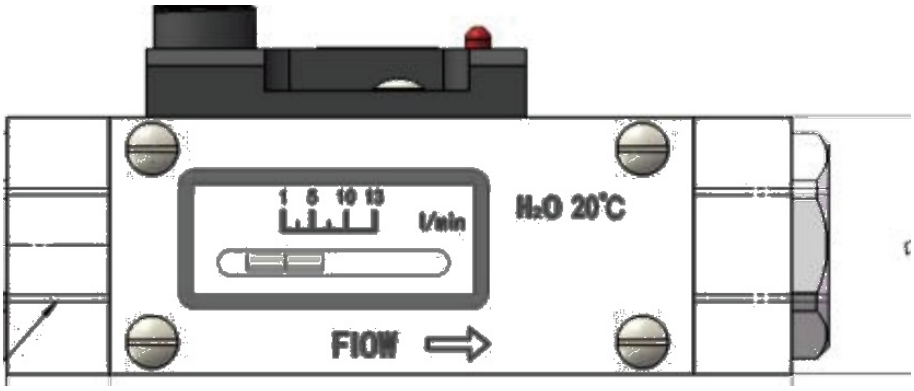
OCTOGON

MANUAL

QSKJ

IN-LINE PISTON FLOW SWITCH WITH A SCALE

Installation and user manual



Document	Version	Date	Applies to
Installation and user manual	V00x	11/2026	QSKJ, all threads, cases, setting ranges and supplies

This manual describes the QSKJ mechanical in-line piston flow switch with a scale on the body: safety, working principle, technical data, sizes, dimensions, electrical connection and installation.

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1 About this manual

Read this manual before installing the switch and keep it available for later use. Values and order codes refer to the QSKJ order code (section 3.5).

1.1 Versions covered

Feature	Versions
Process connection	G1/4 · G3/8 · G1/2 · G3/4 · G1 female thread
Supply	24 V DC ± 20 % or 230 V AC ± 15 %
Case	POM plastic · anodised aluminium · stainless steel
Setting range	0.6 ... 8 · 1 ... 15 · 2 ... 25 · 27 ... 70 L/min
Switch points	one or two

2 Safety

2.1 Before installation

Check the flow switch carefully before installation: the package must be complete, and the switch must be free from damage and deformation. If you have any questions, contact your supplier.

2.2 Wiring

Warning To avoid electric shock and damage to the equipment, cut off the power supply when wiring or adjusting. When connecting the cables, do not adjust any screws other than the wiring terminals and the earth screws.

Warning Do not connect the white and the black wire directly to the positive and negative terminals of the power supply. Otherwise the switch is short-circuited.

3 Product description

3.1 Working principle

The QSKJ is a mechanical in-line flow switch. A spring holds a magnetic piston back; the flow pushes it aside and the magnet closes a reed contact outside the pipe. The mechanical and the electrical part are completely isolated. The switch has a

minimal pressure loss, good repeatability and good resistance to fouling. Thanks to the setting scale, the switch does not need to be set on site; an LED shows the switch status (DC version), and a version with two switch points is available.

Applications: liquids and gases - industrial automation, machinery, air compression, refrigeration and air conditioning.

3.2 Technical data

Item	Value
Measuring principle	mechanical - a magnetic piston on a spring; the magnet closes a reed contact outside the wetted part
Media	liquid or gaseous
Setting range	four order fields: 0.6 ... 8, 1 ... 15, 2 ... 25 and 27 ... 70 L/min
Accuracy	5 % of the total range
Hysteresis	at least 0.6 L/min, depending on the switching point
Pressure loss	0.3 bar at 25 L/min
Setting scale	on the body, 1 to 13 L/min, with the marks 1, 5, 10 and 13, marked H2O 20 °C; calibrated in water at 20 °C, mounted horizontally
Switch points	one or two, chosen in the order code
Plastic version	POM housing, POM piston, stainless spring, NBR seal · 10 bar
Aluminium version	anodised aluminium housing, POM piston, stainless spring, NBR seal · 50 bar
Stainless version	stainless housing, POM piston, stainless spring, NBR seal
Process connection	G1/4 to G1 female thread (section 3.4)
Medium temperature	≤ 90 °C
Protection grade	IP67
Output	dry reed contact, two-wire, normally open
Switching capacity	24 V DC / 250 V AC, 100 mA
Supply	24 V DC ± 20 % or 230 V AC ± 15 %, chosen in the order code
LED	shows the switch status on the DC version; the AC version has no LED
Electrical connection	M12 connector, four pins

3.3 Switching point

The scale on the body (1 to 13 L/min, marked H2O 20 °C) is calibrated in water at 20 °C with the switch mounted horizontally. Mounting position, medium and temperature have a slight effect on the switching value.

With the order, state the flow direction, the medium, the pipe bore and the wanted setting; the switch can be set before delivery.

3.4 Sizes, ranges and threads

Thread	Field	Adjustable range L/min	Max. flow L/min	L	H	B	X
G1/4	008	0.6 (0.1) ... 8 (7)	40	93	36	30	12
G3/8	008	0.6 (0.1) ... 8 (7)	40	93	36	30	15
G1/2	008	0.6 (0.1) ... 8 (7)	40	93	36	30	15
G3/4	008	0.6 (0.1) ... 8 (7)	40	105	38.5	35	15
G1	008	0.6 (0.1) ... 8 (7)	40	105	41	40	15
G1/4	015	1 (0.5) ... 15 (13)	40	93	36	30	12
G3/8	015	1 (0.5) ... 15 (13)	40	93	36	30	15
G1/2	015	1 (0.5) ... 15 (13)	40	93	36	30	15
G3/4	015	1 (0.5) ... 15 (13)	40	105	38.5	35	15
G1	015	1 (0.5) ... 15 (13)	40	105	41	40	15
G1/2	025	2 (0.8) ... 25 (25)	40	93	36	30	15
G3/4	025	2 (0.8) ... 25 (25)	40	105	36	35	15
G1	025	2 (0.8) ... 25 (25)	40	105	36	40	15
G3/4	070	27 (21) ... 70 (66)	—	105	38.5	35	15
G1	070	27 (21) ... 70 (66)	—	106	41	40	15

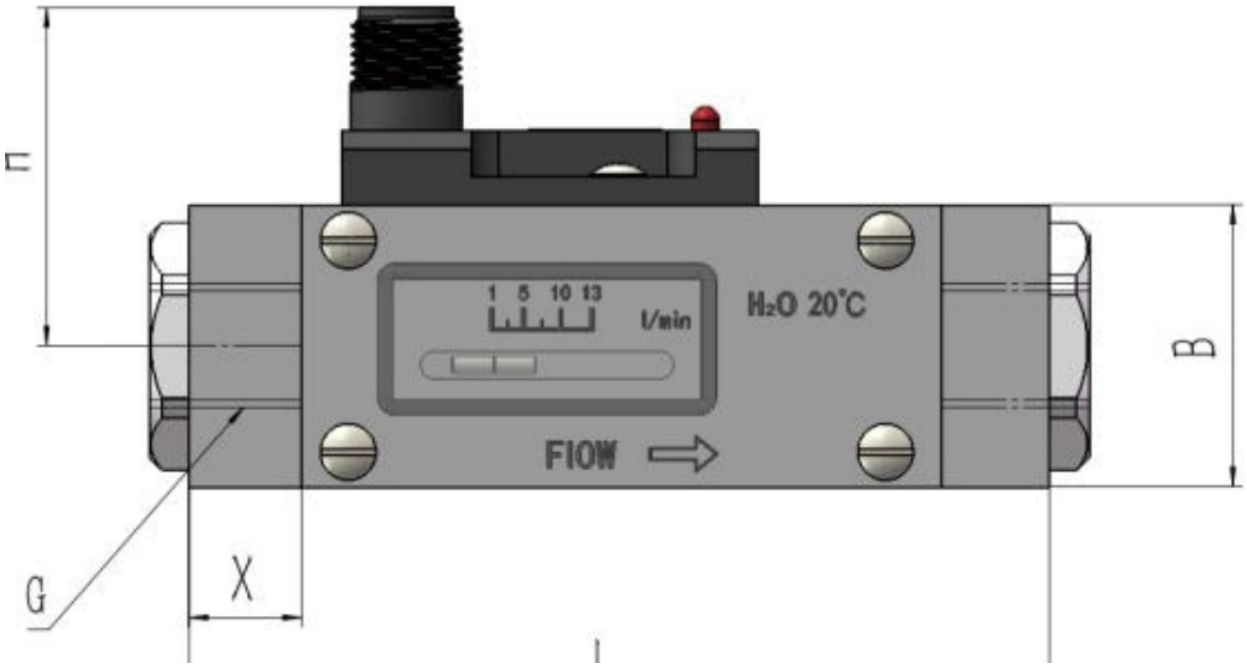
Fifteen models; L, H, B and X in mm (chapter 4).

3.5 Order code

Field	Code	Meaning
1 Series	QSKJ	in-line piston flow switch with a scale
2 Connection	G14K · G38K · G12K	G1/4 · G3/8 · G1/2 female thread
	G34K · G1K	G3/4 · G1 female thread
3 Supply	DC · AC	24 V DC ± 20 % · 230 V AC ± 15 %, two-wire, normally open
4 Case	P · L · S	POM plastic · anodised aluminium · stainless steel
5 Setting range	008 · 015	0.6 ... 8 L/min · 1 ... 15 L/min
	025 · 070	2 ... 25 L/min · 27 ... 70 L/min
6 Connection	M	M12 connector
7 Switch points	1 · 2	one switch point · two switch points

Example: QSKJ-G14K-DC-L-015-M-1.

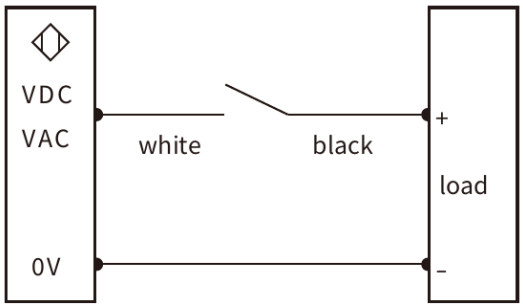
4 Dimensions



From the side. The scale reads 1 to 13 L/min and carries its own condition, H2O 20 °C; the arrow marks the flow direction. L, H, B and X depend on the size (section 3.4). Dimensions in mm.

Feature	mm	Note
Overall length L	93 · 105 · 106	by size - see section 3.4
Height H	36 · 38.5 · 41	by size
Width B	30 · 35 · 40	by size
Offset X	12 · 15	by size
Plug	M12 × 1, 4-pin	on top of the switch head

5 Electrical connection



The reed contact in the supply line, white and black, with the load behind it.

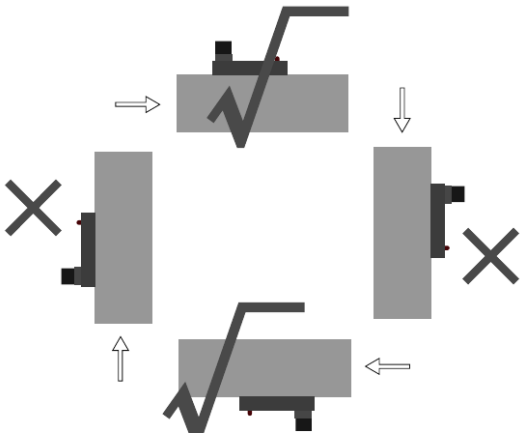
Warning Cut off the power supply before wiring (section 2.2).

- The switch is a normally open contact (dry reed contact, two-wire).
- Connect the switch (white and black wire) in series with the load: supply - switch - load - 0 V.
- Never connect the white and the black wire directly to the positive and negative terminals of the supply; this short-circuits the switch.
- Switching capacity: 24 V DC / 250 V AC, 100 mA.
- DC version: the LED shows the switch status. The AC version has no LED.

M12 × 1 connecting cables, 4-pin, PUR or PVC, 2 · 5 · 10 m, straight or angled, and a self-wiring 4-pin socket (Pg7 / Pg9 gland) are available as accessories. The factory standard is a 2 m PVC cable; the straight sockets are 50 mm long, the angled ones 36 mm. Order numbers: see the datasheet.

6 Installation

- The flow switch can be installed in a horizontal pipe or in a vertical pipe with the liquid flowing upwards. It must not be installed in a pipe with the liquid flowing downwards.
- When installed in a vertical pipe, take the effect of gravity into account: the switching point is offset.
- Install the flow switch in a straight pipe with a straight run of at least 5 × the pipe diameter on both sides.
- The flow direction in the pipe must match the direction of the arrow on the switch housing.
- Position the connection so that it is easy to connect.



The permitted and the forbidden mounting positions (arrows: flow direction).