

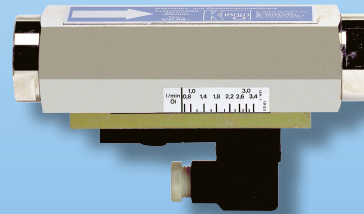
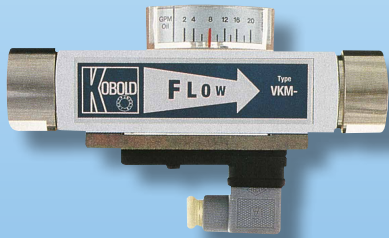
# Viscosity-Compensated Flow Meters and Switches

for Viscous Liquids

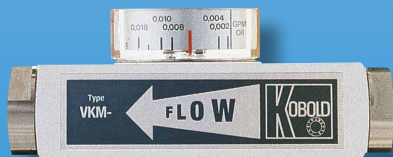


measuring  
•  
monitoring  
•  
analyzing

VKM



- $\pm 4\%$  Full Scale Accuracy
- Viscosity Compensation up to  $\Delta v=540$  cSt
- Density Compensation up to  $\Delta p=30$  lb/ft<sup>3</sup>
- Universal Mounting
- Direct Reading Scales for Oil
- Max. Pressure 3600 PSI Brass  
5000 PSI Stainless Steel
- Housing Materials in Brass  
or Stainless Steel
- 4...20 mA Output and/or  
Digital Display Options



Order from: **C A Briggs Company**  
622 Mary Street; Suite 101; Warminster, PA 18974  
Phone: 267-673-8117 - Fax: 267-673-8118  
[Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)

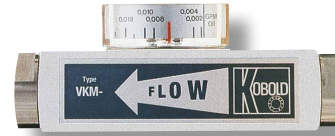
KOBOLD Instruments, Inc.  
1801 Parkway View Drive  
Pittsburgh, PA 15205



## Viscosity Compensated Flowmeter and Switch Model VKM

### Description

KOBOLD VKM flowmeters and switches are unique offerings for high viscosity media. Using KOBOLD's patented viscosity compensation system, the VKM is insensitive to viscosity and density changes during operation. This patented and exceptional technology offers an extremely versatile instrument ready for almost any application imaginable.



### Specifications

**Accuracy:** ± 4% full scale (viscosity of 105 cSt)  
**Viscosity Range:** 1...540 cSt  
**Viscosity-Compensated:** Up to  $\Delta v=540$  cSt with same scale, ± 5% additional variation  
**Density-Compensated:** Up to  $\Delta p=30$  lb/ft<sup>3</sup> with same scale, ± 5% additional variation  
**Flow Media:** e.g. clean mineral oil, water and other compatible liquids  
**Mounting:** Universal, without recalibration  
**Measuring Principle:** Float with orifice, spring-loaded  
**Max. Temperature:** 212 °F (176 °F for VKM-0xxx & VKM-6xxx w/C34P)  
**Max. Pressure:** 3600 PSIG for Brass units  
 5000 PSIG for SS units  
**Housing:** Nickel-plated Brass or SS 304  
**Fittings:** Nickel-plated Brass or SS 304  
**Float:** Brass or SS 304  
**Orifice:** SS 301  
**Spring:** SS 301  
**Seals:** NBR (Brass units), FKM (SS units)  
**Electr. Switch Housing:** Plastic

### Magnetic Pointer Indicator:

Nickel-plated Brass, Polycarbonate

### Ingress Protection:

IP54 for Side Indicator  
 IP65 for Electrical Contact

### Reed Contact:

Standard: N/O, Optional: SPDT  
 Max. 230 VDC/0.26A/60W,  
 60 VDC/1A/60W,  
 Max. 240 VAC/0.42A/100W,  
 100 VAC/1A/100W  
 cCSAus Approved

### Compact Electronic Option C34P\*\*

**Power Requirement:** 24 V<sub>DC</sub> ±20%  
**Display:** 3 digit LED  
**Output:** 4-20 mA, 3-wire, RLoop < 500 ohms  
**Switch:** PNP, 300 mA Max.  
**Electrical Connection:** M-12 Micro-DC plug, 5-Pin  
**Hysteresis:** Approx. 3.5 mm Float Movement  
**Protection:** IP65

**\*\*Note:** Max flow range indicated is reduced by 10% for all ranges when using model VKM-0xxx series or the optional ..C34P electronic.

### Order Details (Example: VKM-7112 U with order note; flow direction horizontal, left to right)

Range Oil** (GPM)	Stand. Conn. (NPT)	Press. Drop Max. (PSI)	4-20 mA Transmitter Oil Scale**		Flow Switch 1 N/O Contact, Oil Scale		Flowmeter Oil Scale		Flowmeter and Scale 1 N/O Contact, Oil Scale		Options	
			Brass	SS	Brass	SS	Brass	SS	Brass	SS	Opt.Conn. (NPT) Suffix "B"	Special Contact
0.03...0.12	1/4"	11.6	VKM-0102	VKM-0202	VKM-5102	VKM-5202	VKM-6102	VKM-6202	VKM-7102	VKM-7202	-	..C34P* Compact Electronic Display, fo VKM-6xxx Series Only
0.05...0.3	1/4"	16.0	VKM-0103	VKM-0203	VKM-5103	VKM-5203	VKM-6103	VKM-6203	VKM-7103	VKM-7203	1/2"	
0.15...0.5	1/4"	17.4	VKM-0104	VKM-0204	VKM-5104	VKM-5204	VKM-6104	VKM-6204	VKM-7104	VKM-7204	1/2"	
0.2...0.9	1/4"	13.1	VKM-0105	VKM-0205	VKM-5105	VKM-5205	VKM-6105	VKM-6205	VKM-7105	VKM-7205	1/2"	
0.5...2.5	1/4"	11.6	VKM-0106	VKM-0206	VKM-5106	VKM-5206	VKM-6106	VKM-6206	VKM-7106	VKM-7206	1/2"	..R** = Additional Contact
1.0...3.5	1/2"	16.0	VKM-0107	VKM-0207	VKM-5107	VKM-5207	VKM-6107	VKM-6207	VKM-7107	VKM-7207	3/4"	..U = SPDT Contact
1.5...5.0	1/2"	16.0	VKM-0108	VKM-0208	VKM-5108	VKM-5208	VKM-6108	VKM-6208	VKM-7108	VKM-7208	3/4"	..V = Special Inlet Fitting for BVB Manifold Mount
1.0...11	3/4"	5.8	VKM-0109	VKM-0209	VKM-5109	VKM-5209	VKM-6109	VKM-6209	VKM-7109	VKM-7209	1"	
1.0...14	3/4"	16.0	VKM-0110	VKM-0210	VKM-5110	VKM-5210	VKM-6110	VKM-6210	VKM-7110	VKM-7210	1"	
2.0...18	3/4"	16.0	VKM-0111	VKM-0211	VKM-5111	VKM-5211	VKM-6111	VKM-6211	VKM-7111	VKM-7211	1"	
2.0...20	1"	16.0	VKM-0112	VKM-0212	VKM-5112	VKM-5212	VKM-6112	VKM-6212	VKM-7112	VKM-7212	-	

**Accessory:** P/N 807.007 = mating 5-Pin Micro-DC Plug w/ 6 Ft. Cable for Option C34P

\* Max flow range indicated is reduced by 10% for all ranges when using model VKM-0xxx series or the optional ..C34P electronic

\*\* Option "R" is not available with option "V".

Note: Remember to always state your flow direction on your order

**Order from: C A Briggs Company;** 622 Mary Street, Suite 101 - Warminster, PA 18974  
 Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: [Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)

No responsibility taken for errors;  
 subject to change without prior notice.

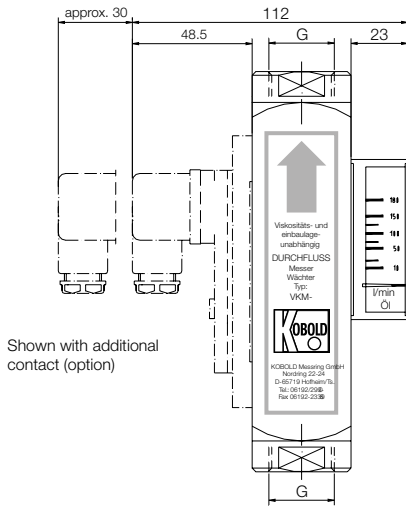
Dimensions

Model	Square (inch)	Length L Connection (inch)	AF Connection (inch)	Weight* (lb)
VKM-..02	1.58 x 1.58	6.38	1.42	3.75
VKM-..03	1.58 x 1.58	6.38	1.42	3.75
VKM-..04	1.58 x 1.58	6.38	1.42	3.75
VKM-..05	1.58 x 1.58	6.38	1.42	3.75
VKM-..06	1.58 x 1.58	6.38	1.42	3.75
VKM-..07	1.58 x 1.58	6.38	1.42	3.75
VKM-..08	1.58 x 1.58	6.38	1.42	3.75
VKM-..09	1.58 x 1.58	6.38 (7.35)**	1.42 (1.62)**	3.75
VKM-..10	1.58 x 1.58	6.38 (7.35)**	1.42 (1.62)**	3.75
VKM-..11	1.58 x 1.58	6.38 (7.35)**	1.42 (1.62)**	3.75
VKM-..12	1.58 x 1.58	7.35	1.62	3.75

\* Weight valid for: VKM-5..., VKM-6...  
for model VKM-7... add 0.22 lb  
for model VKM-6...C34P add 0.44 lb

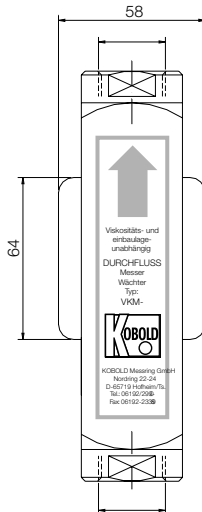
\*\* with suffix B

VKM-5..., VKM-6..., VKM-7..

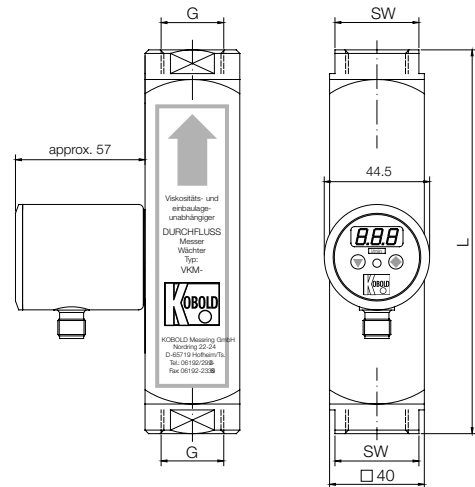


Shown with additional contact (option)

VKM-0...



VKM-6...C34P



Dimensions in mm