

Ultra High Resolution Proportional Pressure Regulator



QKL-UHR • QKL-B1HF



Features

- ◆ Compact
- ◆ High Precision
- ◆ High Sensitivity

Applications

- ◆ Compact high resolution pressure control
- ◆ Multiple manifold configurations
- ◆ Dynamic proportional pressure control
- ◆ High resolution flow rate control

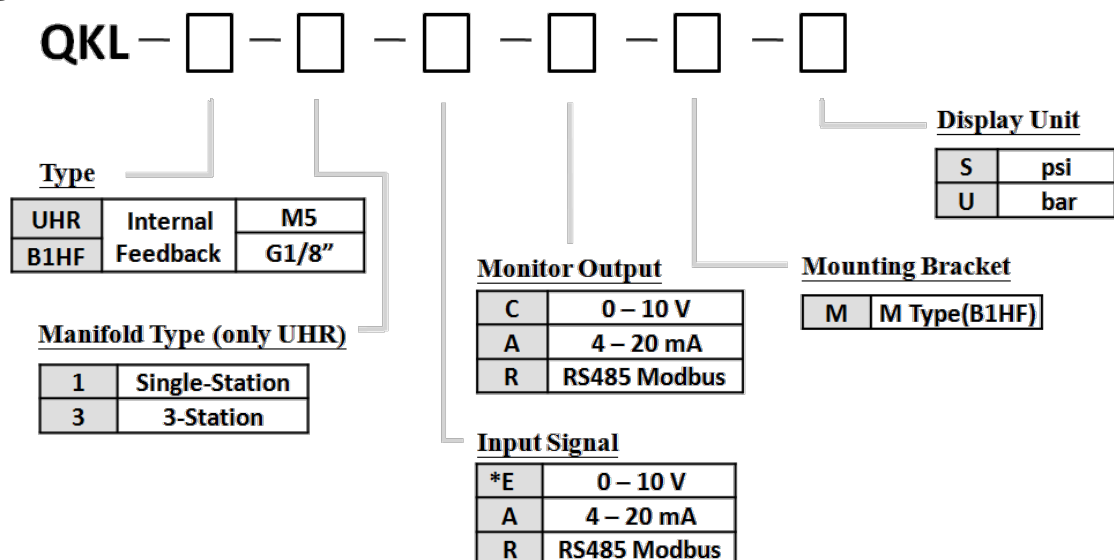
The QKL-UHR/QKL-B1HF is an ultra-high resolution proportional control valve that can be mounted panel or sub-base manifold. This series is an electronically controlled closed loop pressure regulator. The device converts a command signal to customers' specified pressure range. The QKL-UHR/QKL-B1HF consists of a control circuit board, one solenoid valve, an integral electronic pressure sensor, and a manifold. The control board compares the command signal to the integral pressure sensor, then drives the solenoid valve so that desired pressure is maintained even if the required flow rate varies. Two types of pressure regulator can be selected: pressure controller with built-in bleed, or pressure controller without built-in bleed

With built-in bleed version, the application does not consume any gas. The valve acts as pressure regulator with small exhaust capacity.

Without built-in bleed version, the application consume gas or the gas is flammable. There is also a selection of different venting orifice made from ruby, converting this pressure regulator to a high accuracy and high resolution gas flow rate controller. Please consult us for suitable orifice.

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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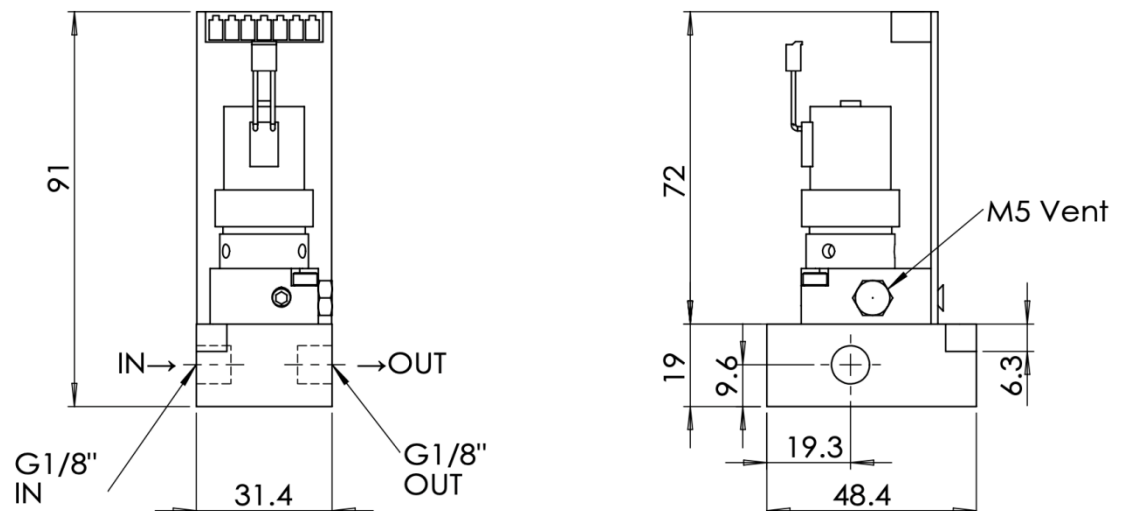
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Specifications (with built-in bleed)

Type	QKL-UHR	QKL-B1HF
Output Range	2 / 5 / 10 bar (29 / 72 / 145 psig)	
Supply Pressure Max	11.5 bar (165 psi)	
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)	$\pm 0.015\%$ F.S.	$\pm 0.03\%$ F.S.
Accuracy	$\pm 0.25\%$ F.S.	$\pm 0.1\%$ F.S.
Hysteresis	$\pm 0.02\%$ 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	M5 and G1/8"	G1/8"
Manifold Material	Aluminum	
Wetted Materials	Aluminum, Stainless steel, Brass, FKM	
Electrical Connection	EDZ1550/7	M12 Connector(2m)
Ruby orifice selection	0.2 / 0.3 / 0.4 / 0.5 / 0.6 mm	

Overall Dimension

QKL-UHR-1



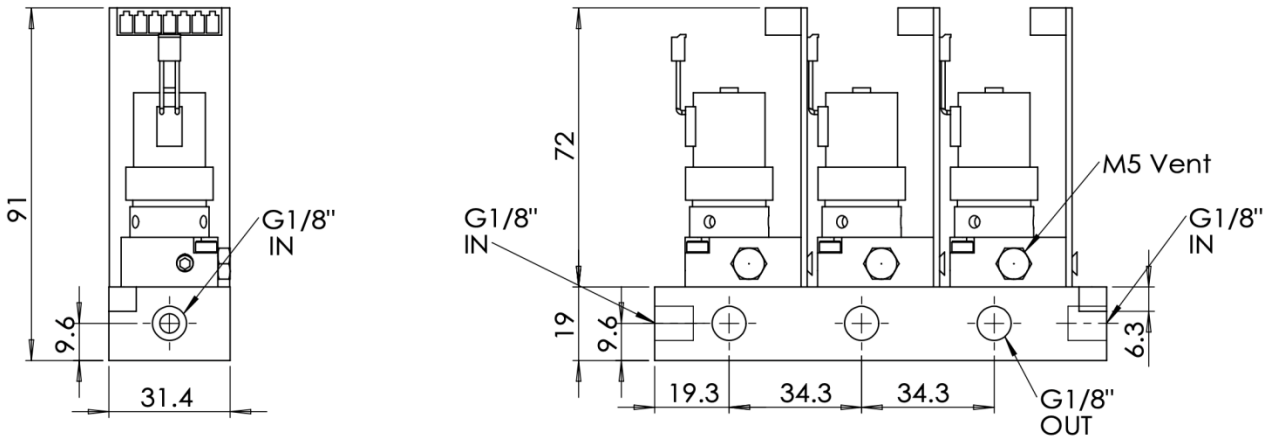


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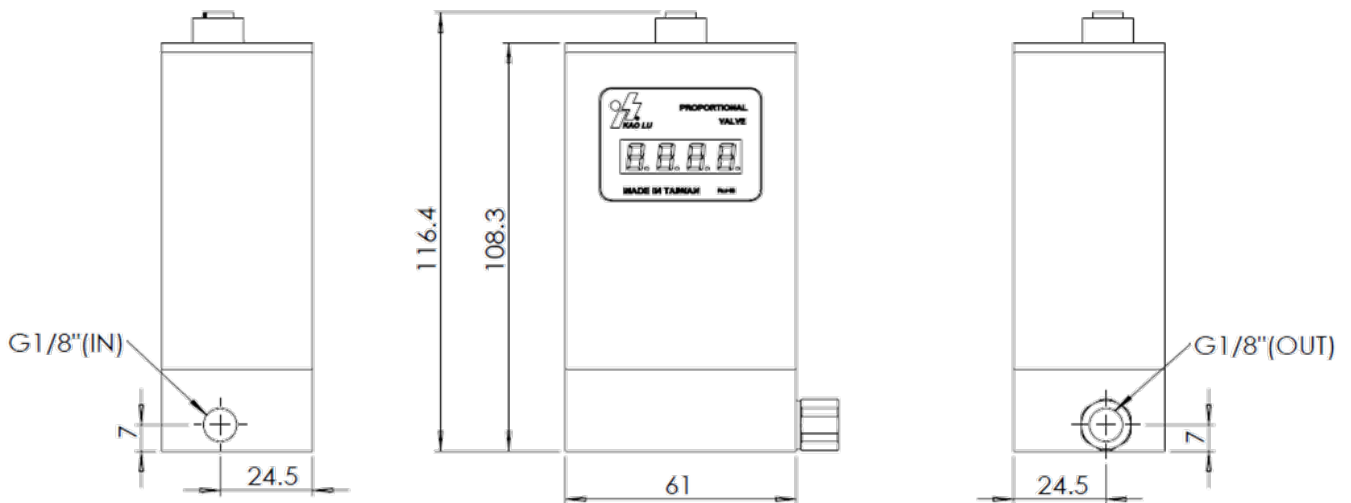
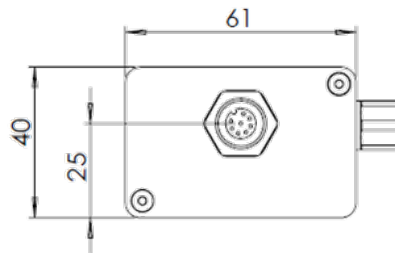
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Overall Dimension

QKL-UHR-3



QKL-B1HF

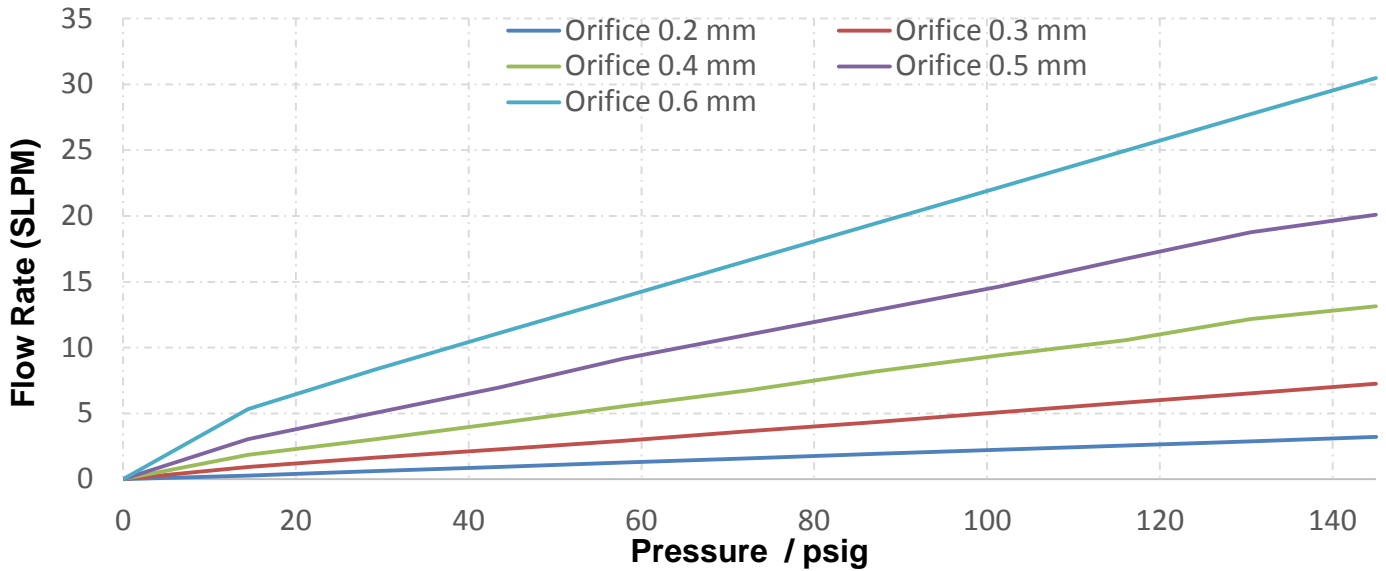


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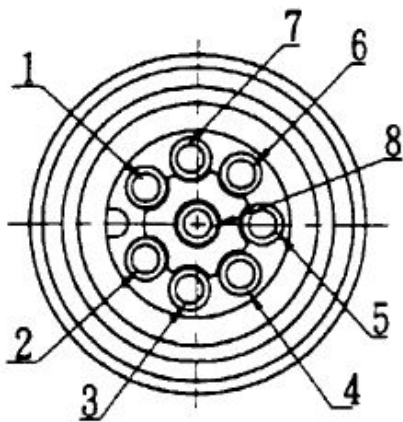


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Flow capability with various orifice size



Wiring Description



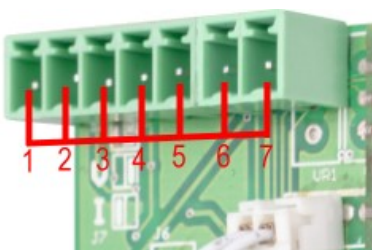
The wiring diagram shows from top view.

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.

EDZ1550/7



No.	1	2	3	4
Color	Brown	Blue	White	Black
Function	DC24V +	DC24V -	Command+	Monitor+
No.	5	6	7	
Color	Purple	Red	Grey	
Function	Command- Monitor-	RS485+	RS485-	