



Piston-type flow meter

SKM

Design and applications

The piston-type flow meter SKM is used to measure water, oils or other fluids independently from the posture of the device.

The devices are equipped with a spring loaded piston inside a cylindrical tube made of borosilicate glass. Together with the spring, the piston with an orifice bore forms the measuring system. When the fluid flows through the SKM, the piston will change its position. The position is proportional to the quantity flowing through the meter. A scale at the upper edge of the piston directly indicates the flow rate. The SKM can be installed into pipelines either horizontally or vertically.

The meter is available in the sizes G 1/4 to G 1.



- female thread connection
- compact design
- optionally with limit value switch RK
- measuring range 1:3
- for water, oils, and fluids
- accuracy 4 % FS
- protective cover made of perspex



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Piston-type flow meter



SKM

Type series

SKM	local display
SKM-RK1	with limit value switch RK

Dimensions

SKM			
G	A	SW	D
1/4	156	40	48.3
1/2	156	40	48.3
3/4	156	40	48.3
1	156	40	48.3

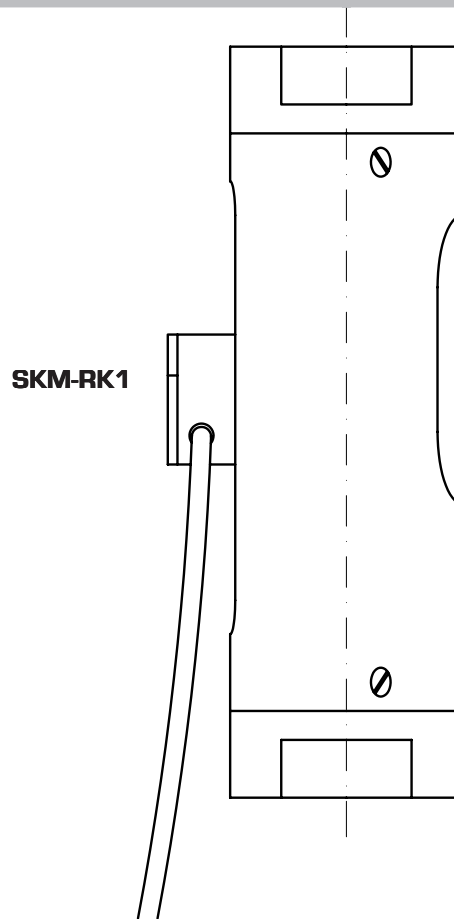
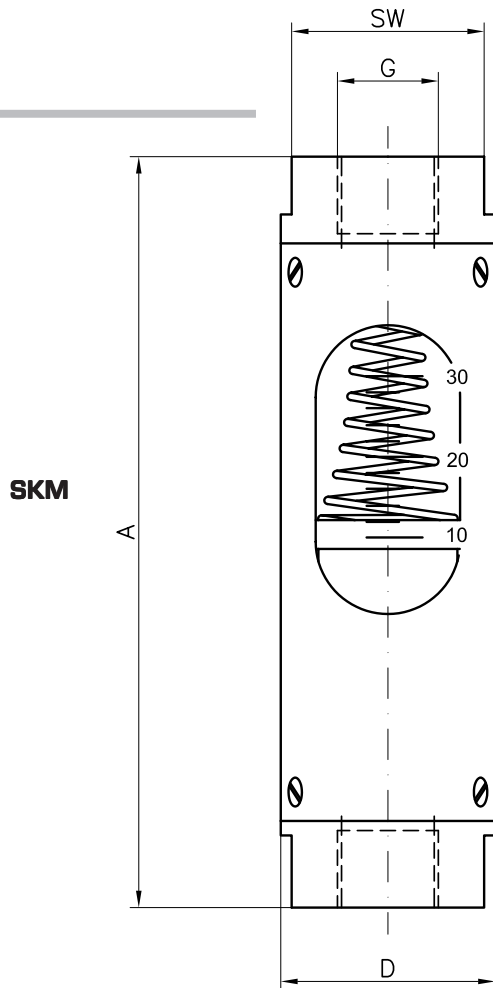
Technical data

Scale	l/min
Measuring range	1:3
Measuring accuracy	4 % FS
Reproducibility	2 % FS
Medium temperature	max +100 °C
Ambient temperature	0 to +50 °C
Maximum static operational pressure	PN 10

SKM-RK1			
G	A	SW	D
1/4	156	40	48.3
1/2	156	40	48.3
3/4	156	40	48.3
1	156	40	48.3

Materials

Connections	1.4571 or brass nickel plated
Measuring piston	1.4571
Sleeve	1.4301
Glass	Borosilicate glass
Seals	NBR, optionally EPDM/Viton
Connection	Female thread acc. to ISO 228



Measuring ranges

Measuring range l/min H ₂ O	Connection G	max. pressure loss mbar	Connection G	max. pressure loss mbar
1.5 - 4.5	1/4 or 1/2	-	3/4 or 1	-
2.5 - 8	1/4 or 1/2	695	3/4 or 1	695
5 - 15	1/4 or 1/2	800	3/4 or 1	725
10 - 30	1/4 or 1/2	1075	3/4 or 1	650
15 - 45	-	-	3/4 or 1	730
20 - 60	-	-	3/4 or 1	750
30 - 90	-	-	3/4 or 1	910

Piston-type flow meter




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Limit value switch RK

The piston-type flow meter SKM can optionally be fitted with an electric limit value switch RK for the purpose of flow monitoring and control. The limit value switch is adjustable over the entire measuring range. The limit value switch consists of a bistable Reed-contact switched by the magnet integrated into the piston of the flow meter. The switch is guided in a guide slot on the back of the protective tube and can be adjusted over the full measuring range. In case of inductive or capacitive loads, e.g. caused by contactors or solenoid valves, uncontrollable surge currents or voltage peaks may occur. Depending on their geometry such peaks also occur in lines, if they exceed a certain length. It is therefore recommended to use an additionally available arc suppression relay MSR. This increases the switching capacity and avoids the appearance of inductive and capacitive peaks. It thereby ensures a long lifetime of the switches.

Technical data of the limit value switch

RK	Design with one contact
Voltage switched	50 V AC/ 75 V DC
Dielectric strength	230 V AC/ DC
Switching current	max. 0.2 A
Switching capacity	max. 10 VA, 10 W
Switching performance	bistable
Indication of switching condition	LED yellow
Limit value switch	Reed contact
Temperature range	-25 to +75 °C
Degree of protection	IP 67 (IEC 529)
Switching function	Normally open contact



Low-Voltage Directive

Above 50 V AC/ 75 V DC, contacts are subject to the EU Low-Voltage Directive. The user is required to verify their use accordingly.

Safety notes

For safety reasons all devices with a measuring tube made of borosilicate glass are fitted with a perspex protection tube.

Avoid excessive pressure shocks.

The KIRCHNER equipment has been tested in compliance with applicable CE-regulations of the European Community.

The respective declaration of conformity is available on request.

The KIRCHNER QM-System will be certified in accordance with DIN-EN-ISO 9001:2000. The quality is systematically adapted to the continuously increasing demands.



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