

NEW STANDARD OF
FLOW & PRESSURE SENSOR



KFP01

Digital Flow and Pressure Sensor

Cost Control

User-friendly

High Performance

DRY AIR, N₂

RS-485 MODBUS CONTROL



High Precision

Flow

Indicator accuracy $\pm 3\%$ F.S.
Repeatability $\pm 1\%$ F.S.

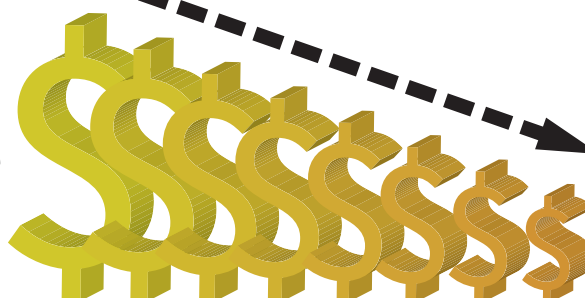
Pressure

Indicator accuracy $\pm 2\%$ F.S.
Repeatability $\pm 0.2\%$ F.S.

Cost Reduction

Traditional

- 2× Sensor cost
- 2× Power supply
- 2× Plumbing costs & time
- 2× Wiring work cost & time
- 2× Location of installation



KFP01

Total Cost & Time
Reduction

2-in-1 Design

Pressure and Flow Rate Simultaneous Monitoring

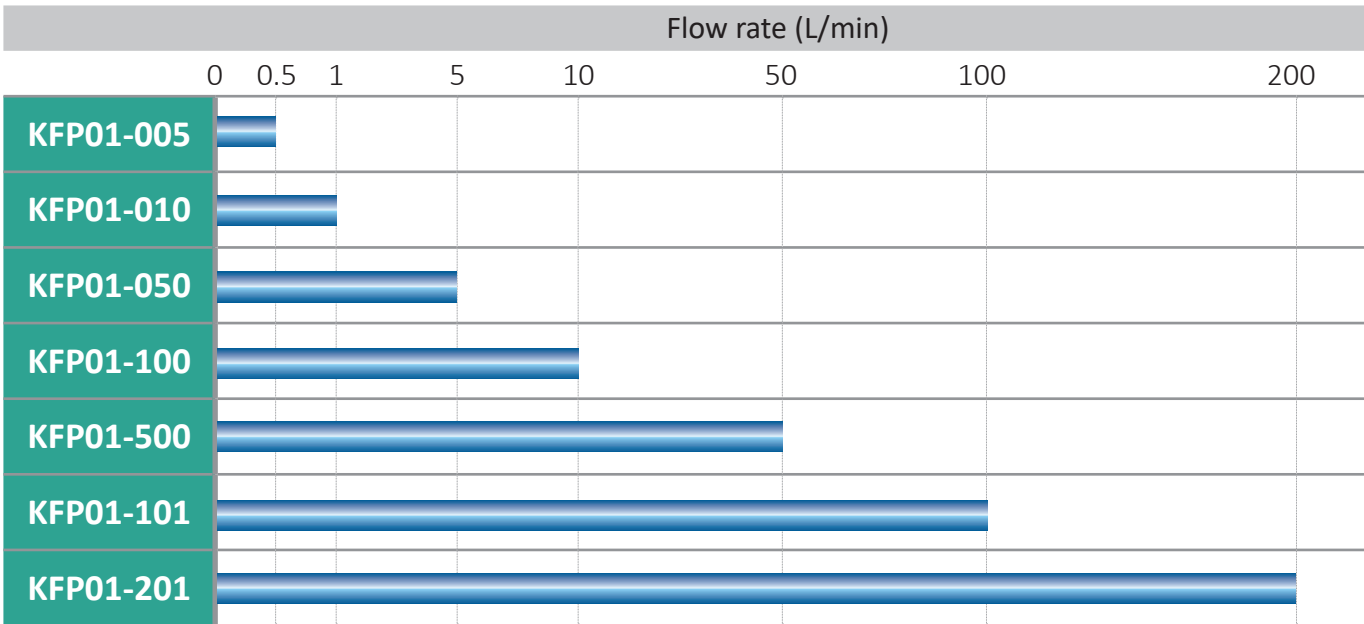
Accumulated Flow Rate Display at a Glance



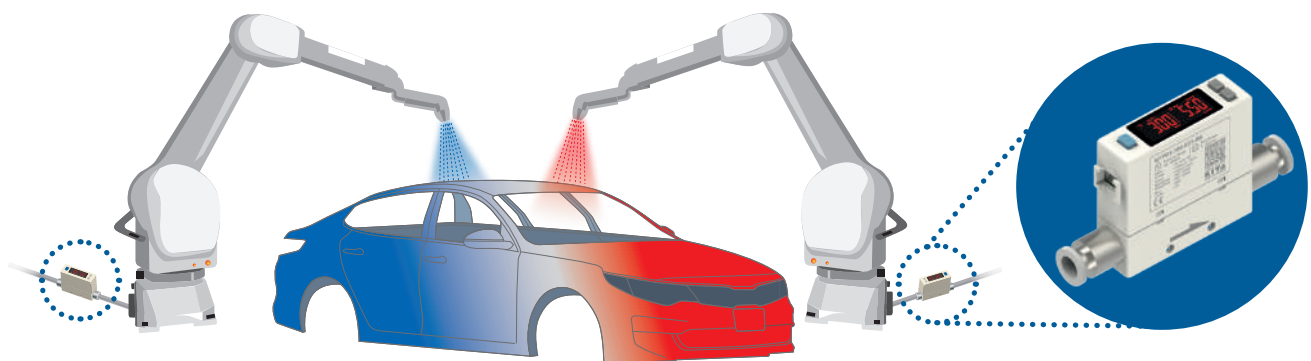
Multiple Output Function

Digital Display	Switch Output	Analog output	Accumulated Pulse Output
Instantaneous flow value Accumulated flow value Pressure value	NPN output PNP output	Voltage output 1 ~ 5 V Current output 4 ~ 20 mA	50ms pulse output

Wide Range of Flow Rates



Application

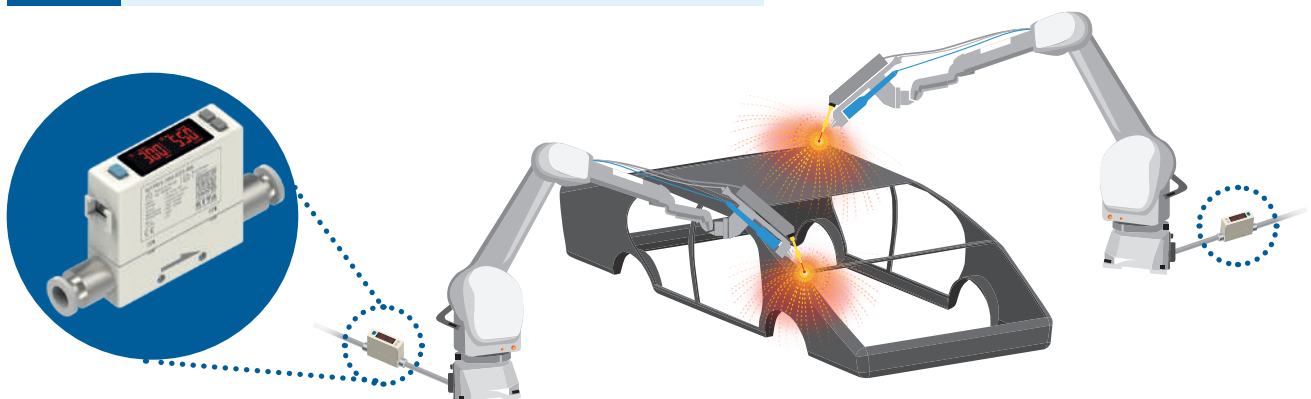


Application

01

Paint and Coating Flow Monitoring

Air flow and pressure management of paint and coating processes.



Application

02

Laser Welding Monitoring

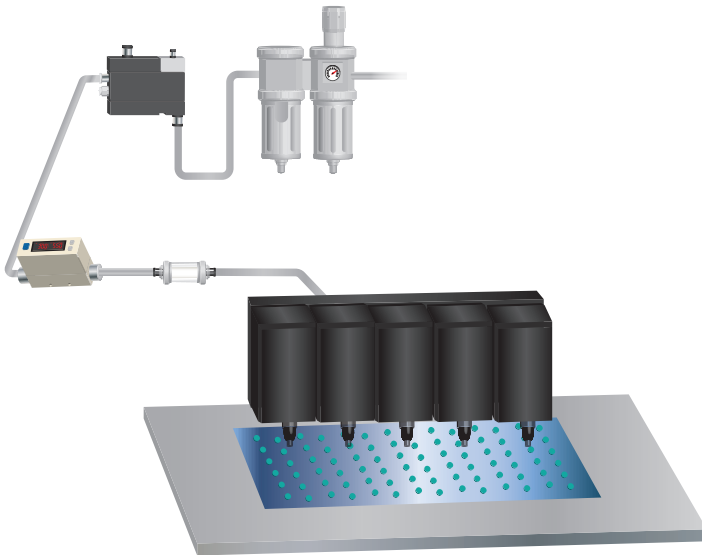
Precision management of shielding gas, flow rate and pressure.

Application

03

Suction Operation

Detect the suction state of microelectronic parts by flow rate.

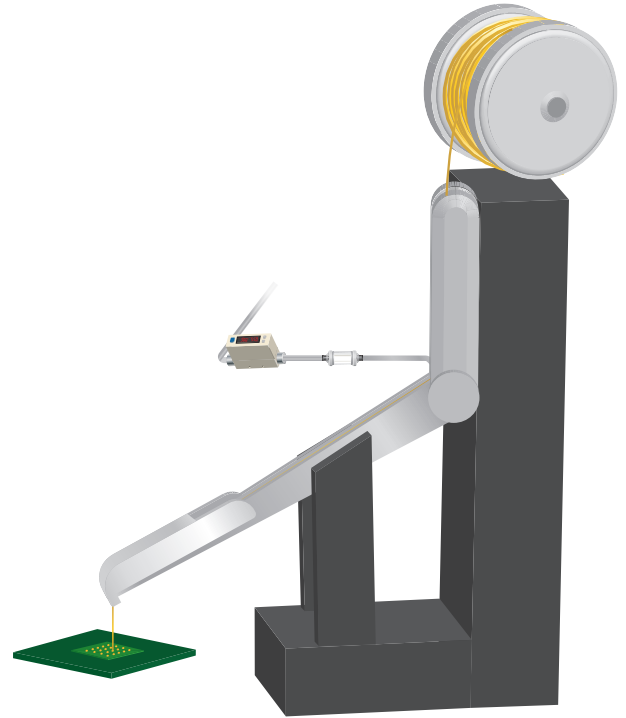


Application

04

Electronic Part Installation

Control the tension of gold wire for bonding electronic parts.

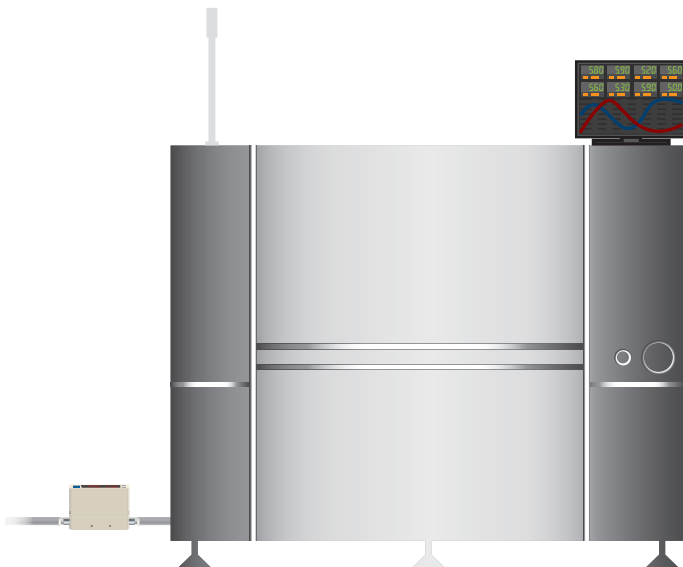


Application

05

Air Consumption Monitoring

Monitor air consumption of devices.

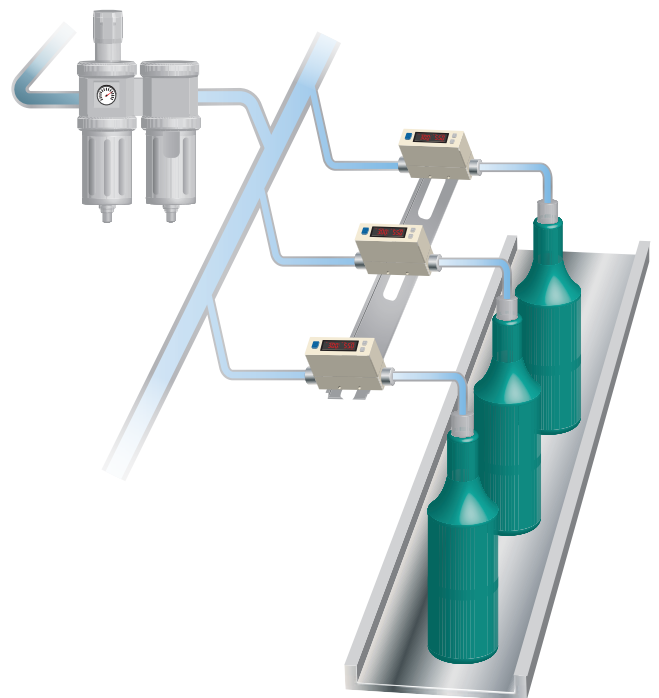


Application

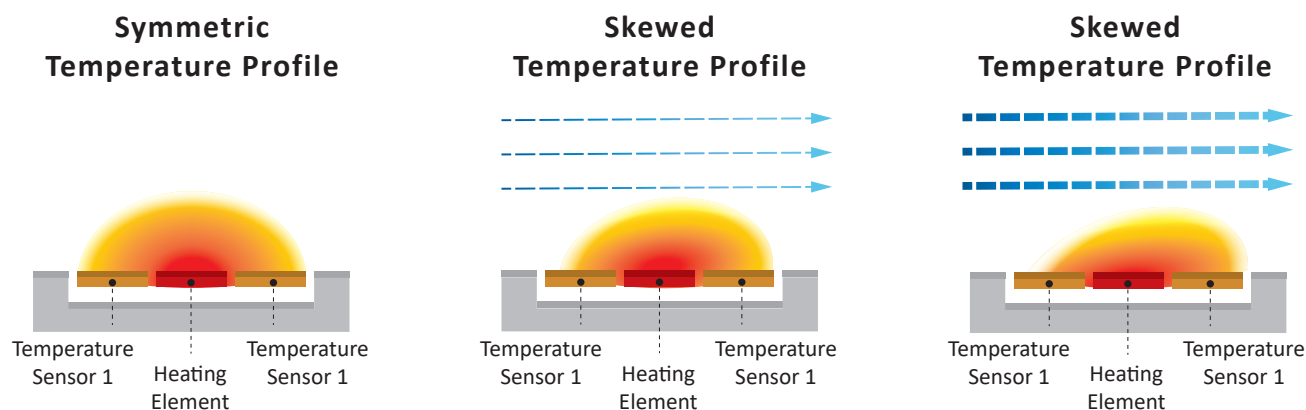
06

Leakage Detect

Container with gas and inspect whether it leaks.



Thermal Mass Flow Sensor Principles



(a) No Flow

In the absence of flow, the heat from the heater spreads evenly left and right, so the temperature distribution is like (a).

(b) Small Flow

When flow begins, the inlet side is cooled by the flow, the outlet side is warmed by the heat of the inlet side of the heater, and the temperature distribution is like (b).

(c) Large Flow

When the flow increases, it becomes a distribution like (C). Since the temperature distribution before and after the heater is proportional to the flow rate, the flow rate can be determined from the ratio.

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

Optional Parts

BT-26 : Mounting bracket

Port Size

R6 : $\varnothing 6$ mm, for Flow Rate Range
005, 010, 050, 100, 500.
R8 : $\varnothing 8$ mm, for Flow Rate Range
101, 201.

Specifications

Model			005	010	050	100	500	101	201		
Fluid			Dry air, N ₂ , Non-corrosive / Non-flammable gas								
Sensor Element	Flow	Measured Flow Rate Range	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		
		Flow Direction	Unidirection								
	Pressure	Rated Pressure Range	-90 ~ 800 kPa								
			4 digital * 4 digital, 7 segment LCD display (Red / Green / Orange)								
Display	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	LPM	1 mL/min	1 mL/min	0.01 L/min	0.01 L/min	0.1 L/min	0.1 L/min	1 L/min	
			CFM	0.01 ft ³ /min	0.01 ft ³ /min	0.1 ft ³ /min	0.1 ft ³ /min	1 ft ³ /min	1 ft ³ /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	1 mL	0.01 L	0.01 L	0.1 L	0.1 L	1 L	
				0.01 ft ³	0.01 ft ³	0.1 ft ³	0.1 ft ³	1 ft ³	1 ft ³	1 ft ³	
	Pressure Display		Display Range	-100 ~ 1000 kPa							
			Minimum Setting Scale	kPa	1						
				kgf/cm ²	0.01						
				bar	0.01						
psi				0.1							
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								
		Temp. Characteristic	± 2 % F.S. (15 ~ 35 °C) ; ± 5 % F.S. (0 ~ 15 °C, 35 ~ 50 °C) (compare with *3)								
	Pressure	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								
		Repeatability	± 0.2 % F.S. ± 1 digit *5								
		Linearity	± 1 % F.S. *5								
		Temp. Characteristic	± 2 % F.S. (compare with *5)								
				2 NPN : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 28 V DC Voltage Drop : ≤ 1.5 V							
		2 PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Voltage Drop : ≤ 1.5 V									
Switch Output	Response Time	Flow	800 ms (50 ms, 80 ms, 120 ms, 200 ms, 400 ms, 1500 ms selectable)								
		Pressure	2.5 ms (25 ms, 100 ms, 250 ms, 500 ms, 1000 ms, 1500 ms selectable)								
	Output Mode	Flow	Hysteresis Mode, Window Comparator Mode, Accumulated Output, Accumulated Pulse Output								
		Pressure	One Point Set Mode, Hysteresis Mode, Window Comparator Mode								
	Hysteresis	Adjustable									
Output Short Circuit Protection		Yes									
Accumulated Pulse Output *1			5 mL/Pulse	10 mL/Pulse	0.05 L/Pulse	0.1 L/Pulse	0.5 L/Pulse	1 L/Pulse	2 L/Pulse		
			0.02 ft ³ /Pulse	0.04 ft ³ /Pulse	0.2 ft ³ /Pulse	0.4 ft ³ /Pulse	2 ft ³ /Pulse	4 ft ³ /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

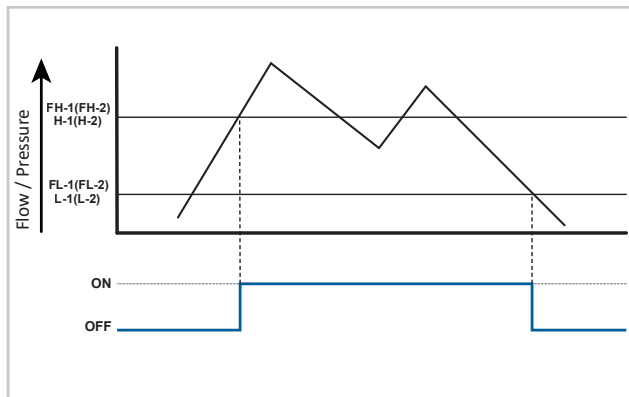
*5 : Outlet flow rate = 0 L/min, 25 °C

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

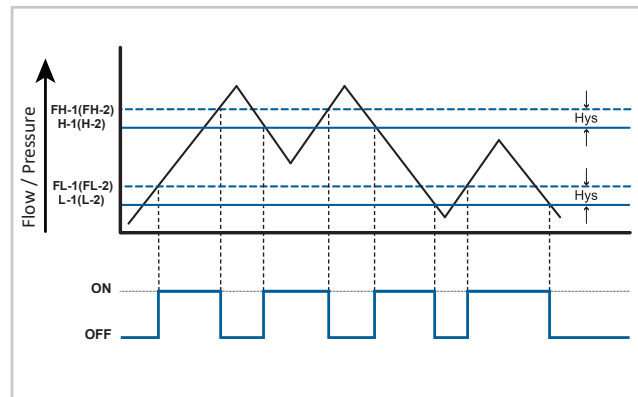
*7 : This function only available for Output Specification -02 and -04

Output Type

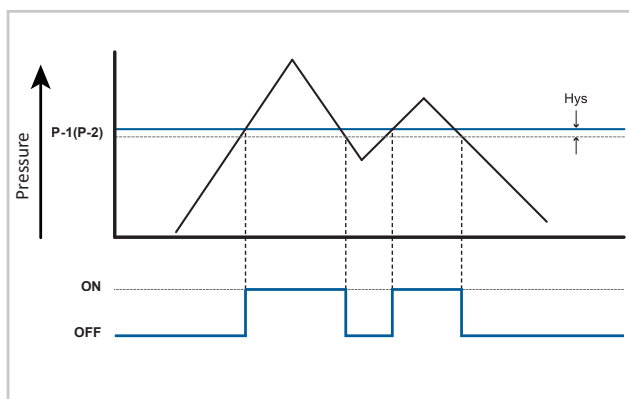
• Hysteresis Mode



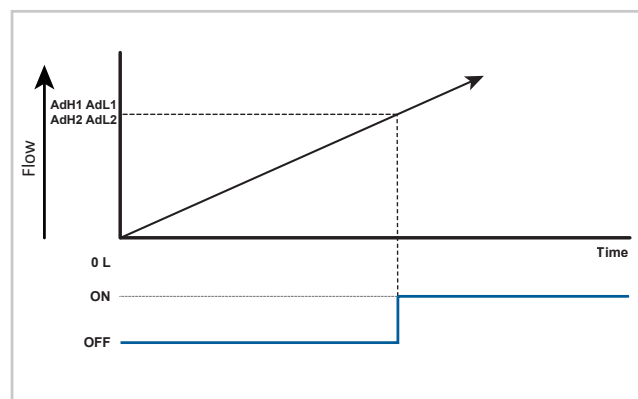
• Window Comparator Mode



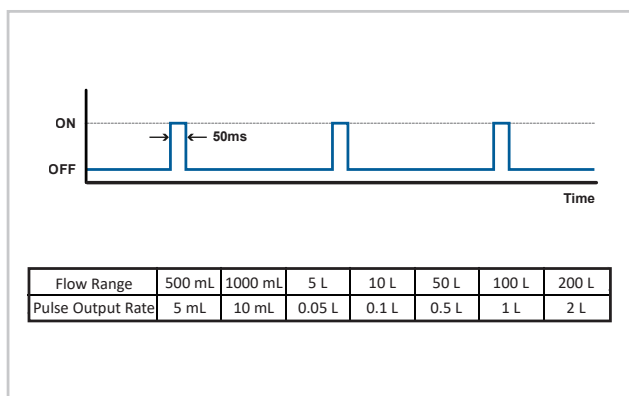
• One Point Set Mode



• Accumulated Output Mode



• Accumulated Pulse Output Mode

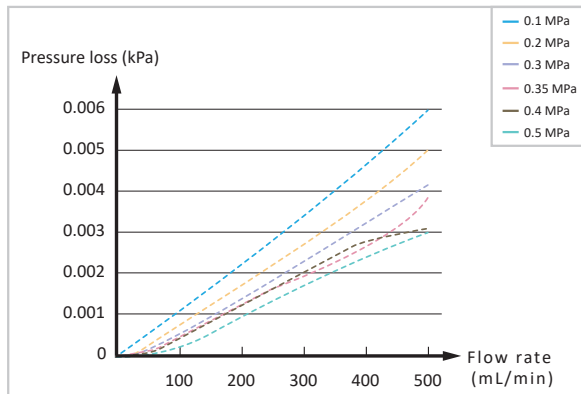


NOTE

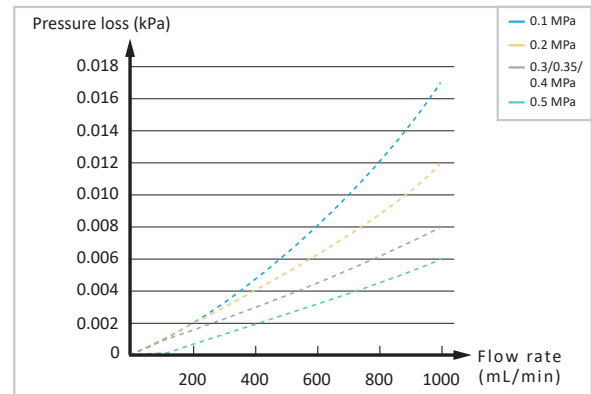
- *1 : In case hysteresis is set at less than or equal to 2 digits, switch output may chatter if input pressure fluctuates near the set point.
- *2 : When using window comparator mode, the difference between two set points must be greater than the fixed hysteresis, otherwise will cause the switch output to malfunction.

Pressure Loss Characteristics

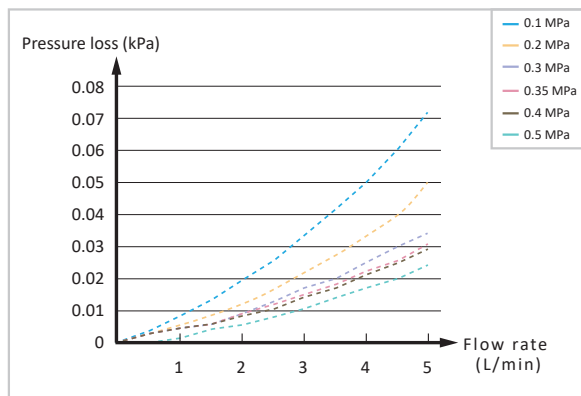
● KFP01-005- ☐ - ☐



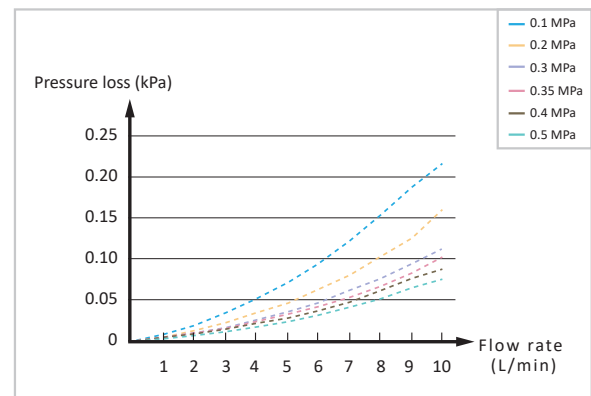
● KFP01-010- ☐ - ☐



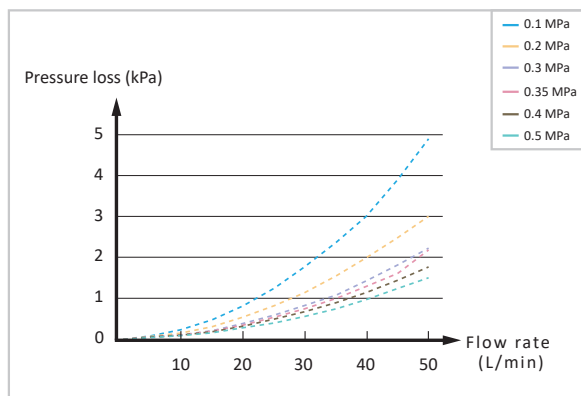
● KFP01-050- ☐ - ☐



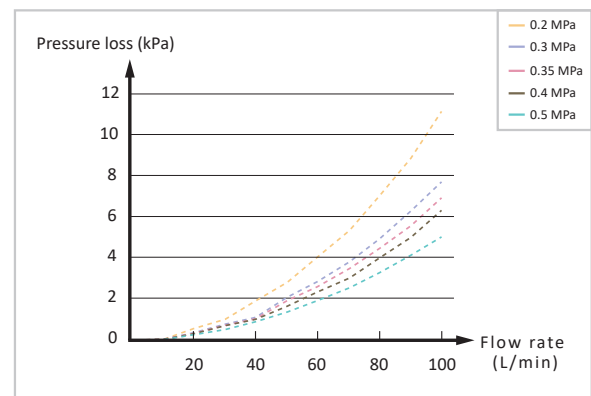
● KFP01-100- ☐ - ☐



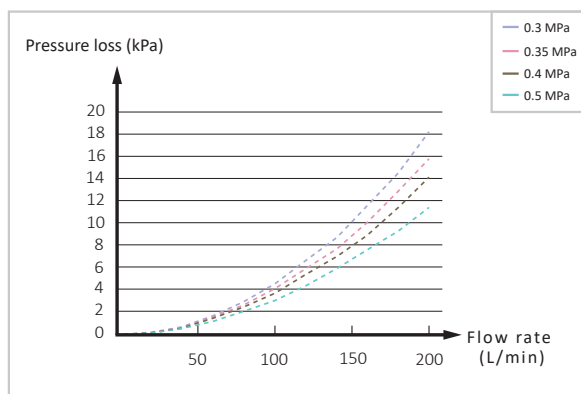
● KFP01-500- ☐ - ☐



● KFP01-101- ☐ - ☐



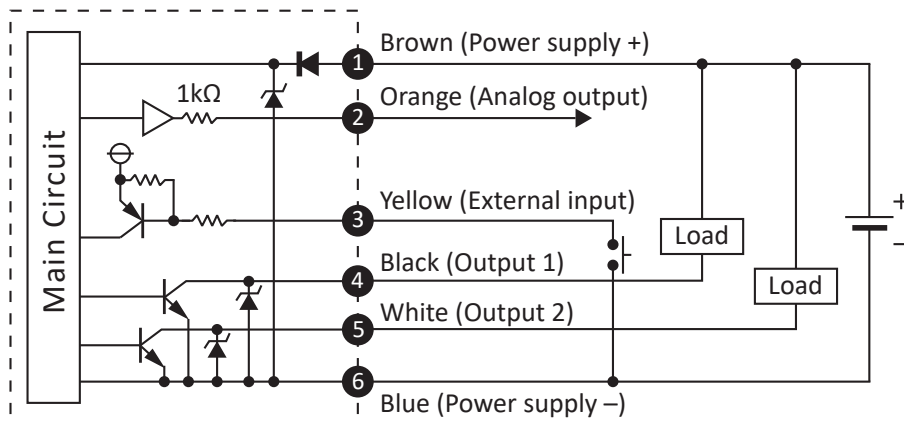
● KFP01-201- ☐ - ☐



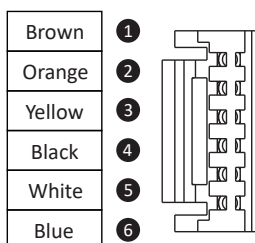
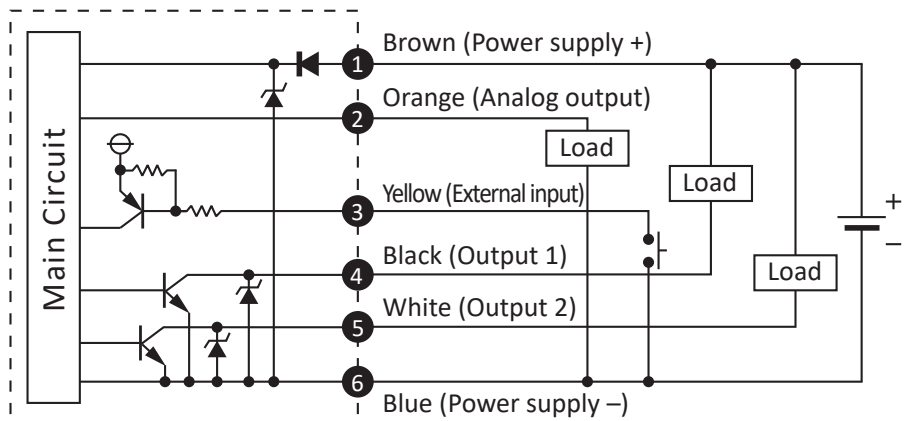
Wiring Diagrams

① NPN Output, Analog Output and External Input

- NPN Output / Analog Voltage Output / External Input



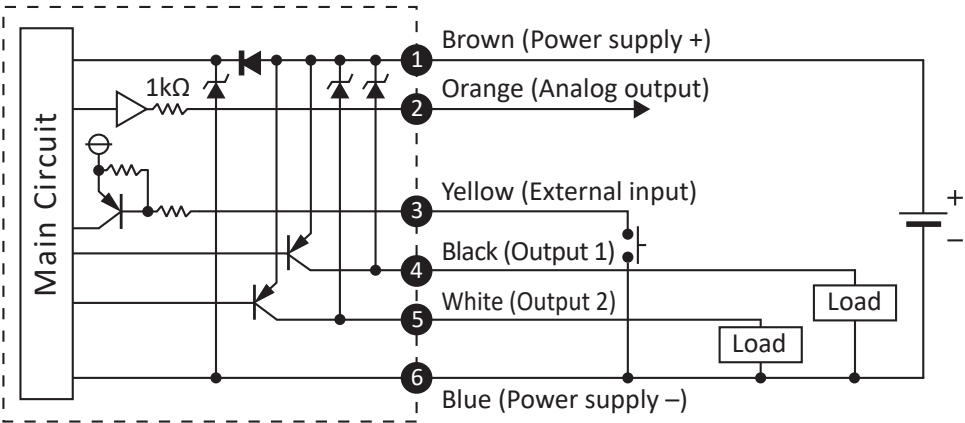
- NPN Output / Analog Current Output / External Input



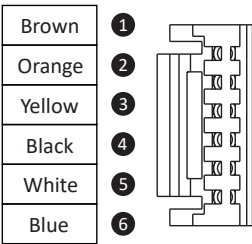
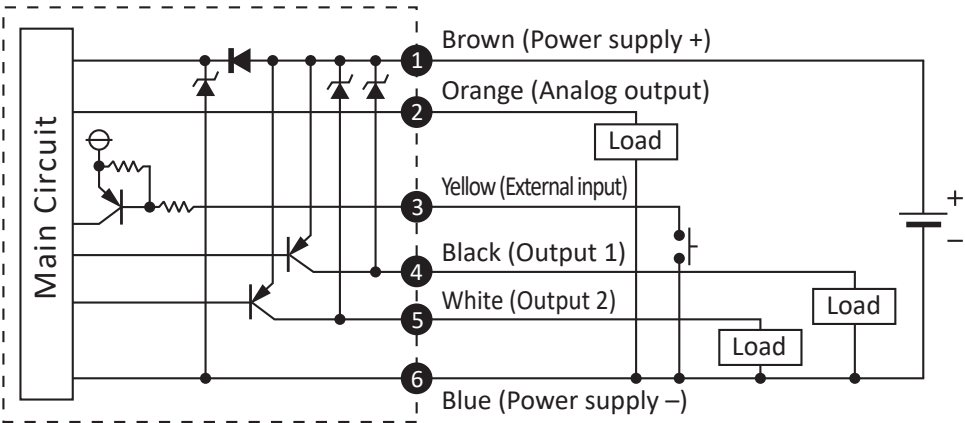
Pin No.	Line color	Content
①	Brown	Power supply (12 to 24 V DC)
②	Orange	Analog voltage output : 1 ~ 5 V Analog current output : 4 ~ 20 mA
③	Yellow	External input
④	Black	Output 1 (Max. load current : 125 mA)
⑤	White	Output 2 (Max. load current : 125 mA)
⑥	Blue	0 V (GND)

2 PNP Output, Analog Output and External Input

- PNP Output / Analog Voltage Output / External Input

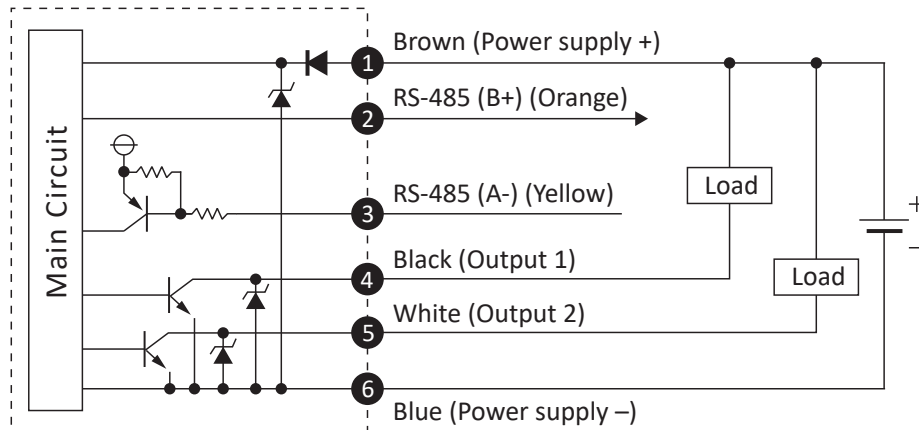


- PNP Output / Analog Current Output / External Input

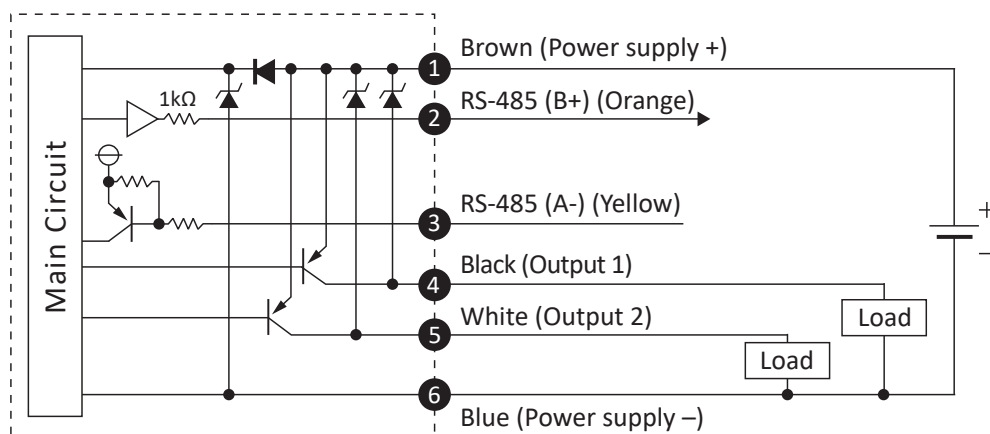


Pin No.	Line color	Content
1	Brown	Power supply (12 to 24 V DC)
2	Orange	Analog voltage output : 1 ~ 5 V Analog current output : 4 ~ 20 mA
3	Yellow	External input
4	Black	Output 1 (Max. load current : 125 mA)
5	White	Output 2 (Max. load current : 125 mA)
6	Blue	0 V (GND)

3 NPN Output, RS-485 MODBUS Mode



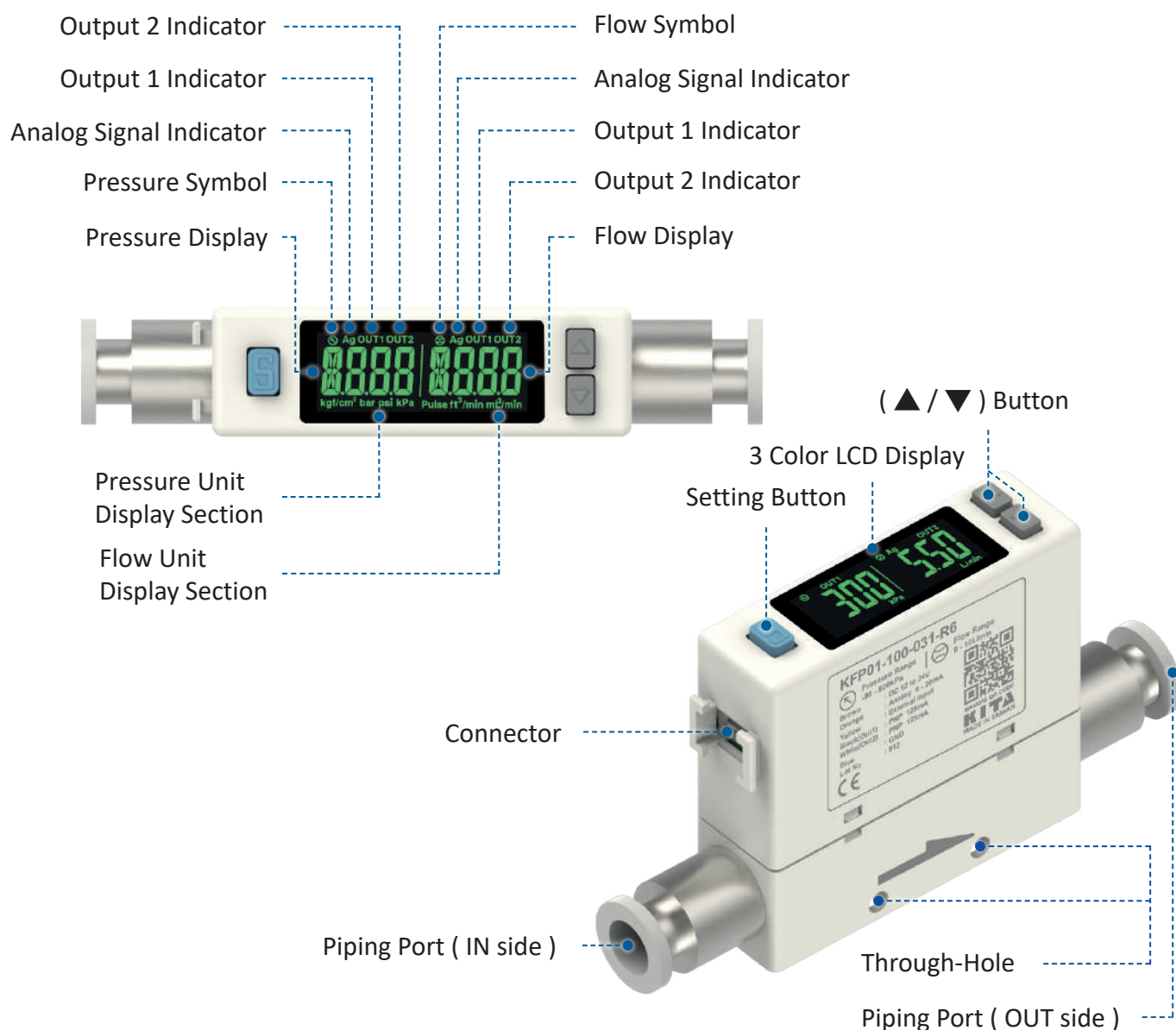
4 PNP Output, RS-485 MODBUS Mode



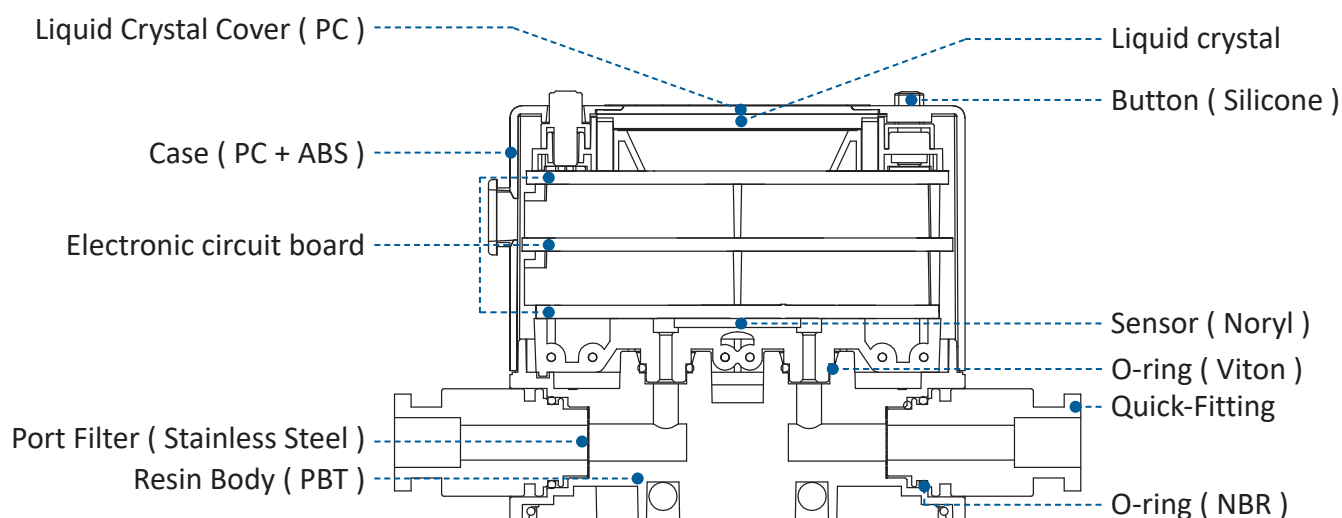
Brown	①
Orange	②
Yellow	③
Black	④
White	⑤
Blue	⑥

Pin No.	Line color	Content
①	Brown	Power supply (12 to 24 V DC)
②	Orange	RS-485 (B+)
③	Yellow	RS-485 (A-)
④	Black	Output 1 (Max. load current : 125 mA)
⑤	White	Output 2 (Max. load current : 125 mA)
⑥	Blue	0 V (GND)

Names and Functions of Individual Parts

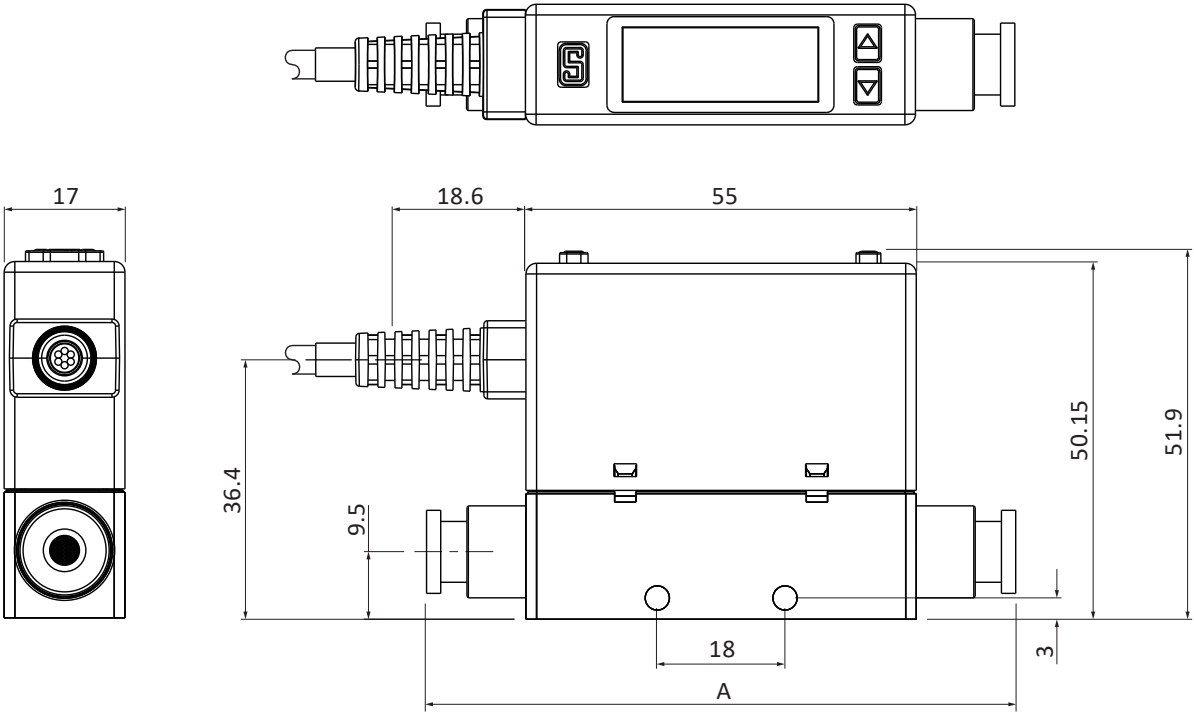


Construction



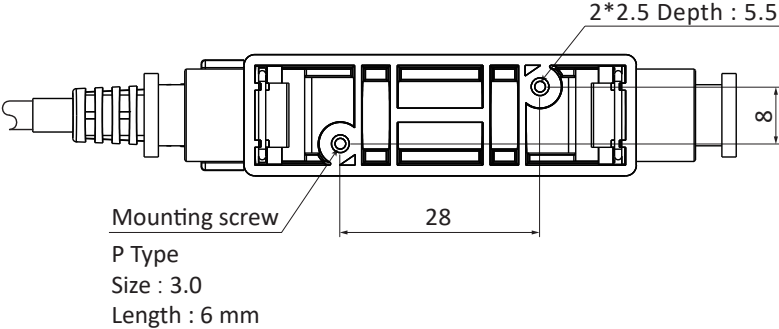
Dimensions

● Product

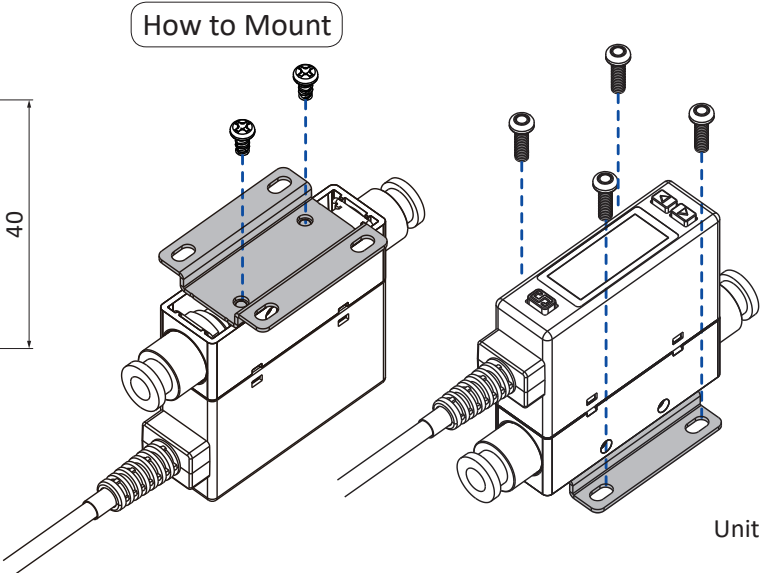
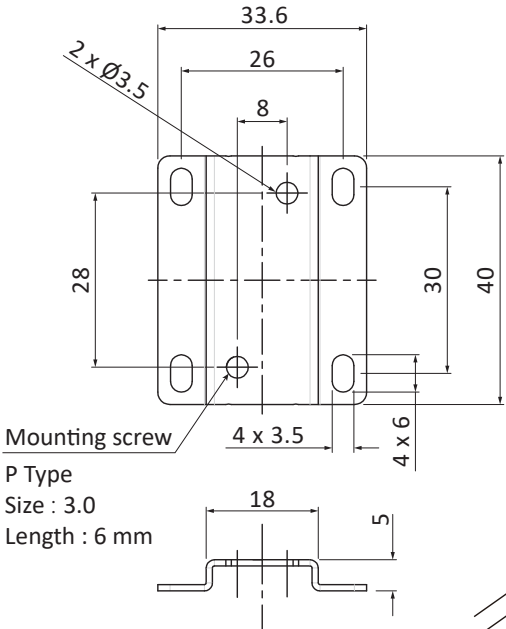


A	
Ø 8	92.1
Ø 6	82.9

(mm)



● Mounting Bracket (BT-26)



Functions Instructions

• Function Setting Mode

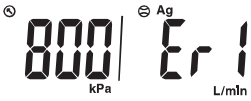
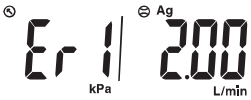
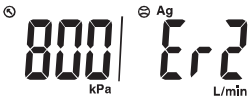
Function Code	Item	Default Setting	Explanation
F-01	OUT1 OUT1 setting	OUT1	Select output 1 corresponding to flow sensor or pressure sensor. Set the flow rate or pressure value to switch ON / OFF.
	OUT1 OUT1 sensor correspondence	Flow	
	Flow OUT1 output mode	HYG	
	OUT1 OUT1 output type	no	
	FL-1 OUT1 set value input	50 % of maximum measured flow rate 005 : 250 mL/min 、 010 : 500 mL/min 050 : 2.50 L/min 、 100 : 5.00 L/min 500 : 25.0 L/min 、 101 : 50.0 L/min 201 : 100 L/min	
	FH-1 OUT1 set value input	60 % of maximum measured flow rate 005 : 300 mL/min 、 010 : 600 mL/min 050 : 3.00 L/min 、 100 : 6.00 L/min 500 : 30.0 L/min 、 101 : 60.0 L/min 201 : 120 L/min	
F-02	OUT2 OUT2 setting	OUT2	Select output 2 corresponding to flow sensor or pressure sensor. Set the flow rate or pressure value to switch ON / OFF.
	OUT2 OUT2 sensor correspondence	Flow	
	Flow OUT2 output mode	HYG	
	OUT2 OUT2 output type	no	
	FL-2 OUT2 set value input	50 % of maximum measured flow rate 005 : 250 mL/min 、 010 : 500 mL/min 050 : 2.50 L/min 、 100 : 5.00 L/min 500 : 25.0 L/min 、 101 : 50.0 L/min 201 : 100 L/min	
	FH-2 OUT2 set value input	60 % of maximum measured flow rate 005 : 300 mL/min 、 010 : 600 mL/min 050 : 3.00 L/min 、 100 : 6.00 L/min 500 : 30.0 L/min 、 101 : 60.0 L/min 201 : 120 L/min	
F-03	CLor LCD display setting	CLor	Select back light color and display mode.
	dISP LCD display corresponding to output	OUT1	
	dISP LCD display color selection	SOB	
F-04	rESP Response time selection	rESP	Select the response time for analog output. Pressure sensor : 2.5 ms ~ 1500 ms. Flow sensor : 50 ms ~ 1500 ms.
	rESP Flow / Pressure sensor selection	Flow	
	Flow Response time selection	800 (ms)	
F-05	UPdR Display refresh time selection	UPdR	Display refresh cycle can be set in 200 ms, 500 ms or 1000 ms.
	UPdR Flow / Pressure sensor selection	Flow	
	UPdR Display refresh time of flow sensor selection	500 (ms)	
F-06	Unit Unit selection	Unit	Select the UNIT of pressure / flow sensor.
	Flow Flow unit selection	LPa	
	PrES Pressure unit selection	Pa	

Function Code	Item	Default Setting	Explanation
F-07	rEFE Flow reference standard selection	rEFE	Select the flow value is shown under standard (ANR) or normal condition (NOR).
	rEFE Flow reference standard selection	Anr	
F-08	AnG Analog output selection	AnG	Select the analog corresponding to pressure or flow sensor.
	FLoY Analog output selection	FLoY	
F-09	EEP _r Accumulated value hold selection	EEP _r	To save the last accumulated flow value every 2 or 5 minutes.
	EEP _r Accumulated value hold selection	off	
F-10	dIS Flow sensor display mode selection	dIS	Select to display Instantaneous Flow or Accumulated Flow Mode.
	dSP Flow sensor display mode selection	inS	
F-91	EEo Power-Save mode selection	EEo	Select if turn on power-save mode to reduce power consumption.
	EEo Power-Save mode selection	no	
F-92	inP External input selection	inP	Select for Accumulated flow rate zero clear, Auto-Shift or Auto-Shift zero.
	inP External input selection	r_r	
F-93	mbUS Modbus RTU setting	mbUS	Set ID number, baud rate and transmission format.
	id ID number setting	1	
	rAt Baud rate setting	96 (9600 Bd)	
	For Transmission format setting	n81	
	trA Communications protocol setting	rTU	
F-94	F inE Fine adjustment setting	F inE	The displayed value can be adjusted slightly.
	F inE Fine adjustment setting	off	
F-95	FoUt Forced output function	FoUt	To turn the analog ON / OFF forcibly.
	oUt1 Forced output function	off	
	oUt2 Forced output function	off	
F-99	rESt Reset to the default setting	rESt	Return to the factory default setting.
	rSt Reset to the default setting	off	

● Measurement Mode

Item	Explanation
Pressure display	Display pressure value.
Flow display	Display instantaneous flow rate.
Accumulated flow rate display	Display accumulated flow rate.
Pressure zero setting	The displayed pressure value can be adjusted to "0".
Instantaneous flow rate zero setting	The displayed instantaneous flow rate value can be adjusted to "0".
Accumulated flow rate zero clear	The accumulated flow rate can be set to "0".
Peak value display	The maximum pressure or instantaneous flow can be detected when the power is supplied for a period.
Bottom value display	The minimum pressure or instantaneous flow can be detected when the power is supplied for a period.
Key lock / unlock mode	To prevent errors occurring due to unintentional changes of the set values.

Error Code Instruction

Error Type	Error Code	Error Condition	Troubleshooting
OUT1 excess load current error		Output 1 load current is more than 125 mA.	Turn power off and check the cause of overload current or lower the current load under 125 mA, then restart.
			
OUT2 excess load current error		Output 2 load current is more than 125 mA.	
			
Zero adjustment error		The instant flow is within $\pm 10\%$ F.S. of the zero point.	Perform the zero clear function again under no flow conditions.
		The pressure value is over $\pm 3\%$ F.S. of the zero point.	Perform the zero clear function again under no pressure conditions.
System error		Memory error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
		Internal data error	
		Internal data error	
		System parameter error	
Applied flow / pressure error		The instant flow has exceeded the upper limit of the flow display range.	Reduce the flow to the display range.
		The pressure has exceeded the upper limit of the pressure display range.	Reduce the pressure to the display range.
		The instant flow has exceeded the lower limit of the flow display range.	Ensure the flow is in the correct direction.
		The pressure has exceeded the lower limit of the pressure display range.	Reduce the pressure to the display range.

Modbus RTU Instruction

Error Code	Explanation	Operation
0000H	ID Number (0 ~ 255) Range : 0 ~ 255	Read / Write
0001H	Baud rate setting 0 : 9600 bps 1 : 19200 bps 2 : 38400 bps	Read / Write
0002H	Transmission format setting 0 : N.8.1 1 : E.8.1 2 : O.8.1	Read / Write
0003H	Communications protocol setting 0 : RTU	Read / Write
0004H	Measured flow rate range 005 : 0 ~ 500 mL/min 010 : 0 ~ 1000 mL/min 050 : 0 ~ 5 L/min 100 : 0 ~ 10 L/min 500 : 0 ~ 50 L/min 101 : 0 ~ 100 L/min 201 : 0 ~ 200 L/min	Read
0005H	Instantaneous flow value	Read
0006H	Flow unit 0 : LPM (L/min or mL/min) 1 : CFM (ft ³ /min)	Read / Write
0007H	Decimal place for flow value 0 : None 1 : One decimal place 0.1 2 : Two decimal places 0.01 3 : Three decimal places 0.001	Read
0008H	Accumulated flow value (ADL) XXXX 9999	Read
0009H	Accumulated flow value (ADH) 9999 XXXX	Read
000AH	Flow reference standard 0 : ANR (Standard condition) 1 : NOR (Normal condition)	Read / Write
000BH	Flow sensor display mode 0 : Instantaneous flow 1 : Accumulated flow	Read / Write
000CH	Accumulated value hold 0 : None 1 : 2 min/times 2 : 5 min/times	Read / Write

Error Code	Explanation	Operation
000DH	Flow display refresh time 0 : 200 ms 1 : 500 ms 2 : 1000 ms	Read / Write
000EH	Rated pressure range 3 : -0.100 ~ 1.000 MPa	Read
000FH	Display pressure value	Read
0010H	Pressure unit 0 : kPa 1 : Kg/cm ² 2 : bar 3 : psi	Read / Write
0011H	Decimal place for pressure value 1 : One decimal place 0.1 2 : Two decimal places 0.01 3 : Three decimal places 0.001	Read
0012H	Pressure display refresh time 0 : 200 ms 1 : 500 ms 2 : 1000 ms	Read / Write
0013H	Fine Adjustment Setting 0 : OFF 1 : FLOW SENSOR 2 : PRESSURE SENSOR	Read / Write
0014H	Fine adjustment of display value -25 ~ 25 (-2.5 % ~ +2.5 %)	Read / Write
0015H	Response time of flow sensor 0 : 50 ms 1 : 80 ms 2 : 120 ms 3 : 200 ms 4 : 400 ms 5 : 800 ms 6 : 1500 ms	Read / Write
0016H	Response time of pressure sensor 0 : 2.5 ms 1 : 25 ms 2 : 100 ms 3 : 250 ms 4 : 500 ms 5 : 1000 ms 6 : 1500 ms	Read / Write
0017H	OUT1 corresponding sensor 0 : FLOW SENSOR 1 : PRESSURE SENSOR	Read / Write

Error Code	Explanation		Operation
0018H	OUT1 output mode		Read / Write
	FLOW 0 : HYS 1 : WIN 2 : ADD 3 : PLS	PRESSURE 0: OPS 1: HYS 2: WIN	
0019H	OUT1 output type 0 : N.O. mode 1 : N.C. mode		Read / Write
001AH	Flow setting value FL-1		Read / Write
001BH	Flow setting value FH-1		Read / Write
001CH	Flow setting value ADL1		Read / Write
001DH	Flow setting value ADH1		Read / Write
001EH	Fixed hysteresis setting for flow value HYS 0 ~ 8		Read / Write
001FH	Pressure setting value P-1 or L-1		Read / Write
0020H	Pressure setting value H-1		Read / Write
0021H	Fixed hysteresis setting for pressure value HYS 0 ~ 8		Read / Write
0022H	OUT1 switch 0 : OFF 1 : ON		Read
0023H	OUT2 corresponding sensor 0 : FLOW SENSOR 1 : PRESSURE SENSOR		Read / Write
0024H	OUT2 output mode		Read / Write
	FLOW 0 : HYS 1 : WIN 2 : ADD	PRESSURE 0: OPS 1: HYS 2: WIN	
0025H	OUT2 output type 0 : N.O. mode 1 : N.C. mode		Read / Write
0026H	Flow setting value FL-2		Read / Write
0027H	Flow setting value FH-2		Read / Write
0028H	Flow setting value ADL2		Read / Write

Error Code	Explanation	Operation
0029H	Flow setting value ADH2	Read / Write
002AH	Fixed hysteresis setting for flow value HYS 0 ~ 8	Read / Write
002BH	Pressure setting value P-2 or L-2	Read / Write
002CH	Pressure setting value H-2	Read / Write
002DH	Fixed hysteresis setting for pressure value HYS 0 ~ 8	Read / Write
002EH	OUT2 switch 0 : OFF 1 : ON	Read
002FH	Color display for OUT1 or OUT2 selection 0 : OUT1 1 : OUT2	Read / Write
0030H	Display color setting 0 : SOG (Switch on Green) 1 : SOR (Switch on Red) 2 : GRN (Always is Green) 3 : RED (Always is Red)	Read / Write
0031H	Power-save mode 0 : NO 1 : YES	Read / Write
0032H	Reset to the default setting 0: RECALL	Write
0033H	Instant flow zero adjustment 0 : When over $\pm 10\%$, error code 03H will show	Write
0034H	Pressure zero adjustment 0 : When over $\pm 3\%$, error code 03H will show	Write
0035H	Reset accumulated flow 0 : Accumulated flow value return to zero	Write
0036H	Key lock / unlock setting 0 : OFF 1 : ON	Read / Write
0037H	Switch output 0 : NPN 1 : PNP	Read

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