



KLFMA Series

Digital Mass Flow Sensor

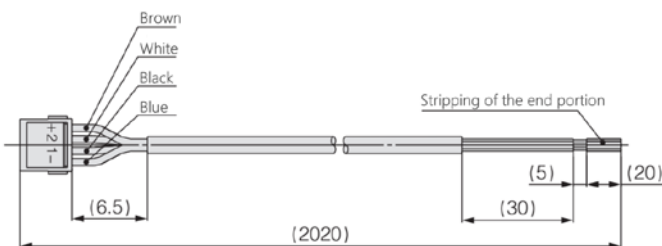


Ordering Code

KLFMA — — — — —

①	②	③	④	⑤	⑥
Series	Type	Flow Rate Range	Port Size	Mounting Bracket	Output Method
KLFMA	01 : Standard	25 : 0.2~25	F1 : G1/8”	－ : No Bracket R : Mounting Bracket	D : NPN output + Analog output (4~20mA)
		100 : 1~100	F2 : G1/4”		
		200 : 2~200			
	02 : High Flow	500 : 5~500	F4 : G1/2”		
		1000 : 10~1000			
		2000 : 20~2000	F6 : G3/4		

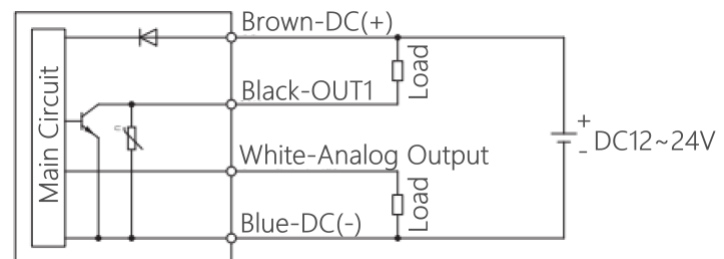
Cable Specification



Conductor	Nominal area	AWG26
	O.D.	About 0.5mm
Insulator	O.D.	About 1mm
	Color	Brown, White, Black, Blue
Casing	Material	Oil-resistant PVC
Finished O.D.		φ3.5

Internal Circuitry and Wiring

NPN + Analog Output



- Maximum applied voltage: 28V,
Maximum load current: 80mA,
Internal voltage drop: less than 1V
- D-analog output: 4~20mA
Load impedance: 50~600Ω



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Specification

Series KLFMA								
Type			KLFMA 0125	KLFMA 01100	KLFMA 01200	KLFMA 02500	KLFMA 021000	KLFMA 022000
Fluid	Medium		Dry air, N ₂ , CO ₂ , Ar, Vacuum			Dry air, N ₂		
Flow	Flow Range (L/min)	Air,N2	0.2~25	1~100	2~200	5~500	10~1000	20~2000
		CO ₂	0.2~12.5	1~50	2~100	—	—	—
	Setting Flow Range	Instantaneous Flow	0.1 L/min		1 L/min		1 L/min	
		Cumulative Flow	1 L			10 L		
		Accumulated Pulse Output (L/pulse)		0.1	1	1	10	10
Pressure	Pressure Range		-0.1~0.75 MPa			0~0.8 MPa		
	Max. Pressure		1.0 MPa					
Electrical	Supply Power		DC12~24V±10%					
	Current Consumption		≤35mA			≤55mA		
Accuracy	Display Accuracy		±3% F.S. ±1 digit					
	Analog Output Accuracy		±3% F.S.					
	Repeat Accuracy		±1% F.S. ±1 digit (±2% F.S. ±1 digit when digital filter 0.05s is selected)					
	Temperature		±5% F.S. ±1 digit (0~50C: 25°C reference)					
Switch Output	Output Form		NPN open collector					
	Output Mode		Hysteresis mode/upper and lower limit comparison mode/accumulated pulse output mode Error output mode/switch output OFF mode					
	On/Off		NPN/PNP open collector					
	Max. Load Current		100mA					
	Max. Supply		DC30V					
	Internal Voltage Drop		NPN: 1V or less (load current 80mA)					
	Response Time		50ms or less					
	Short Circuit Protection		Yes					
Analog Output	Output Form		Current output: 4~20mA					
	Impedance	Voltage Output	Output impedance: about 1kΩ					
		Current Output	Maximum load impedance: 600Ω when power supply voltage is 24V, 300Ω when power supply voltage is 12V					
		Response Time		50ms±40%				



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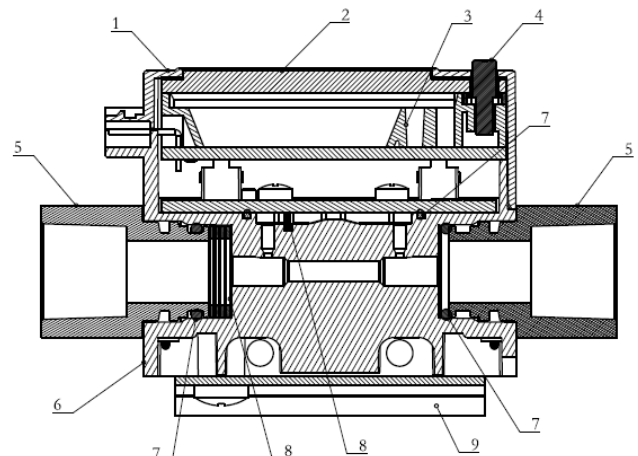
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Specification

Series KLFMA							
Type		KLFMA 0125	KLFMA 01100	KLFMA 01200	KLFMA 02500	KLFMA 021000	KLFMA 022000
Display	Display Unit		STD, NOR				
	Display Mode		Instantaneous flow display / Accumulated flow display				
	Unit	Instantaneous Flow	L/min 、 cfm				
		Cumulative Flow	L 、 ft3				
	Displayable Range	Cumulative Flow	-1.3~26.3	-5~105	-10~210	-25~525	-50~1050
		Forced Zero Range	0~±10%F.S. (For the maximum rated flow, select every 1%F.S.)				
		Accumulated Flow	0~999999999				
	Display		Display mode: LCD, Display color: red. green, Display digits: 4 digits 7 segments				
	Action Indicator Light		Out1/2 lights up when switch is ON: orange				
Environ-mental Resist-ance	Protection level		IP 40				
	Voltage Resistance		AC1000V (1 minute between lead and plastic housing)				
	Insulation Resistance		50 MΩ or more (DC500V, between lead and plastic housing)				
	Temperature Range		Action: 0~50°C, Storage: -10~60°C (no condensation, no freezing)				
	Humidity Range		Action, storage: 35-85%RH (no condensation, no freezing)				

Structural Material

No.	Name	Material
1	Casing	PBT+30%GF
2	Panel	PMMA
3	Panel bracket	PC black
4	Button	Silicone rubber
5	Connector	SUS304
6	Body	PPS+30%GF
7	Sealing ring	FKM
8	Filter	SUS304
9	Bracket	SUS304

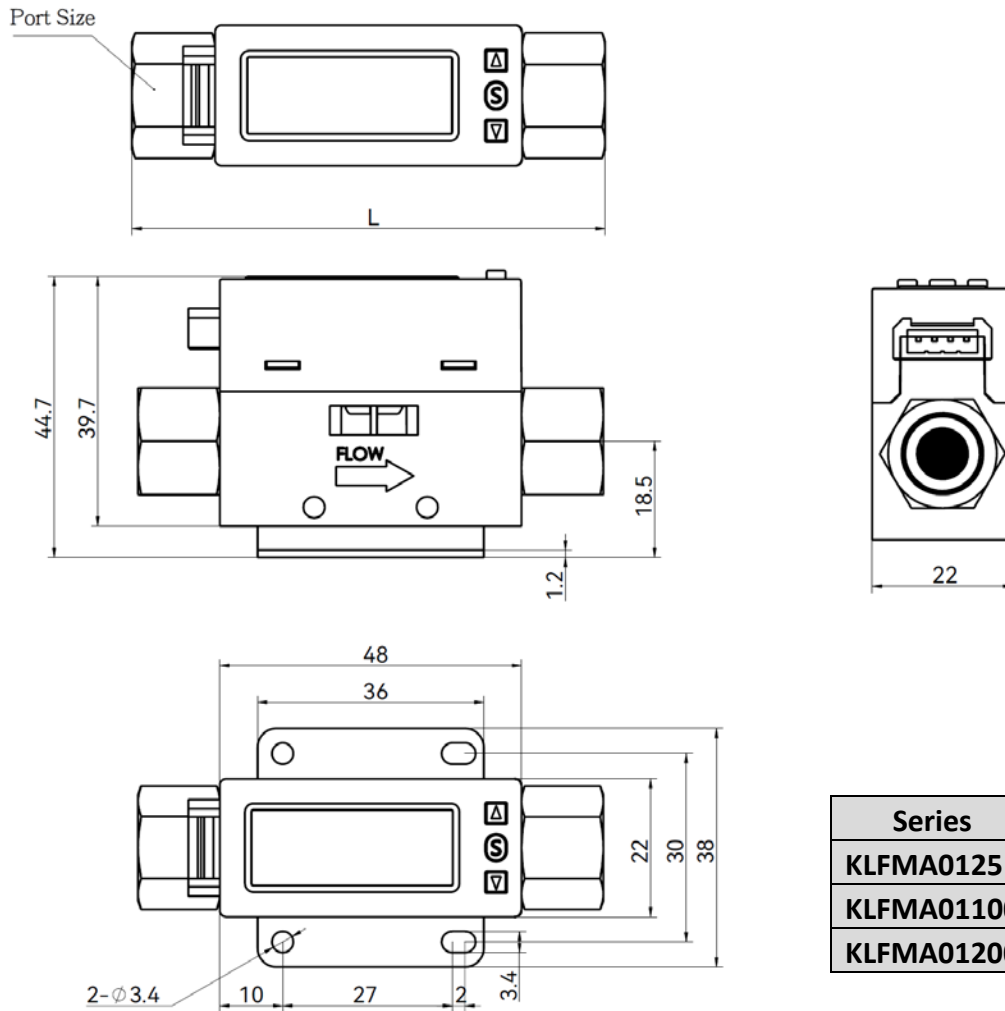




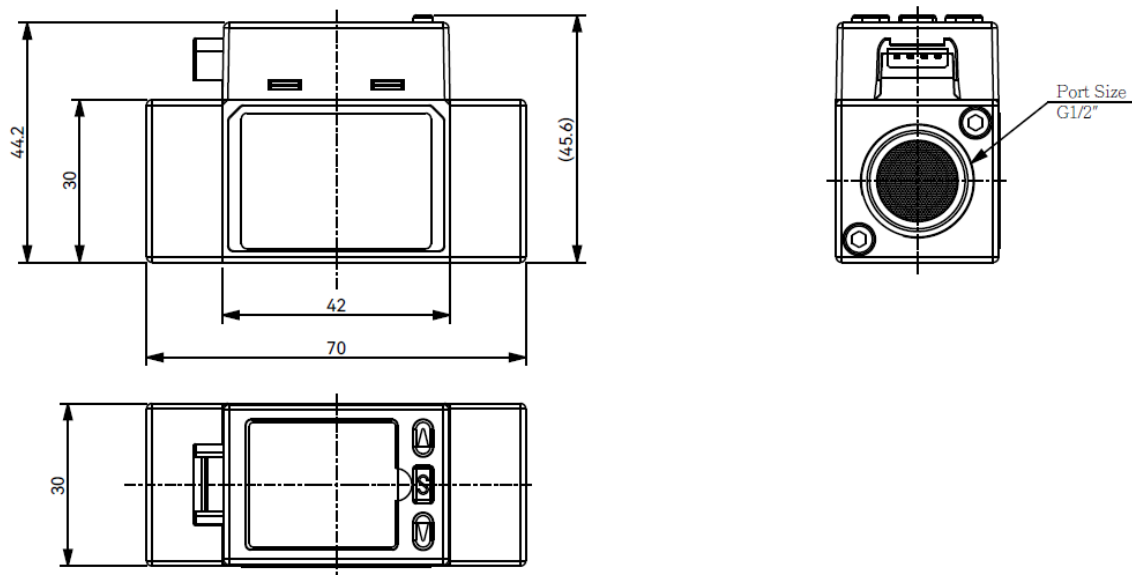
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Dimensions



KLFMA02500 、KLFMA021000





Digital Mass Flow Sensor

KLFMA Series

Dimensions

KLFMA022000

