

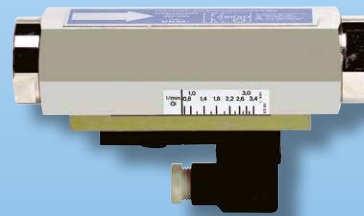
Viscosity-Compensated Flow Meters and Switches

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/ft³
- 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



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

KOBOLD Instruments, Inc.
1801 Parkway View Drive
Pittsburgh, PA 15205
Main Office:
1.800.998.1020
1.412.788.4890
info@koboldusa.com
www.koboldusa.com



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 $\Delta \rho=30$ lb/ft³ 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
Contacts: Max. 230 VDC/0.26A/60W,
 60 VDC/1A/60W,
 Max. 240 VAC/0.42A/100W,
 100 VAC/1A/100W

Compact Electronic Option C34P**
Power Requirement: 24 V_{DC} ±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, 4-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	-	..U = SPDT Contact ..R = Additional Contact ..C34P** = Compact Electronic Display, for 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"	
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"	
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"	
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

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

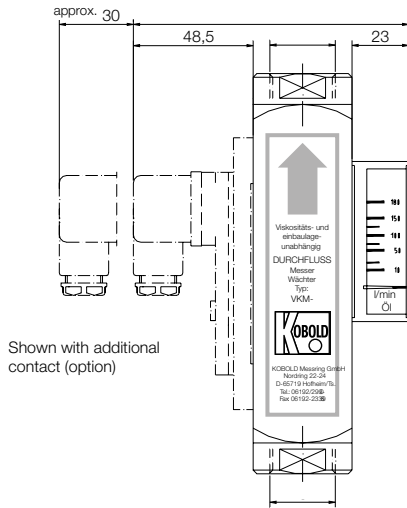
Dimensions

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

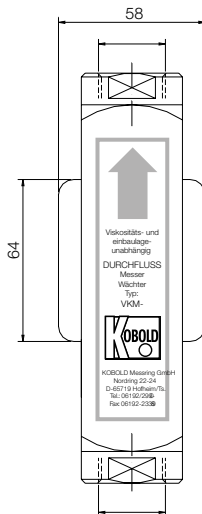
** with suffix B

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

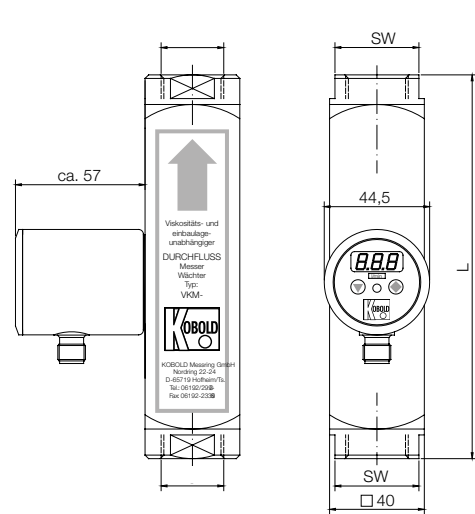


Shown with additional contact (option)

VKM-0...



VKM-6...C34P



Dimensions in mm