

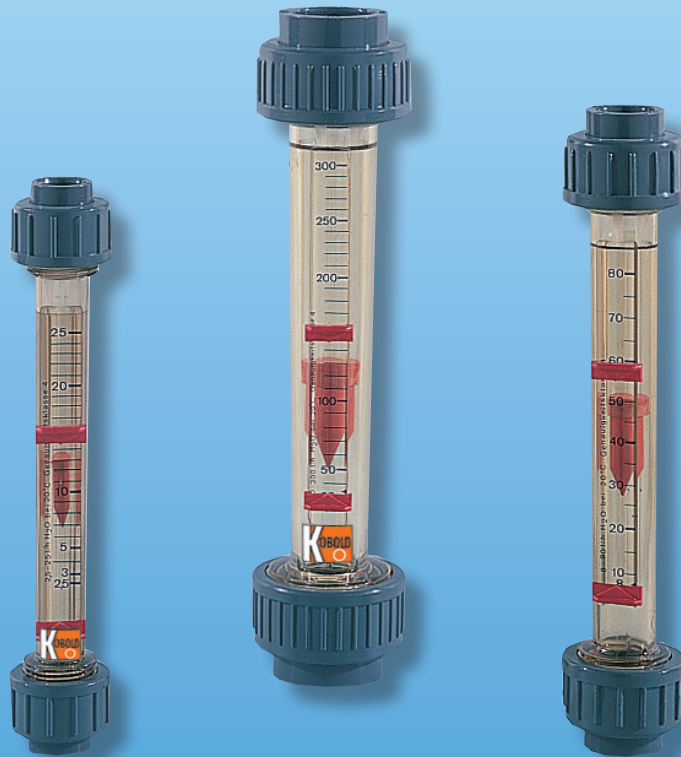
## Plastic Flowmeters and Switches

for Liquids and Gases



measuring  
•  
monitoring  
•  
analyzing

KSK



- Accuracy:  $\pm 4\%$  of Full Scale
- Shock and Corrosion Proof
- Maximum Pressure: 145 PSIG
- Polysulfone Versions have Excellent Resistance to Acids and Alkaline Solutions
- Compact Design



KOBOLD companies worldwide:

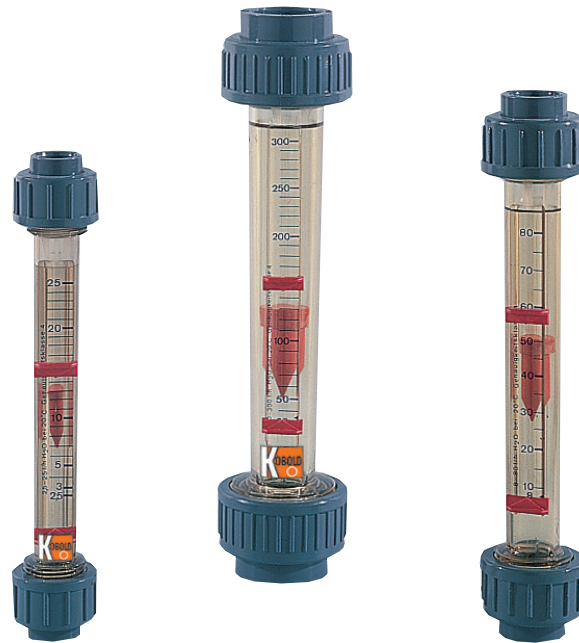
ARGENTINA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLUMBIA, CZECH REPUBLIC, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, ROMANIA, SINGAPORE, SOUTH KOREA, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, USA, VIETNAM

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**Description**

The KOBOLD KSK plastic flowmeter/switch operates on the basis of the well known variable-area principle. The medium flows upward through a conically widening plastic measuring tube. The float is lifted by the flowing medium and indicates the instantaneous flow rate on the scale attached to the flowmeter. The KSK series is all plastic with bodies made of Trogamid® or Polysulfone to handle aggressive media.

For the control of flow setpoints, a bistable switch can be provided for the instrument. Reed contacts or transistor switches are available and can be used to monitor and alarm on an upset flow condition. The transistor switch has an LED on the contact housing to indicate switching status.



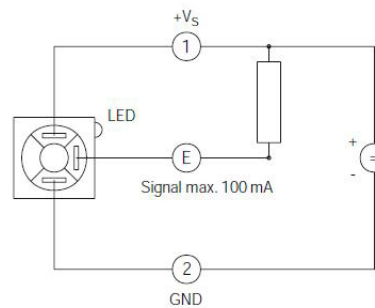
**Specifications**

|                                |   |
|--------------------------------|---|
| <b>Accuracy:</b>               | ±4% Full Scale  |
| <b>Flow Media:</b>             | Air or Water and other Fluids   |
| <b>Mounting:</b>               | Vertical, Flow Up   |
| <b>Max. Media Temperature:</b> |   |
| <b>Trogamid:</b>               | 140 °F  |
| <b>Polysulfone:</b>            | 140 °F w/ PVC Fittings<br>180 °F w/ polypropylene,<br>Brass & SS Fittings |
| <b>Max. Pressure:</b>          | 145 PSIG  |
| <b>Materials</b>               |   |
| <b>Measuring Tube:</b>         | Trogamid,<br>Polysulfone  |
| <b>Float:</b>                  | PVDF  |
| <b>O-Rings:</b>                | EPDM  |
| <b>Connection with Capnut:</b> | Per Ordering Code   |

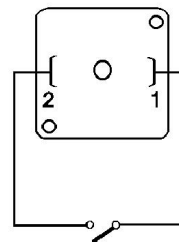
**Switch Specifications**

|                            |   |
|----------------------------|---|
| <b>NPN Transistor:</b>     | Hall-Sensor, Bistable<br>NPN Open Collector |
| <b>Operating Voltage:</b>  | 9-24 VDC                                    |
| <b>Operating Current:</b>  | Max. 100 mA                                 |
| <b>Ambient Temp:</b>       | 130°F Max.                                  |
| <b>Hysteresis:</b>         | <0.24"                                      |
| <b>Output Signal:</b>      | LED Lights w/ Flow<br>Above Setpoint        |
| <b>Reed Switch:</b>        | SPST N/O or N/C<br>Based on Order Code      |
| <b>Electrical Ratings:</b> | Max. 130 VAC<br>10 W / 10 VA, 0.5A          |
| <b>Ambient Temp:</b>       | Max. 130°F                                  |
| <b>Protection:</b>         | NEMA 4X/IP65                                |

**Transistor Switch**



**Reed Switch**



**Measuring Scales**

Measuring scales are available for water or air. Compressed air scales are available in SCFM, calibrated for direct readings at operating pressures from 0 to 145 PSIG. The compressed air scale table shows the available ranges and calibration pressures for each meter size.



**Compressed Air Scale Ranges @ Specified Outlet Pressure**

(NOTE: Air units available only with Polysulfone (KSK-2...) measuring tube)

| Model   | SCFM<br>0 PSIG | SCFM<br>15 PSIG | SCFM<br>30 PSIG | SCFM<br>45 PSIG | SCFM<br>60 PSIG | SCFM<br>75 PSIG | SCFM<br>85 PSIG | SCFM<br>100 PSIG | SCFM<br>115 PSIG | SCFM<br>130 PSIG | SCFM<br>145 PSIG |
|---------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| KSK-.15 | 0.06-0.27      | 0.12-0.35       | 0.12-0.44       | 0.12-0.5        | 0.18-0.6        | 0.18-0.65       | 0.18-0.7        | 0.24-0.77        | 0.24-0.8         | 0.24-0.83        | 0.24-0.9         |
| KSK-.25 | 0.12-0.65      | 0.15-0.9        | 0.18-1.1        | 0.18-1.3        | 0.24-1.5        | 0.30-1.6        | 0.30-1.7        | 0.30-1.8         | 0.35-2.0         | 0.35-2.1         | 0.60-2.1         |
| KSK-.50 | 0.24-1.2       | 0.30-1.7        | 0.35-2.0        | 0.40-2.4        | 0.47-2.7        | 0.53-3.0        | 0.60-3.2        | 0.60-3.4         | 0.60-3.5         | 0.75-3.8         | 0.90-4.1         |
| KSK-.80 | 0.30-1.8       | 0.40-2.5        | 0.40-3.3        | 0.60-3.8        | 0.60-3.9        | 0.60-4.0        | 1.0-5.0         | 0.90-5.3         | 0.90-5.6         | 0.90-6.0         | 0.90-6.2         |
| KSK-100 | 0.40-2.1       | 0.60-3.0        | 0.70-3.5        | 0.90-4.1        | 1.0-4.7         | 1.2-5.3         | 1.2-5.6         | 1.2-6.0          | 1.5-6.2          | 1.5-6.5          | 1.5-7.0          |
| KSK-150 | 0.60-3.5       | 0.90-4.4        | 1.2-5.3         | 1.2-7.0         | 1.5-7.7         | 1.5-8.3         | 1.8-8.9         | 1.8-9.4          | 1.8-10.0         | 2.1-10.1         | 2.1-11.5         |
| KSK-200 | 0.90-4.4       | 1.5-6.0         | 1.8-7.7         | 2.1-8.6         | 2.4-10.0        | 2.7-11.2        | 3.0-11.8        | 3.0-13.3         | 3.5-13.6         | 3.5-14.2         | 3.5-14.8         |
| KSK-300 | 0.60-6.0       | 0.90-8.3        | 1.2-10.0        | 1.5-11.8        | 1.8-13.6        | 1.8-14.2        | 2.1-14.8        | 2.1-16.2         | 2.1-17.7         | 2.4-18.3         | 2.4-18.9         |
| KSK-500 | 1.2-10.0       | 1.8-14.2        | 2.4-16.5        | 2.4-19.0        | 3.0-21.2        | 3.0-23.6        | 3.5-24.8        | 3.5-26.6         | 3.5-28.3         | 4.1-30.0         | 4.1-33.0         |
| KSK-999 | 3.5-18.3       | 4.7-26.0        | 6.0-32.0        | 7.1-36.6        | 7.1-41.0        | 8.9-44.3        | 8.9-47.2        | 8.9-53.1         | 8.9-56.0         | 8.9-59.0         | 11.8-62.0        |

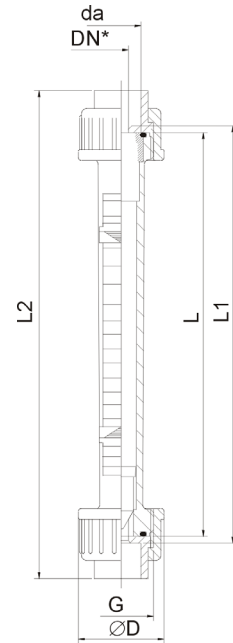
**Order Numbers for Standard Types**

| Range<br>Water GPM | Max. Press.<br>Drop PSI | Material   |             | Measuring<br>Scale   | Fittings   | Switch<br>Options |
|--------------------|-------------------------|------------|-------------|--|--|-------------------|
|                    |                         | Trogamid   | Polysulfone |  |  |                   |
| 0.006-0.05         | 0.07                    | KSK-1015.. | KSK-2015..  | <b>Water Scale</b><br>..G.. = GPM water<br>..GH.. = GPH water<br>..H.. = LPH water<br>..M.. = LPM water<br><br><b>Air Scale</b><br>(see table)<br>..0S.. = 0 PSIG<br>..1S.. = 15 PSIG<br>..2S.. = 30 PSIG<br>..3S.. = 45 PSIG<br>..4S.. = 60 PSIG<br>..5S.. = 75 PSIG<br>..6S.. = 85 PSIG<br>..7S.. = 100 PSIG<br>..8S.. = 115 PSIG<br>..9S.. = 130 PSIG<br>..Z.. = 145 PSIG | <b>For KSK-x015 to x100</b><br>..P10.. = Polypro, 3/8" NPT Female<br>..K10.. = PVC, 3/8" Glue Socket<br>..T10.. = PVC, 3/8" NPT Female |                   |
| 0.01-0.10          | 0.07                    | KSK-1025.. | KSK-2025..  |  |  |                   |
| 0.02-0.20          | 0.07                    | KSK-1050.. | KSK-2050..  |  |  |                   |
| 0.04-0.44          | 0.07                    | KSK-1100.. | KSK-2100..  |  |  |                   |
| 0.035-0.35         | 0.07                    | KSK-1080.. | KSK-2080..  |  |  |                   |
| 0.06-0.66          | 0.07                    | KSK-1150.. | KSK-2150..  |  |  |                   |
| 0.08-0.8           | 0.07                    | KSK-1200.. | KSK-2200..  |  |  |                   |
| 0.13-1.3           | 0.12                    | KSK-1300.. | KSK-2300..  |  |  |                   |
| 0.22-2.2           | 0.12                    | KSK-1500.. | KSK-2500..  |  |  |                   |
| 0.44-4.4           | 0.12                    | KSK-1999.. | KSK-2999..  |  |  |                   |
|                    |                         |            |             | <b>For KSK-x080 to x200</b><br>..P15.. = Polypro, 1/2" NPT Female<br>..K15.. = PVC 1/2" Glue Socket<br>..T15.. = PVC 1/2" NPT Female<br>..IN1.. = Brass, 1/2" NPT Female<br>..AN1.. = Brass, 1/2" NPT Male<br>..AN3.. = 316 SS, 3/4" NPT Male<br>..IN2.. = 316 SS, 1/2" NPT Female<br>..AN2.. = 316SS, 1/2" NPT Male   | ..00 = Without<br>..S0 = 1 N/O Reed<br>..SS = 2 N/O Reed<br>..C0 = 1 N/C Reed<br>..CC = 2 N/C Reed<br>..E0 = 1 NPN<br>..EE = 2 NPN     |                   |
|                    |                         |            |             | <b>For KSK-x300 to x999</b><br>..P25.. = Polypro, 1" NPT Female<br>..K25.. = PVC, 1" Glue Socket<br>..T25.. = PVC, 1" NPT Female   |  |                   |

Dimensions

Dimensions with PVC Glue Socket, Female NPT

| Model      | DN   | da     | L   | L1  | L2  |
|------------|------|--------|-----|-----|-----|
| KSK-.015.. | 3/8" | 1/2"   | 6.5 | 6.7 | 7.8 |
| KSK-.025.. | 3/8" | 1/2"   | 6.5 | 6.7 | 7.8 |
| KSK-.050.. | 3/8" | 1/2"   | 6.5 | 6.7 | 7.8 |
| KSK-.080.. | 1/2" | 3/4"   | 7.3 | 7.5 | 8.8 |
| KSK-.100.. | 3/8" | 1/2"   | 6.5 | 6.7 | 6.5 |
| KSK-.150.. | 1/2" | 3/4"   | 7.3 | 7.5 | 8.8 |
| KSK-.200.. | 1/2" | 3/4"   | 7.3 | 7.5 | 8.8 |
| KSK-.300.. | 1"   | 1-1/4" | 7.9 | 8.1 | 9.8 |
| KSK-.500.. | 1"   | 1-1/4" | 7.9 | 8.1 | 9.8 |
| KSK-.999.. | 1"   | 1-1/4" | 7.9 | 8.1 | 9.8 |



Dimensions with Special Thread Fittings in Brass or Stainless Steel

| Model      | L   | L2  | Female   | Male             | AF    |
|------------|-----|-----|----------|------------------|-------|
| KSK-.015.. | 6.5 | -   | -        | -                | -     |
| KSK-.025.. | 6.5 | -   | -        | -                | -     |
| KSK-.050.. | 6.5 | -   | -        | -                | -     |
| KSK-.080.. | 7.3 | 9.6 | 1/2" NPT | 1/2" or 3/4" NPT | 36 mm |
| KSK-.100.. | 6.5 | -   | -        | -                | -     |
| KSK-.150.. | 7.3 | 9.6 | 1/2" NPT | 1/2" or 3/4" NPT | 36 mm |
| KSK-.200.. | 7.3 | 9.6 | 1/2" NPT | 1/2" or 3/4" NPT | 36 mm |
| KSK-.300.. | 7.9 | -   | -        | -                | -     |
| KSK-.500.. | 7.9 | -   | -        | -                | -     |
| KSK-.999.. | 7.9 | -   | -        | -                | -     |

