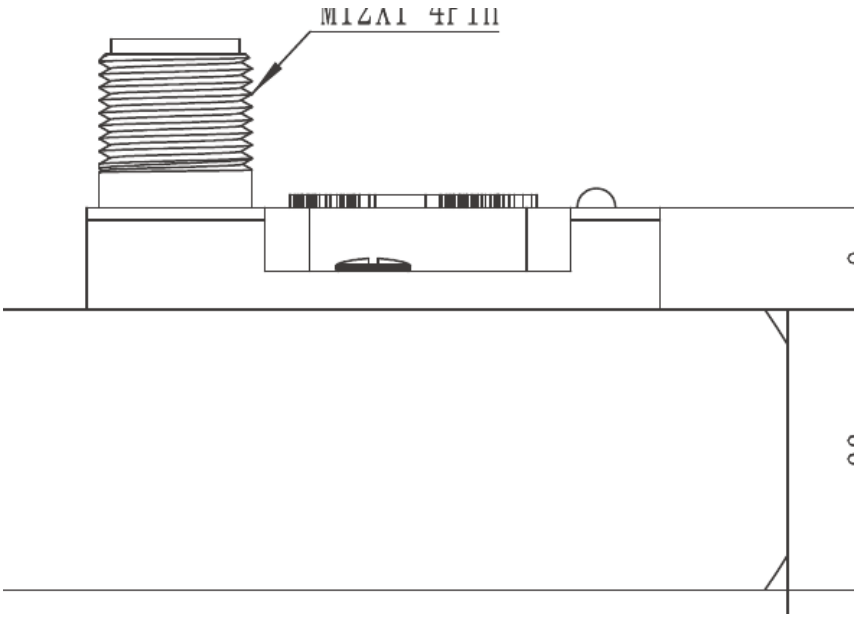
OCTOGON

MANUAL

QSKK

SMALL-FLOW PISTON SWITCH, 0.03 ... 1.2 L/MIN

Installation and user manual



Document	Version	Date	Applies to
Installation and user manual	V00x	11/2026	QSKK, all housings, supplies and connections

This manual describes the QSKK mechanical piston flow switch for small flows, e.g. in centralised lubrication: safety, working principle, technical data, 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 QSKK order code (section 3.4).

1.1 Versions covered

Feature	Versions
Process connection	G1/4 female thread (one size)
Supply	24 V DC ± 20 % or 230 V AC ± 15 %
Housing	nickel-plated brass · 304 stainless steel · aluminium
Setting range	0.03 ... 1.2 L/min (one range)
Electrical connection	M12 connector or cable taken straight out of the head
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 QSKK 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: centralised lubrication, 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
Setting range	0.03 ... 1.2 L/min; one range and one size
Accuracy	± 5 % of the total range
Hysteresis	depends on the switching point
Setting scale	on the body, between the marks min and max; calibrated in lubricating oil 46 at 20 °C, mounted horizontally
Switch points	one or two, chosen in the order code
Housing	nickel-plated, aluminium or 304 stainless steel, chosen in the order code
Piston, spring	brass · stainless steel
Pressure range	50 bar with the nickel-plated or the aluminium housing, 100 bar with stainless
Process connection	G1/4 female thread
Medium temperature	≤ 100 °C
Protection grade	IP65
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, or a cable taken straight out of the head

3.3 Switching point

The setting scale on the body is calibrated in lubricating oil 46 at 20 °C with the switch mounted horizontally. Mounting position, medium and temperature have a slight effect on the switching value.

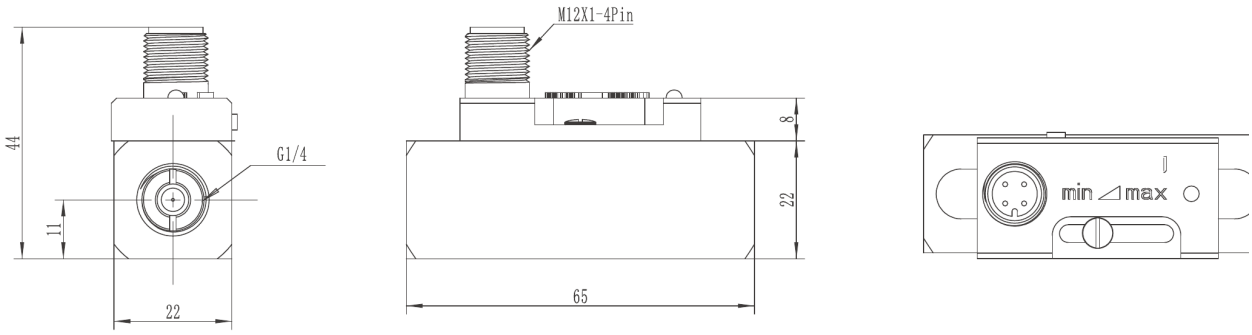
With the order, state the flow direction, the medium, the pipe bore and the wanted setting; the switch can be set before delivery.

3.4 Order code

Field	Code	Meaning
1 Series	QSKK	small-flow piston switch
2 Connection	G14K	G1/4 female thread
3 Supply	DC · AC	24 V DC ± 20 % · 230 V AC ± 15 %, two-wire, normally open
4 Housing	T	nickel-plated brass, the preferred choice · 50 bar
	S	304 stainless steel · 100 bar
	L	aluminium · 50 bar
5 Setting range	012	0.03 ... 1.2 L/min
6 Connection	M · Z	M12 connector · cable taken straight out
7 Switch points	1 · 2	one switch point · two switch points

Example: QSKK-G14K-DC-T-012-M-1. There is one size and one setting range; field 4 decides the pressure rating.

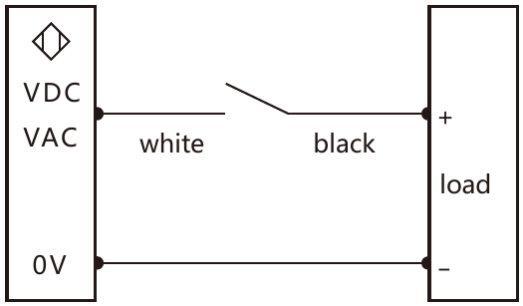
4 Dimensions



From the end, from the side and from above. The setting scale with its marks min and max is on the top face, next to the plug. One size only. Dimensions in mm.

Feature	mm	Note
Overall length	65	across both process connections
Height with the plug	44	to the top of the M12 thread
Body height	22	without the switch head
Switch head height	8	above the body
Body width	22	seen from the end
Connection height	11	centre of the bore above the base
Process thread	G1/4	female, both ends
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).

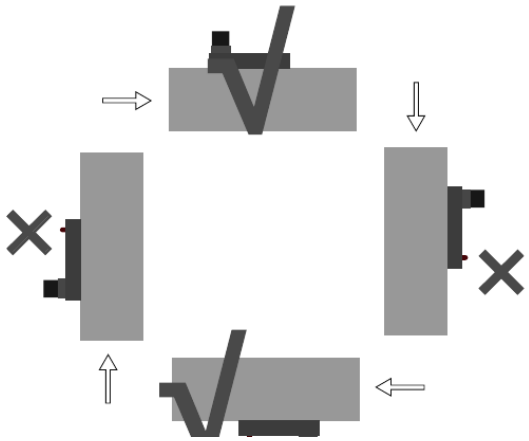
- The switch is a normally open contact (dry reed contact, two-wire).
- Connect the switch (white and black wire) in series with the load: supply - switch - load - 0 V.
- Never connect the white and the black wire directly to the positive and negative terminals of the supply; this short-circuits the 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).