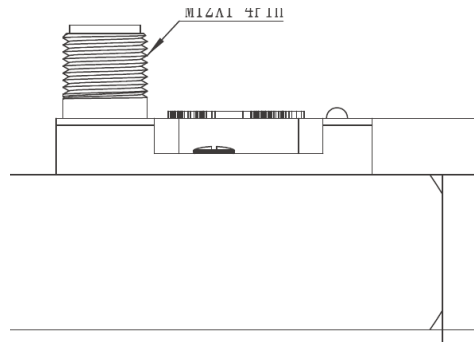


SMALL-FLOW PISTON SWITCH, 0.03 ... 1.2 L/MIN



- FOR CENTRALISED LUBRICATION · ONE SIZE, G1/4, 65 MM LONG
- SCALE CALIBRATED IN LUBRICATING OIL 46 AT 20 °C
- REED 24 VDC / 250 VAC, 100 mA · 50 OR 100 BAR · IP65

KEY DATA

Property	Value	Property	Value
Setting range	0.03 ... 1.2 L/min — one range, one size	Accuracy	± 5 % of total range
Output	Dry reed contact · one or two switch points	Switching capacity	24 Vdc / 250 Vac, 100 mA
Pressure range	50 bar nickel-plated or aluminium · 100 bar stainless	Medium temperature	≤ 100 °C
Setting scale	Calibrated in lubricating oil 46 at 20 °C	Media	Liquid
Process connection	G1/4 female thread	Protection grade	IP65

A spring holds a magnetic piston back; the flow pushes it aside and the magnet closes a reed contact outside the pipe. The setting scale is calibrated in lubricating oil 46 at 20 °C.



MEASUREMENT

Measuring principle	Mechanical — a magnetic piston on a spring; the flow displaces it and the magnet closes a reed contact outside the wetted part
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. Calibrated in lubricating oil 46 at 20 °C, mounted horizontally. Mounting position, medium and temperature have a slight effect on the switching value
Switch points	One or two, chosen in the order code
Media	Liquid. Centralised lubrication, industrial automation, machinery, air compression, refrigeration and air conditioning

MATERIALS AND PROCESS

Housing	Nickel-plated, aluminium or 304 stainless steel, chosen in the order code
Piston	Brass · spring 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

ELECTRICAL PROPERTIES

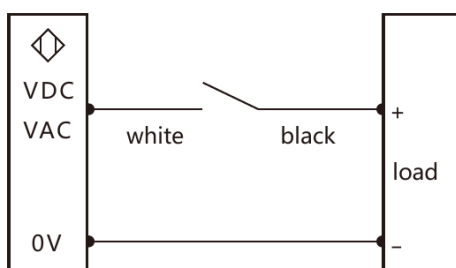
Output	Dry reed contact, two-wire, normally open
Switch points	One or two, chosen in the order code
Switching capacity	24 Vdc / 250 Vac, 100 mA
Supply	24 Vdc ± 20 % or 230 Vac ± 15 %, chosen in the order code
Connection	M12 connector, or a cable taken straight out of the head

SCALE AND INDICATION

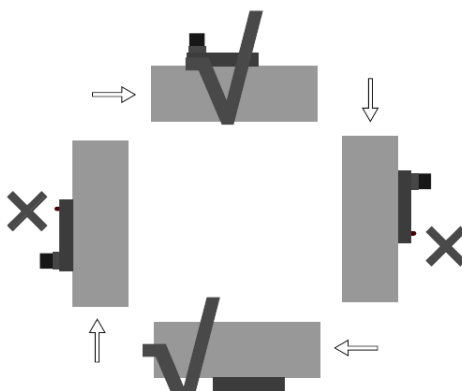
Scale	On the body, between the marks min and max
Reference	Lubricating oil 46 at 20 °C, mounted horizontally
LED	Shows the switch status on the dc version; the ac version has no LED
Influence	Mounting position, medium and temperature have a slight effect on the switching value



WIRING AND MOUNTING



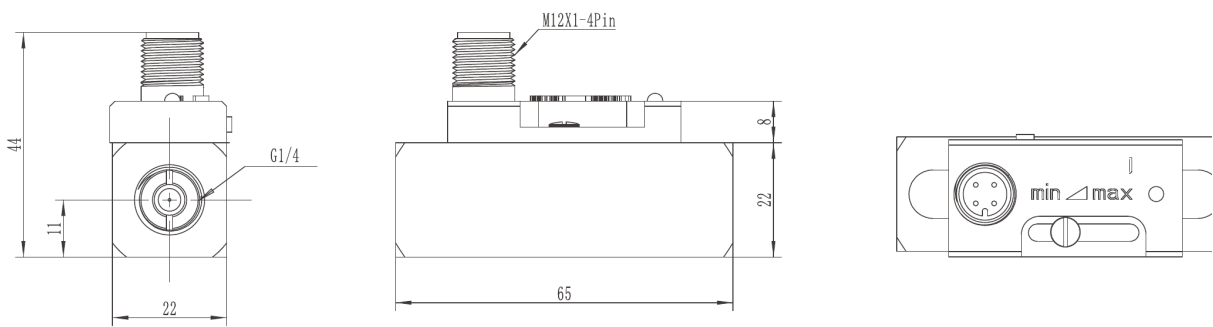
The reed contact in the supply line, white and black, with the load behind it.



The permitted and the forbidden mounting positions.



DIMENSIONS (mm)



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.

OVERALL DIMENSIONS (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 x 1, 4-pin	On top of the switch head



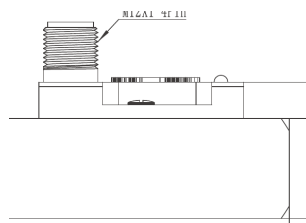
COMPLIANCE AND CERTIFICATION

Measuring principle	Mechanical, magnetic piston on a spring
Accuracy	$\pm 5\%$ of the total range
Hysteresis	Depends on the switching point
Setting scale	Calibrated in lubricating oil 46 at 20 °C
Pressure rating	50 bar with the nickel-plated or the aluminium housing, 100 bar with stainless
Medium temperature	$\leq 100\text{ °C}$
Protection grade	IP65
Wetted materials	Brass piston, stainless spring, and a housing nickel-plated, of aluminium or of 304 stainless steel
Contact rating	24 Vdc / 250 Vac, 100 mA

ACCESSORIES AND ORDER CODE

Accessories

- Electrical accessories: M12 cables in PUR and PVC, straight and angled, in two, five and ten metres, and a self-wiring socket. The factory standard is ZL02-PC02G.



Range
0.03 ... 1.2 L/min

Protection
IP65



ZL02-PC02G, two metres of PVC, is the factory standard. The straight sockets are 50 mm long, the angled ones 36 mm.

ELECTRICAL ACCESSORIES

Electrical accessory	Material	Straight (G)	Angled (W)
M12 × 1, 4-pin, 2 m	PUR	ZL02-PU02G	ZL02-PU02W
M12 × 1, 4-pin, 5 m	PUR	ZL02-PU05G	ZL02-PU05W
M12 × 1, 4-pin, 10 m	PUR	ZL02-PU010G	ZL02-PU010W
M12 × 1, 4-pin, 2 m	PVC	ZL02-PC02G	ZL02-PC02W
M12 × 1, 4-pin, 5 m	PVC	ZL02-PC05G	ZL02-PC05W
M12 × 1, 4-pin, 10 m	PVC	ZL02-PC010G	ZL02-PC010W
Self-wiring socket, 4-pin	Pg7 / Pg9 gland	GL04	WL04

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

ORDER CODE

Field	Code	Meaning
1 Series	QSKK	QSKK small-flow piston switch
2 Connection	G14K	G1/4 female thread
3 Supply	DC · AC	24 Vdc ± 20 % · 230 Vac ± 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

