

KFP01 SERİSİ / KFP01 SERIES

Dijital Akış ve Basınç Sensörü / Digital Flow and Pressure Sensor



KFP01 SERİSİ / KFP01 SERIES
Specifications

Model		005	010	050	100	500	101	201	
Fluid		Dry air, N ₂ , Non-corrosive / Non-flammable gas							
Sensor Element	Flow	0 ~ 500 mL/min	0 ~ 1000 mL/min	0 ~ 5 L/min	0 ~ 10 L/min	0 ~ 50 L/min	0 ~ 100 L/min	0 ~ 200 L/min	
	Pressure	Unidirection							
Rated Pressure Range		-90 ~ 800 kPa							
Display		4 digital * 4 digital, 7 segment LCD display (Red / Green / Orange)							
Instant Flow Rate	Display Range	0 ~ 500 mL/min	0 ~ 1000 mL/min	0 ~ 5.00 L/min	0 ~ 10.00 L/min	0 ~ 50.0 L/min	0 ~ 100.0 L/min	0 ~ 200 L/min	
	Minimum Setting Scale *1	1 mL/min 0.01 ft ³ /min	1 mL/min 0.01 ft ³ /min	0.01 L/min 0.1 ft ³ /min	0.01 L/min 0.1 ft ³ /min	0.1 L/min 1 ft ³ /min	0.1 L/min 1 ft ³ /min	1 L/min 1 ft ³ /min	
Accumulated Flow	Display Range	99999999 mL	99999999 mL	999999.99 L	999999.99 L	9999999.9 L	9999999.9 L	99999999 L	
	Minimum Setting Scale *1	1 mL 0.01 ft ³	1 mL 0.01 ft ³	0.01 L 0.1 ft ³	0.01 L 0.1 ft ³	0.1 L 1 ft ³	0.1 L 1 ft ³	1 L 1 ft ³	
Pressure Display	Display Range	-100 ~ 1000 kPa							
	Minimum Setting Scale	1 0.01 0.01 0.1							
		kPa kgf/cm ² bar psi							
Accuracy	Flow	Guaranteed Range	2 ~ 100 % F.S.						
		Indicator Accuracy	± 3 % F.S. ± 1 digit *2						
		Analog Output Accuracy	± 5 % F.S. *2						
		Repeatability	± 1 % F.S. ± 1 digit *3						
		Linearity	± 3 % F.S. *3						
	Pressure	Temp. Characteristic	± 2 % F.S. (15 ~ 35 °C) ; ± 5 % F.S. (0 ~ 15 °C, 35 ~ 50 °C) (compare with *3)						
		Pressure Characteristic	± 5 % F.S. ± 1 digit *4						
		Guaranteed Range	0 ~ 100 % F.S.						
		Indicator Accuracy	± 2 % F.S. ± 1 digit *5						
		Analog Output Accuracy	± 2.5 % F.S. *5						
Switch Output	Response Time	800 ms (50 ms, 80 ms, 120 ms, 200 ms, 400 ms, 1500 ms selectable)							
	Output Mode	Hysteresis Mode, Window Comparator Mode, Accumulated Output, Accumulated Pulse Output							
Hysteresis		One Point Set Mode, Hysteresis Mode, Window Comparator Mode							
	Output Short Circuit Protection	Adjustable							
Accumulated Pulse Output *1		Yes							
		5 mL/Pulse 0.02 ft ³ /Pulse	10 mL/Pulse 0.04 ft ³ /Pulse	0.05 L/Pulse 0.2 ft ³ /Pulse	0.1 L/Pulse 0.4 ft ³ /Pulse	0.5 L/Pulse 2 ft ³ /Pulse	1 L/Pulse 4 ft ³ /Pulse	2 L/Pulse 7 ft ³ /Pulse	
Analog Output	Voltage Output	Voltage Output Range : 1 ~ 5 V *6 Output Impedance : 1 KΩ							
	Current Output	Current Output Range : 4 ~ 20 mA *6 Load Impedance : ≤ 300 Ω							
	Response Time	Pressure : ≤ 50 ms ; Flow : ≤ 100 ms							
External Input		Non-voltage input, < 0.4 V, ≥ 30 ms							
Communication Interface		RS-485 *7							
Power	Power Supply Voltage	12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 %							
	Current Consumption	≤ 50 mA							
Environment	Withstand Pressure	1000 kPa							
	Enclosure	IP40							
	Working Fluid Temp.	0 ~ 50 °C (No condensation or freezing)							
	Ambient Temp. Range	Operation : 0 ~ 50 °C ; Storage : -10 ~ 60 °C (No condensation or freezing)							
	Ambient Humidity Range	Operation / Storage : 35 ~ 85 % R.H. (No condensation)							
	Insulation Resistance	≥ 50 MΩ (500 V DC, between case and lead wire)							
	Withstand Voltage	1000 V AC in 1-min (between case and lead wire)							
	Vibration	Total amplitude 1.5 mm or 10 G, 10 Hz ~ 55 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z							
	Shock	100 m/s ² (10 G), 3 times each in direction of X, Y and Z							
	EMC	IEC 61000-6-2, IEC 61000-6-4							
Lead Wire		Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 6 cores							
Port Size	Ø6 mm Quick-Fitting	•	•	•	•	•	•	•	
	Ø8 mm Quick-Fitting						•	•	
Weight (with 2 Meter Lead Wire)		Approx. 107 g (Ø6 port) ; Approx. 110.5 g (Ø8 port)							

NOTE :

 *1 : CFM (ft³/min*10⁻²) and ft³*10⁻²

*2 : CONDITION : Inlet Pressure : 300 kPa , Outlet Pressure : 1 atmospheric pressure, 25 °C

*3 : CONDITION : Outlet Pressure : 1 atmospheric pressure, 25 °C

*4 : -90 ~ 800 kPa, Outlet Pressure : 1 atmospheric pressure, 25 °C

*5 : Outlet flow rate = 0 L/min, 25 °C

*6 : PWM output, corresponding to pressure sensor 0 ~ 1000 kPa

*7 : This function only available for Output Specification -02 and -04.

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Features

- Flow and pressure dual sensor.
- 3-color LED display.
- Flow and pressure 4 digit, 7 segment dual LCD display.
- 7 segment 8 digit LCD display.
- Accumulated flow rate display at a glance.
- Real-time monitoring.
- RS-485 Modbus RTU.

Ordering Information

K F P 0 1 - 0 0 5 - 0 1 0 - R 6

Flow Rate Range

- 005 : 500 mL/min
- 010 : 1000 mL/min
- 050 : 5 L/min
- 100 : 10 L/min
- 500 : 50 L/min
- 101 : 100 L/min
- 201 : 200 L/min

Output Specifications

- 010 : 2 NPN output + Analog output 1 ~ 5 V
- 011 : 2 NPN output + Analog output 4 ~ 20 mA
- 02 : 2 NPN output + RS485
- 030 : 2 PNP output + Analog output 1 ~ 5 V
- 031 : 2 PNP output + Analog output 4 ~ 20 mA
- 04 : 2 PNP output + RS485

Port Size

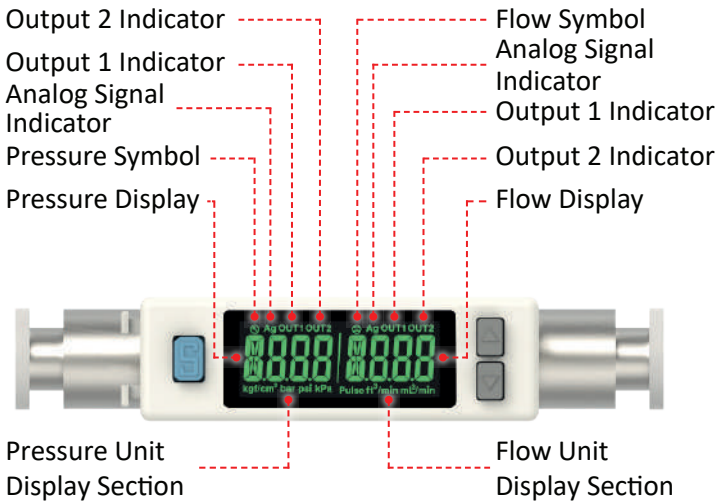
- R6 : ø6 mm, for Flow Rate Range 005, 010, 050, 100, 500.
- R8 : ø8 mm, for Flow Rate Range 101, 201.

Optional Parts

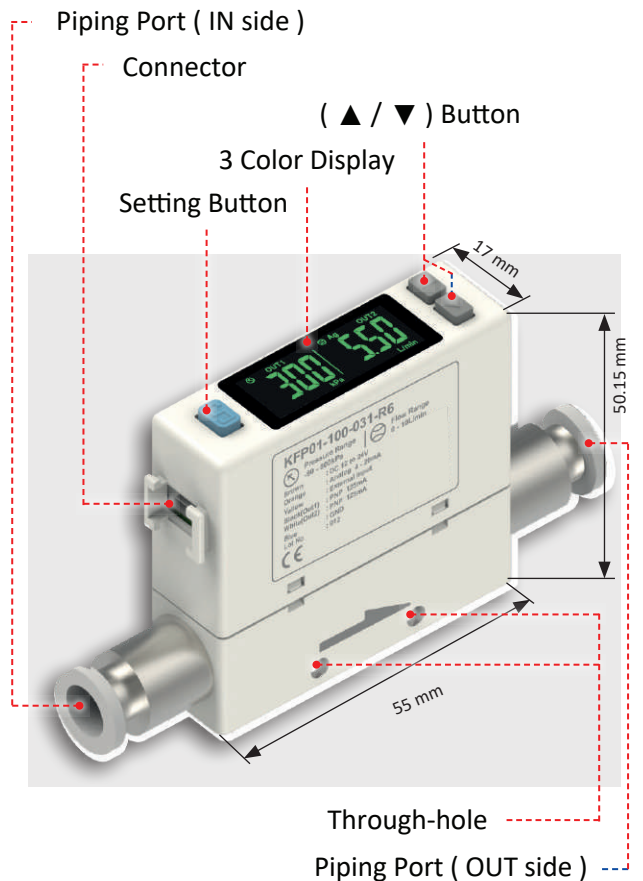
- BT-26 : Mounting bracket

Summary Of Each Part Name

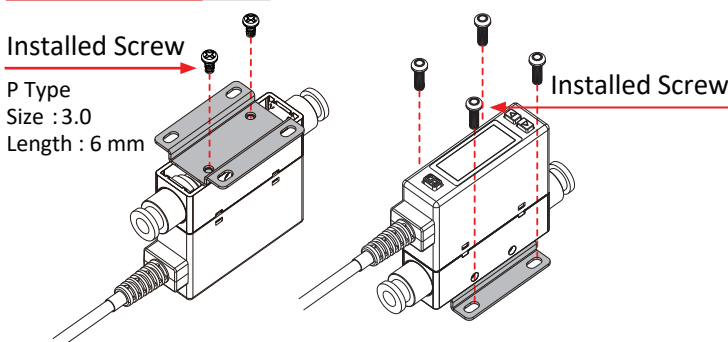
LCD Display



Body

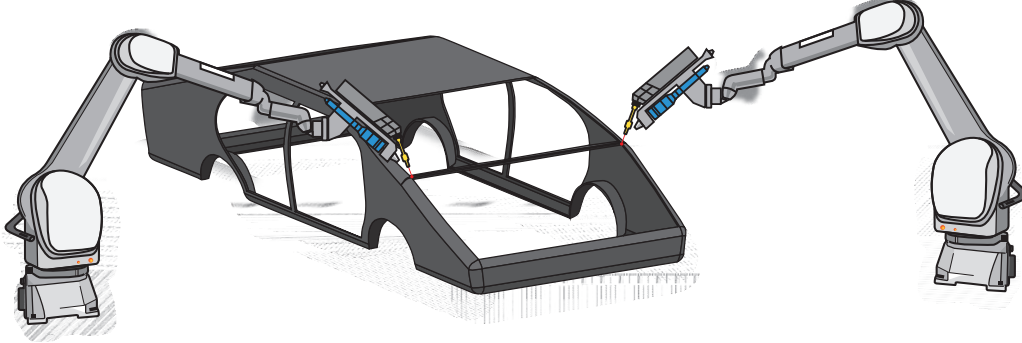


Bracket (BT-26)

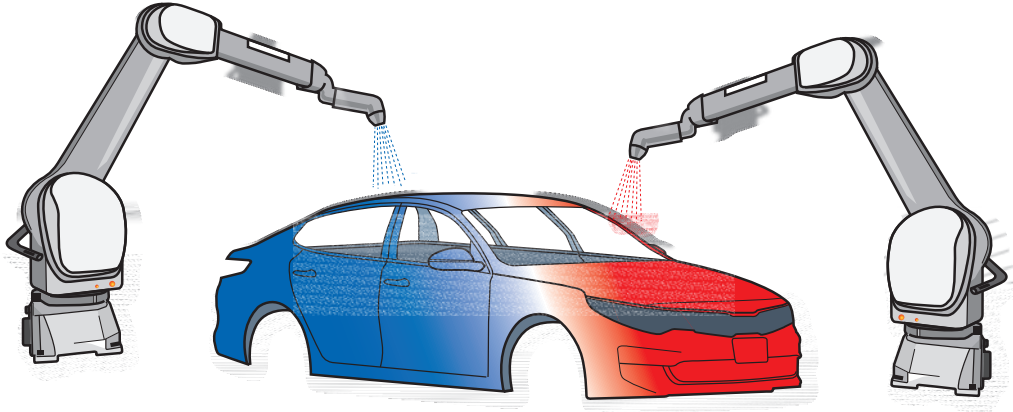


KFP01 SERİSİ / KFP01 SERIES**Applications**

- Quality Control

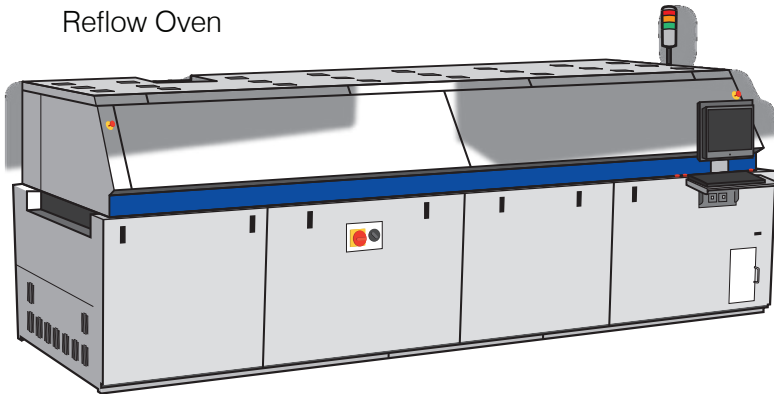
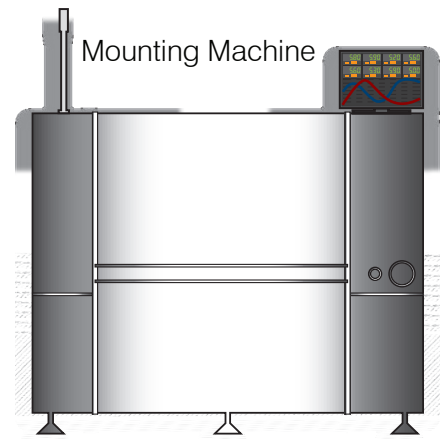
**Laser Welding Robot**

Management of shielding gas, flow rate and pressure.

**Painting Robot**

Paint air flow management of flow rate and pressure.

- Cost Management
- Energy-Saving and Environmental Protection

**Reflow Oven****Mounting Machine****Reflow Oven / Mounting Machine**

N₂ & Air consumption of the whole equipment management.