



Ultra High Resolution Proportional Pressure Regulator

QKL-B1TR • QKL-B4HR



Features

- ◆ Compact
- ◆ High Precision
- ◆ High Sensitivity
- ◆ Wide Pressure Range

Applications

- ◆ Leak Testing At Low Pressure
- ◆ Microfluidics Flow Control
- ◆ Dispensing
- ◆ Multi-Stage Pressure Control

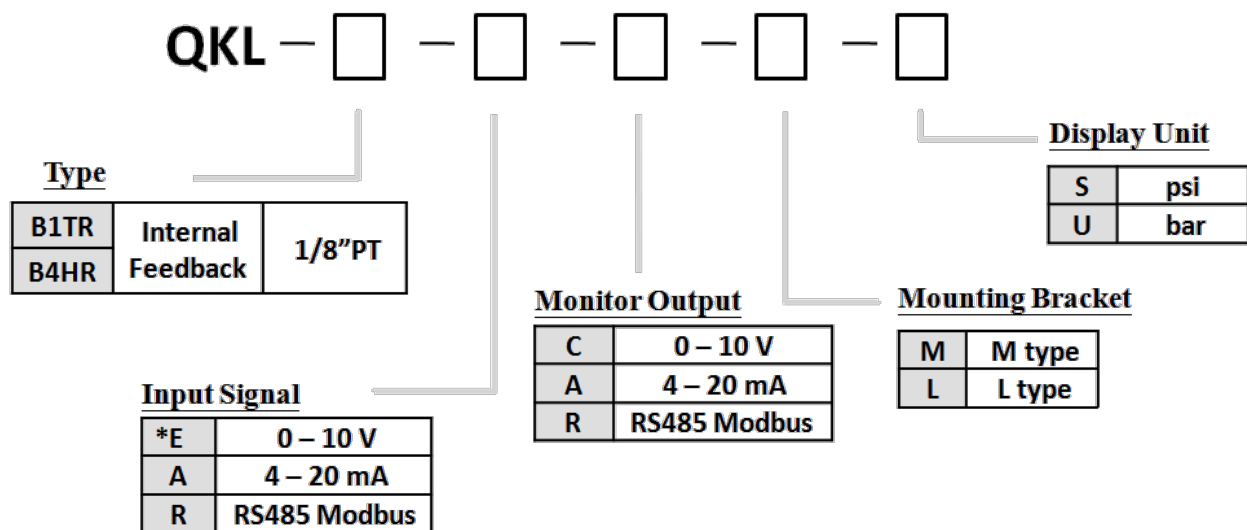
QKL-B1TR/QKL-B4HR is ultra high resolution electro-pneumatic proportional pressure control valves provides a step control of $\pm 0.005\%$ F.S. , ideal for very sensitive applications.

This series is a complete closed loop servo system consisting of two solenoid valves, an internal pressure transducer, and electronic controls.

A bleed orifice of 0.1mm (1/8"PT exhaust) comes with this series. Based on input signal, the pressure is controlled by two solenoid valves and the bleed to maintain precise pressure; one valve functions as inlet control, the other as exhaust, and a constant bleed. This series features fast and high resolution pressure change. The pressure output is measured by an internal feedback pressure transducer that provides a feedback signal to the electronic controls. There are 3 selections of input signal and monitor signal: 0-10VDC, 4-20mA or RS485 ModBus.

All our products have CE, SGS, RoHS certification with ISO13485 quality system.

Ordering Code



* For Command Signal type 0-10V, the minimum driving current is 3mA.

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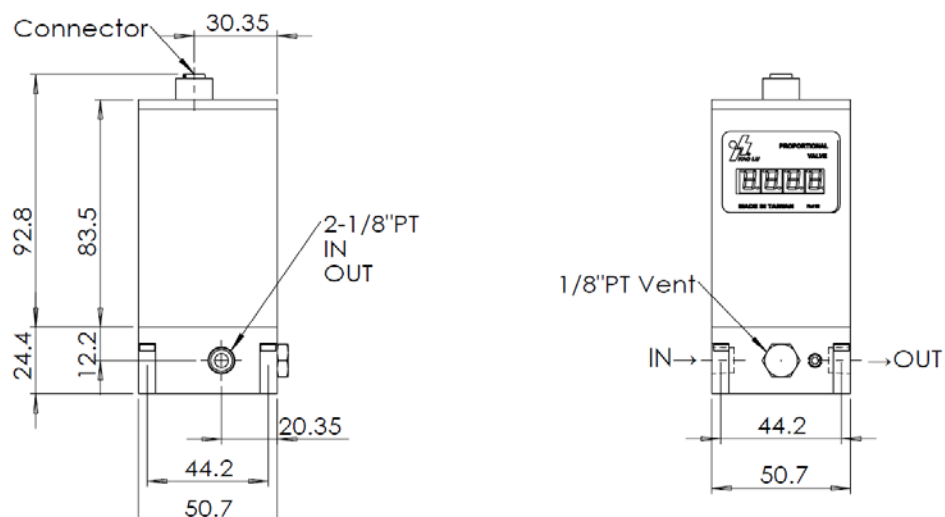
Specifications

Type	QKL-B1TR			QKL-B4HR		
Output Range	2 bar (29psi)	5 bar (72psi)	10 bar (145psi)	2 bar (29psi)	5 bar (72psi)	10 bar (145psi)
Supply Pressure Max	4 bar (58psi)	7 bar (101.5psi)	12 bar (174psi)	3 bar (43.5psi)	10 bar (145psi)	12 bar (174psi)
Input Signal	0-10V / 4-20mA / RS485					
Monitor Output	0-10V / 4-20mA / RS485					
Supply	DC24V ($\leq 3W$)			DC24V ($\leq 5W$)		
Medium	Clean compressed air or with 5 μ m filter					
Repeatability	$\pm 0.02\%$ F.S.			$\pm 0.05\%$ F.S.		
Resolution(max)	$\pm 0.005\%$ F.S.			$\pm 0.01\%$ F.S.		
Accuracy	$\pm 0.1\%$ F.S.			$\pm 0.1\%$ F.S.		
Hysteresis	$\pm 0.1\%$ F.S.			$\pm 0.1\%$ F.S.		
Flow Rate	2.5L/min @ 1bar (orifice: 0.45mm)			3L/min @ 1bar(orifice: 0.5mm) 120L/min@1bar(orifice: 3.0mm)		
Temp. Range(Operating)	0 ~ 70 °C (32 ~ 158 °F)					
Port Size	1/8" PT					
Manifold Material	Aluminum					
Wetted Materials	Aluminum, Stainless steel, Brass, FKM					
Electrical Connection	M12 Connector(2m)					
Ingress Protection	IP 65					

* For Command Signal type 0-10V, the minimum driving current is 3mA.

Overall Dimension

QKL-B1TR



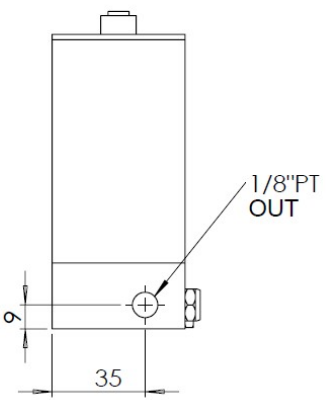
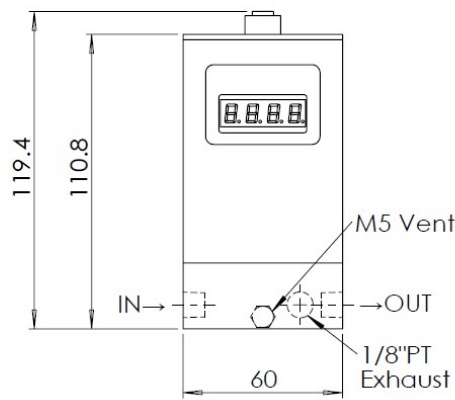
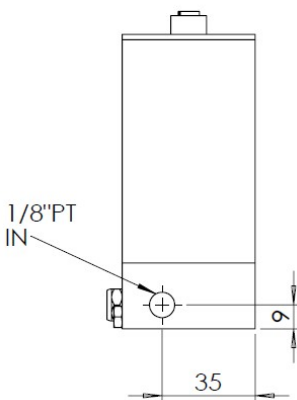
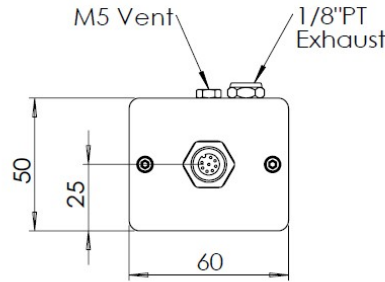


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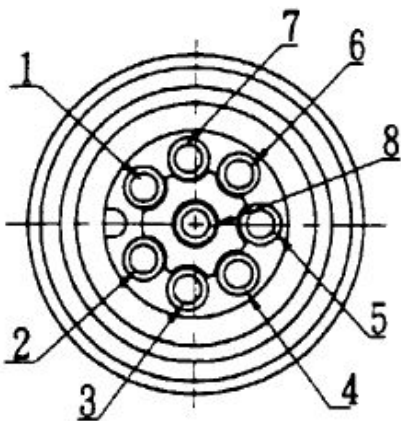
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Overall Dimension

QKL-B4HR



Wiring Description



The wiring diagram shows from top view.

No.	Color	Function
1	Blue	24V DC Power (-)
2	Brown	24V DC Power (+)
3	Black	Monitor output (+)
4	White	0-10 V Command (+) 4-20 mA Command (+)
5	Gray	RS485(D-)
6	-	-
7	purple	Command (-) Monitor output (-)
8	Red	RS485(D+)



Warning: Do not rotate the connection socket when connected, to avoid damage to the internal sensor.