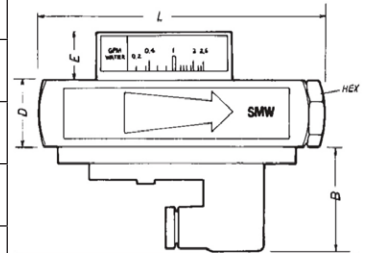


High Pressure - All-Metal Flowmeter and Switch SM Series

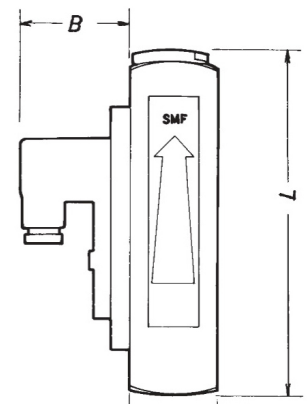
SMW-6...: Flowmeter, Flow Left to Right or Right to Left								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMW-6101 to SMW-6117	SMW-6201 to SMW-6217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	1.98
SMW-6119 to SMW-6120	SMW-6219 to SMW-6220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.02
SMW-6121	SMW-6221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	1.98
SMW-6123	SMW-6223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.02
SMW-6125 to SMW-6132	SMW-6225 to SMW-6232	0.63"	---	1.58" x 1.58"	5.91"	---	0.87"	3.75
U.S. Patent Number 4,567,777								



SMW-7...: Flowmeter and Switch with 1 N/O Contact, Flow Left to Right or Right to Left									
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B			
SMW-7101 to SMW-7117	SMW-7201 to SMW-7217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMW-7119 to SMW-7120	SMW-7219 to SMW-7220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMW-7121	SMW-7221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMW-7123	SMW-7223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMW-7125 to SMW-7132	SMW-7225 to SMW-7232	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	0.87"	3.75
U.S. Patent Number 4,567,777									

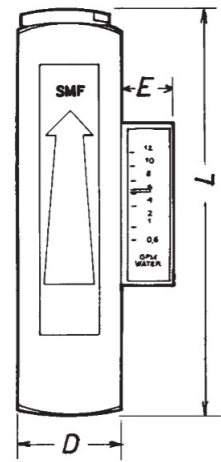


SMF-5...: Flow Switch with 1 N/O Contact, Flow Left to Right or Right to Left									
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B			
SMF-5101 to SMF-5117	SMF-5201 to SMF-5217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMF-5119 to SMF-5120	SMF-5219 to SMF-5220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMF-5121	SMF-5221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMF-5123	SMF-5223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMF-5125 to SMF-5128	SMF-5225 to SMF-5228	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	0.87"	3.75
U.S. Patent Number 4,567,777									

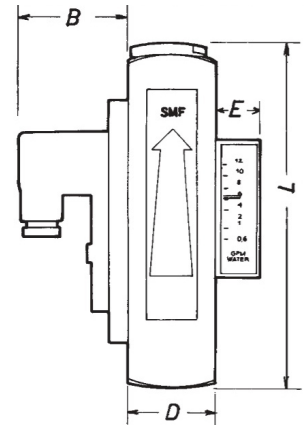


Note: Switches shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator

SMF-6... Flowmeter, Flow Left to Right or Right to Left								
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B		
SMF-6101 to SMF-6117	SMF-6201 to SMF-6217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	1.98
SMF-6119 to SMF-6120	SMF-6219 to SMF-6220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.02
SMF-6121	SMF-6221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	0.87"	1.98
SMF-6123	SMF-6223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	0.87"	2.02
SMF-6125 to SMF-6128	SMF-6225 to SMF-6228	0.63"	---	1.58" x 1.58"	5.91"	---	0.87"	3.75
U.S. Patent Number 4,567,777								



SMF-7... Flowmeter and Switch with 1 N/O Contact, Flow Left to Right or Right to Left									
Model (Brass)	Model (SS)	Depth of Thread		"D"	"L"		"B"	"E"	Weight (lbs)
		Standard	Suffix ..B		Standard	Suffix ..B			
SMF-7101 to SMF-7117	SMF-7201 to SMF-7217	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMF-7119 to SMF-7120	SMF-7219 to SMF-7220	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMF-7121	SMF-7221	0.47"	0.55"	1.18" x 1.18"	5.20"	5.35"	2.09"	0.87"	1.98
SMF-7123	SMF-7223	0.47"	0.55"	1.18" x 1.18"	5.91"	5.91"	2.09"	0.87"	2.02
SMF-7125 to SMF-7128	SMF-7225 to SMF-7228	0.63"	---	1.58" x 1.58"	5.91"	---	2.09"	0.87"	3.75
U.S. Patent Number 4,567,777									



Note: Switches shown 180° opposite the indicator for display purposes only. Standard switch location is 90° from the indicator