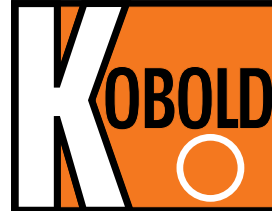




Plastic Flow Meters and Switches

for Liquids and Gases



measuring
•
monitoring
•
analysing



- Flow rates:
Water 1.5-11 to 100-1000 L/h
Air 0.15-0.45 to 20-105 m³_N/h
- Accuracy: category 4
- p_{max} PN 10, t_{max} 140 °C
- Connection:
glue-in connection,
G 1/4, G 1/2, G 3/4, G 1
- Material:
Trogamide, polysulfone, PVDF

KOBOLD offices exist in the following countries:

**ARGENTINA, AUSTRIA, BELGIUM, BRAZIL, CANADA,
CHINA, FRANCE, GREAT BRITAIN, ITALY, NETHERLANDS,
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Model:
KSK



Function and design

Kobold plastic flow meters and switches model KSK are based on the well known suspended float principle. They are used for measuring and monitoring flows in closed pipes.

The media flows, from below, through a conical plastic measuring tube. This raises the float and the flow rate can be read off against the scale. The instruments can be fitted with bistable switches.

The use of the high-quality material PVDF (model KSK 3...) means that this type is very suited for service with corrosive media

Special advantages

- Shock resistant and corrosion-resistant
- May be inserted/removed radially
- Special scales available
- Short installation length
- Plastic float and fitting generally made of PVDF

Technical Details

Materials

Measuring tube:	Trogamide T (KSK 1..) or polysulfone (KSK 2..) or PVDF (KSK 3..) translucent
Float:	PVDF
O-rings:	EPDM (KSK-1../KSK-2..) Viton (KSK-3..)
Max. operating pressure:	PN 10
Max. operating temperature:	KSK 1... max. 60°C KSK 2... max. 100°C (60°C with PVC screwed fitting.) KSK 3... max. 140°C
Accuracy class:	4 (accord. to VDE / VDI 3513, sheet 2)

Connection (standard)

KSK 1.. and KSK 2..:	PVC glue-in connection
KSK 3...:	Welding sleeve

Connection (optional) for KSK 1... and KSK 2... only

KSK- ..080../..150../..200..:	Brass or stainless steel union nut with G 1/2 female or male or G 3/4 male
KSK- ..300../..500../..999..:	PVC union nut with G 1/2; G 3/4, G 1 internal thread or G1 female cast iron
KSK- ..015../..025../..050....100..:	PVC G 1/4 IG

Contacts (optional)

The flow meter can be fitted with either reed contacts or electronic contacts.

Reed contacts (bistable)

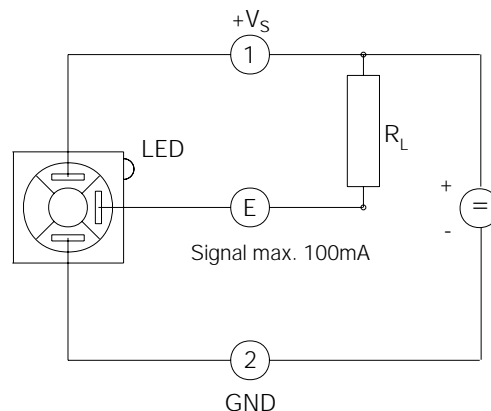
Switching voltage *:	max. 230 V
Breaking capacity *:	max. 10 W / 12 VA
Switching current *:	max. 0.5 A
Contact resistance:	< 200 m Ω
Insulation resistance:	> 10 ¹¹ Ω
Allowed ambient temperature:	0-55 °C
Protection:	IP 65
Contact hysteresis:	approximately 3-12 mm

**Short-time overshoot is not allowed.
The use of a contact protection relay is therefore recommended (see Accessories Z2 brochure).*

Electronic contacts (bistable)

The contact operates electronically with no mechanical parts that are subject to wear and tear.

Operating voltage:	9-24 V _{DC}
Operating current:	max. 100 mA
Ambient temperature:	0-55 °C
Protection:	IP 65
Contact hysteresis:	< 6 mm
Dimensions:	33 x 18 x 40 mm
Weight with plug:	16 g
Output signal (with LED at the top)	
Float above contact across PIN 1 and PIN E:	0 V
Float below contact across PIN 1 and PIN E:	9-24 V LED out





Medium air

The following scales are available for air

Model	m ³ /h (0 bar gauge)	m ³ _N /h (1 bar gauge)	m ³ _N /h (2 bar gauge)	m ³ _N /h (3 bar gauge)	m ³ _N /h (4 bar gauge)	m ³ _N /h (5 bar gauge)	m ³ _N /h (6 bar gauge)	m ³ _N /h (7 bar gauge)	m ³ _N /h (8 bar gauge)	m ³ _N /h (9 bar gauge)	m ³ _N /h (10 bar gauge)
KSK-..15...	0.15...0.45	0.2...0.6	0.25...0.75	0.25...0.9	0.3...1.0	0.35...1.1	0.35...1.2	0.4...1.3	0.4...1.35	0.4...1.4	0.45...1.5
KSK-..25...	0.2...1.1	0.25...1.5	0.3...1.9	0.3...2.2	0.4...2.45	0.5...2.75	0.5...2.9	0.5...3.1	0.6...3.3	0.6...3.5	0.6...3.6
KSK-..50...	0.4...2.0	0.5...2.8	0.6...3.4	0.7...4.0	0.8...4.5	0.9...5.0	1.0...5.5	1.0...5.75	1.0...6.0	1.25...6.5	1.5...7.0
KSK-..80...	0.5...3.0	0.75...4.25	0.75...5.5	1.0...6.5	1.0...7.0	1.0...8.0	1.25...8.5	1.5...9.0	1.5...9.5	1.5...10.0	1.5...10.5
KSK-..100...	0.75...3.75	1.0...5.0	1.25...6.0	1.5...7.0	1.75...8.0	2.0...9.0	2.0...9.5	2.0...10.0	2.5...10.5	2.5...11.0	2.5...12.0
KSK-..150...	1.0...6.0	1.5...7.5	2.0...9.0	2.0...11.0	2.5...13.0	2.5...14.0	3.0...15.0	3.0...16.0	3.0...17.0	3.5...18.5	3.5...19.5
KSK-..200...	1.5...7.5	2.5...10.0	3.0...13.0	3.5...14.5	4.0...17.0	4.5...19.0	5.0...20.0	5.0...22.5	6.0...23.0	6.0...24.0	6.0...25.0
KSK-..300...	1.0...10.0	1.5...14.0	2.0...17.0	2.5...20.0	3.0...23.0	3.0...24.0	3.5...25.0	3.5...27.5	3.5...30.0	4.0...31.0	4.0...32
KSK-..500...	2.0...17.0	3.0...24.0	4.0...28.0	4.0...32.0	5.0...36.0	5.0...40.0	6.0...42.0	6.0...45.0	6.0...48.0	7.0...50.0	7.0...55.0
KSK-..999...	6.0...31.0	8.0...44.0	10.0...54.0	12.0...62.0	12.0...70.0	15.0...75.0	15.0...80.0	15.0...90.0	15.0...95.0	15.0...100.0	20.0...105.0

Order Details (example: KSK-1015 H K16 00)

Measuring range water L/h	Order no. Trogamide	Order no. Polysulfone	Order no. PVDF*	Scale measuring range see table	Thread fitting option	Contact option
1.5-11	KSK-1015...	KSK-2015...	KSK-3015...*	Standard	K16=PVC-glug-in connection Ø 16 V16=PVDF-Welding sleeve Ø 16* P08=PVC G 1/4 IG	00= without contact SO= 1 N/O contact SS= 2 N/O contacts C0= 1 NC contact CC= 2NC contacts EO= 1 electr. cont. EE= 2 electr. cont.
2.5-30	KSK-1025...	KSK-2025...	KSK-3025...*	H= L/h water		
5-50	KSK-1050...	KSK-2050...	KSK-3050...*	Special scale		
10-100	KSK-1100...	KSK-2100...	KSK-3100...*	A=air: 0 bar gauge B=air: 1 bar gauge C=air: 2 bar gauge D=air: 3 bar gauge E=air: 4 bar gauge F=air: 5 bar gauge		
8-80 20-150 30-200	KSK-1080... KSK-1150... KSK-1200...	KSK-2080... KSK-2150... KSK-2200...	KSK-3080...* KSK-3150...* KSK-3200...*	G=air: 6 bar gauge I=air: 7 bar gauge K=air: 8 bar gauge L=air: 9 bar gauge M=air: 10 bar g. Y=other	K20=PVC-glug-in connection Ø 20 V20=PVDF-Welding sleeve Ø 20* IG1=brass G 1/2 female AG1=brass G 1/2 male AG3=brass G 3/4 male IG2=stainless steel G 1/2 female AG2=stainless steel G 1/2 male AG4=stainless steel G 3/4 male	00= without contact SO= 1 N/O contact SS= 2 N/O contacts C0= 1 NC contact CC= 2NC contacts EO= 1 electr. cont. EE= 2 electr. cont.
30-300 50-500 100-1000	KSK-1300... KSK-1500... KSK-1999...	KSK-2300... KSK-2500... KSK-2999...	KSK-3300...* KSK-3500...* KSK-3999...*			

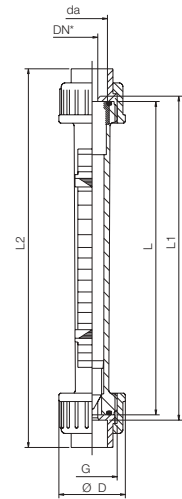
*KSK-3... for PVDF-Welding sleeve and without air scale only



Dimensions (with standard glue-in connection PVC, PVC G 1/4 IG or PVDF welding sleeve)

Model	DN	da	L	L1	L2	D	Male**	Pressure loss mm WC*
KSK-..015..	10	16	165	171	199	35	R 3/4	46
KSK-..025..	10	16	165	171	199	35	R 3/4	46
KSK-..050..	10	16	165	171	199	35	R 3/4	46
KSK-..080..	15	20	185	191	223	43	R 1	45
KSK-..100..	10	16	165	171	199	35	R 3/4	46
KSK-..150..	15	20	185	191	223	43	R 1	45
KSK-..200..	15	20	185	191	223	43	R 1	45
KSK-..300..	25	32	200	206	250	60	R 1 1/2	83
KSK-..500..	25	32	200	206	250	60	R 1 1/2	83
KSK-..990..	25	32	200	206	250	60	R 1 1/2	83

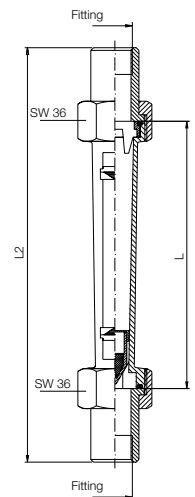
*Medium water **without auxiliary thread fitting



Dimensions (with special thread fittings in brass or stainless steel) female or male

Model	L	L2	Special thread fitting			Male**	Pressure loss mm WC*
			Female	Male	SW		
KSK-..015..	165	-	-	-	-	R 3/4	46
KSK-..025..	165	-	-	-	-	R 3/4	46
KSK-..050..	165	-	-	-	-	R 3/4	46
KSK-..080..	185	245	G 1/2	G 1/2 or G 3/4	36	R 1	45
KSK-..100..	165	-	-	-	-	R 3/4	46
KSK-..150..	185	245	G 1/2	G 1/2 or G 3/4	36	R 1	45
KSK-..200..	185	245	G 1/2	G 1/2 or G 3/4	36	R 1	45
KSK-..300..	200	-	-	-	-	R 1 1/2	83
KSK-..500..	200	-	-	-	-	R 1 1/2	83
KSK-..990..	200	-	-	-	-	R 1 1/2	83

*Medium water **without auxiliary thread fitting



Dimensions (with special thread fittings made of PVC or Cast iron) female

Model	L	L2	Special thread fitting	SW / D	Male**	Press. loss
						mm WC*
KSK-..300..	200	255	Cast iron G 1 female	SW 55	R 1 1/2	83
KSK-..300..	200	295	PVC, G 1/2 female	Ø 60	R 1 1/2	83
KSK-..300..	200	303	PVC, G 3/4 female	Ø 60	R 1 1/2	83
KSK-..300..	200	346	PVC, G 1 female	Ø 60	R 1 1/2	83
KSK-..500..	200	255	Cast iron G 1 female	SW 55	R 1 1/2	83
KSK-..500..	200	295	PVC, G 1/2 female	Ø 60	R 1 1/2	83
KSK-..500..	200	303	PVC, G 3/4 female	Ø 60	R 1 1/2	83
KSK-..500..	200	346	PVC, G 1 female	Ø 60	R 1 1/2	83
KSK-..999..	200	255	Cast iron G 1 female	SW 55	R 1 1/2	83
KSK-..999..	200	295	PVC, G 1/2 female	Ø 60	R 1 1/2	83
KSK-..999..	200	303	PVC, G 3/4 female	Ø 60	R 1 1/2	83
KSK-..999..	200	346	PVC, G 1 female	Ø 60	R 1 1/2	83

*Medium water **without auxiliary thread fitting

