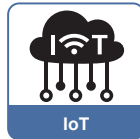
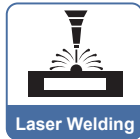
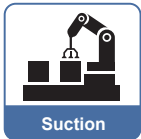


Features

- Design for large flow.
- 200 : 1 ratio covers a wider flow range.
- Invertible display makes digital easier to read.
- 8 digit 7 segment LCD display.
Accumulated flow rate display at a glance.
- Real-time monitoring.

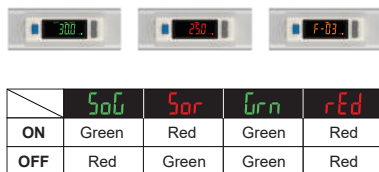
Patented

RS485 MODBUS CONTROL

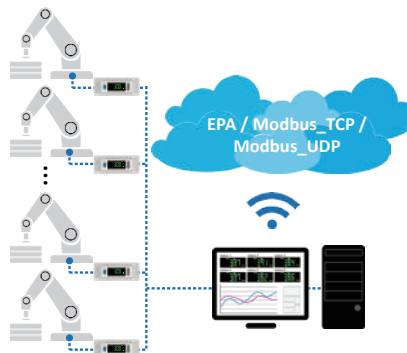


Features Highlight

1 3-color LED display



2 Real-time monitoring



3 High Performance

- High Precision

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

Repeatability $\pm 1\%$ F.S.

- Multiple Output Function

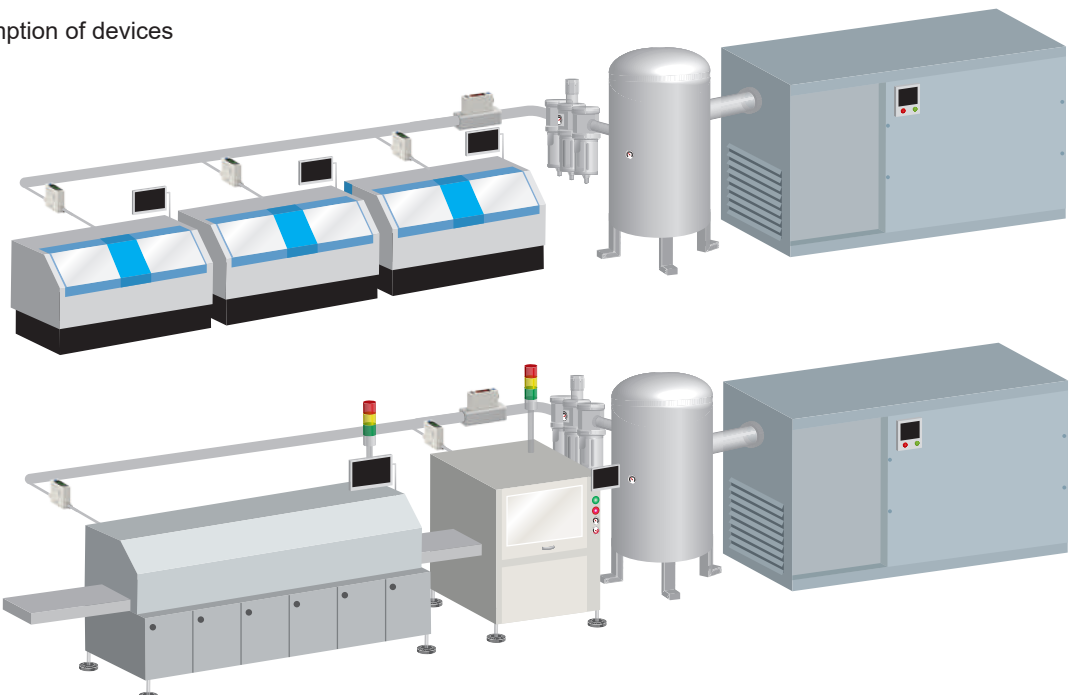
Digital Display	Instantaneous flow value
	Accumulated flow value
Switch Output	NPN output
	PNP output
Analog output	Voltage output 1 ~ 5 V
	Current output 4 ~ 20 mA
Accumulated Pulse Output	50 ms pulse output

4 Air Consumption Monitoring

- Monitor air consumption of devices



+



Specifications

Model				501		102		202	
Fluid				Dry air, N ₂ , Non-corrosive / Non-flammable gas					
Sensor Element		Measured Flow Rate Range		2 ~ 500 L/min		5 ~ 1000 L/min		10 ~ 2000 L/min	
		Flow Direction		Unidirection					
Display	Instant Flow Rate	Display Range		0 ~ 525 L/min		0 ~ 1050 L/min		0 ~ 2100 L/min	
		Minimum Setting Scale	LPM	1 L/min					
			CFM	0.1 ft ³ /min					
		Accumulated Flow	Display Range		99999999 L				
	Minimum Setting Scale		1 L						
			0.1 ft ³						
Accuracy		Guaranteed Range		2 ~ 100 % F.S.					
		Indicator Accuracy		± 3 % F.S. ± 1 digit ※1					
		Analog Output Accuracy		± 5 % F.S. ※1					
		Repeatability		± 1 % F.S. ± 1 digit (± 2 % F.S. when response time is set to 50 ms) ※2					
		Linearity		± 3 % F.S. ※2					
		Temp. Characteristic		± 5 % F.S. ※2					
		Pressure Characteristic		± 5 % F.S. ± 1 digit ※3					
Switch Output				2 NPN open collector outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Voltage Drop : ≤ 1.5 V		2 PNP open collector outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Voltage Drop : ≤ 1.5 V			
	Output Mode			Hysteresis Mode, Window Comparator Mode, Accumulated Output, Accumulated Pulse Output					
	Hysteresis			Adjustable					
	Response Time			800 ms (50 ms, 80 ms, 120 ms, 200 ms, 400 ms, 1500 ms selectable)					
	Output Short Circuit Proterction			Yes					
	Accumulated Pulse Output			5 L/Pulse		10 L/Pulse		10 L/Pulse	
20 ft ³ /Pulse				40 ft ³ /Pulse		40 ft ³ /Pulse			
Analog Output	Voltage Output			Voltage Output Range : 1 ~ 5 V Output Impedance : 1 KΩ					
	Current Output			Current Output Range : 4 ~ 20 mA Load Impedance : ≤ 300 Ω					
External Input				Non-voltage input, ≤ 0.4 V, ≥ 30 ms					
Communication Interface				RS485 ※4					
Power		Power Supply Voltage		12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 % (UL class 2)					
		Current Consumption		≤ 50 mA					
Environment	Working Pressure Range		0 ~ 1.0 MPa						
	Withstand Pressure		1.5 MPa						
	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)						
	Withstand Voltage		250 V AC in 1-min (between case and lead wire)						
	Insulation Resistance		≥ 2 MΩ (50 V DC, 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						
Lead Wire				Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 6 cores					
Weight (without 2 meter lead wire)				Approx. 281.7 g (500 / 1000 L) ; Approx. 344 g (2000 L)					

NOTE

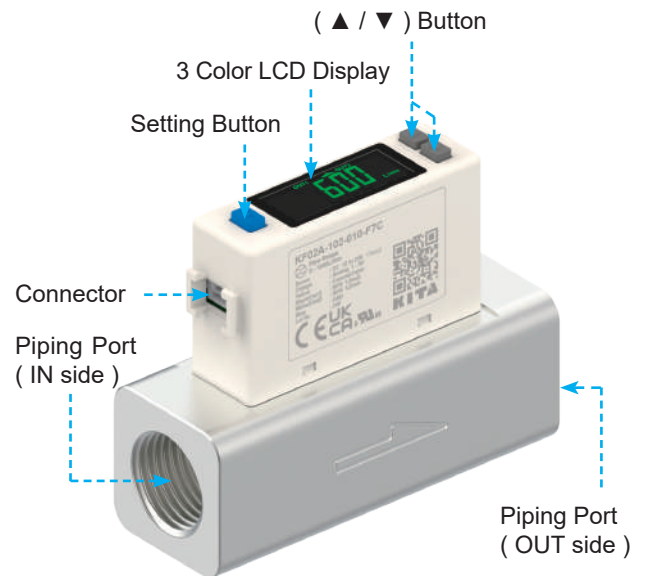
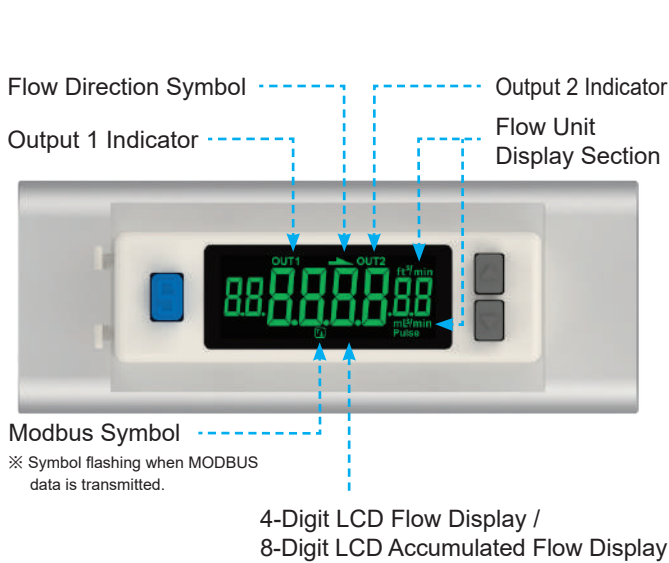
※1 : CONDITION : Inlet Pressure : 600 kPa, Outlet Pressure : 1 atmospheric pressure, 25 °C

※2 : CONDITION : Outlet Pressure : 1 atmospheric pressure, 25 °C

※3 : 0 ~ 1.0 MPa, Outlet Pressure : 1 atmospheric pressure, 25 °C

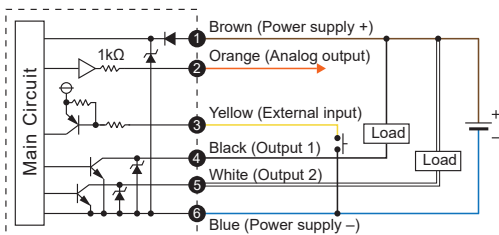
※4 : This function only available for Output Specification -02 and -04.

Panel Description

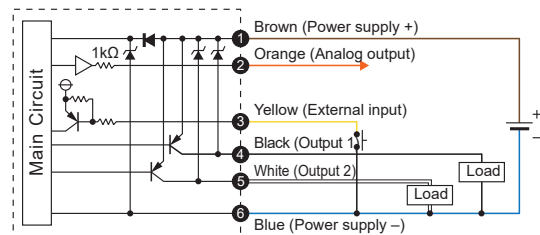


Output Circuit Wiring Diagrams

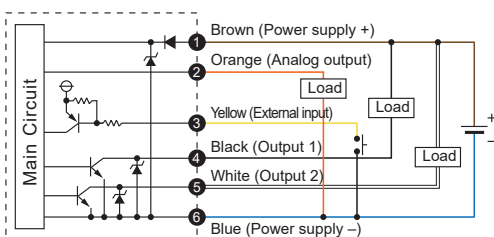
■ NPN Output / Analog Voltage Output / External Input



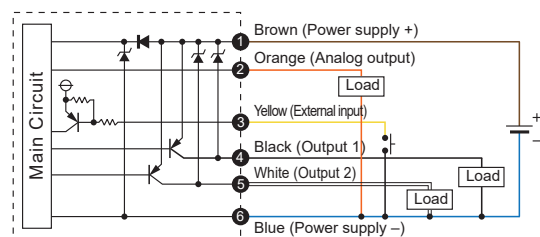
■ PNP Output / Analog Voltage Output / External Input



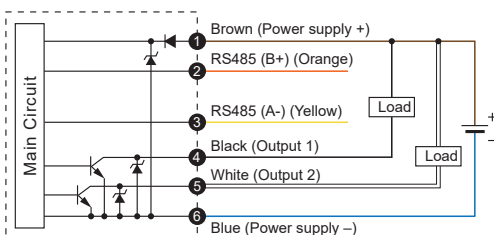
■ NPN Output / Analog Current Output / External Input



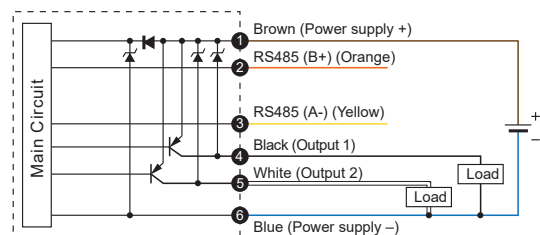
■ PNP Output / Analog Current Output / External Input



■ NPN Output / RS485 MODBUS Mode



■ PNP Output / RS485 MODBUS Mode



※ Wiring for RS485 MODBUS : Please connect RS485 (B+) or (A-) before connecting power supply to avoid short circuit to damage to product.

Ordering Information

K F 0 2 A - 5 0 1 - 0 1 0 - F 7 C

Flow Rate Range

501 : 500 L/min
 102 : 1000 L/min
 202 : 2000 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

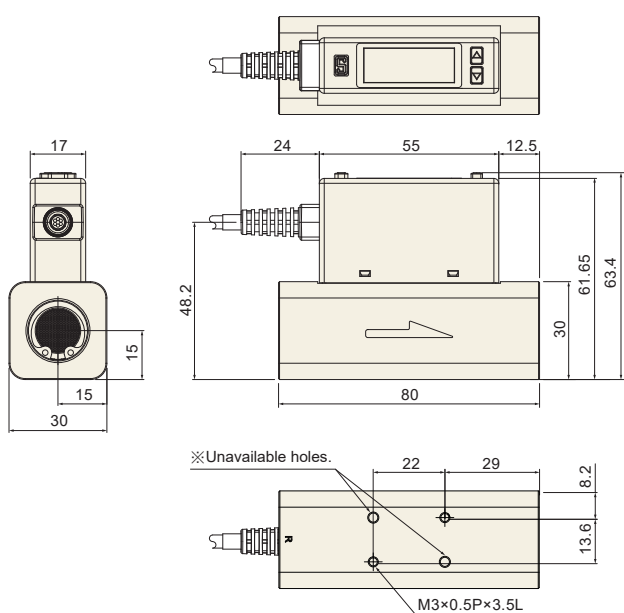
F7C : Rc1/2", for Flow Rate Range 501/102.
 F9C : G1/2", for Flow Rate Range 501/102.
 F10C : Rc3/4", for Flow Rate Range 202.
 F12C : G3/4", for Flow Rate Range 202.

Optional Parts

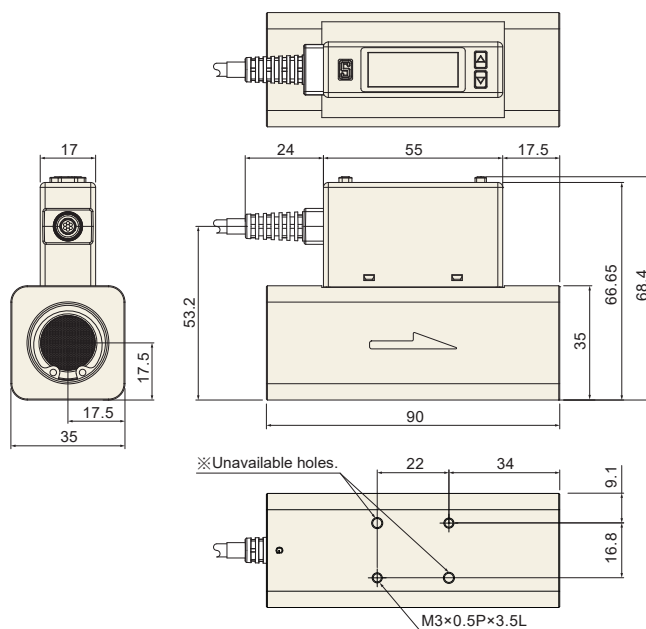
BT-27 : Mounting bracket, for Flow Rate Range 501/102.
 BT-28 : Mounting bracket, for Flow Rate Range 202.

Dimensions

Flow Rate Range 501, 102 (Port Size : Rc1/2", G1/2")

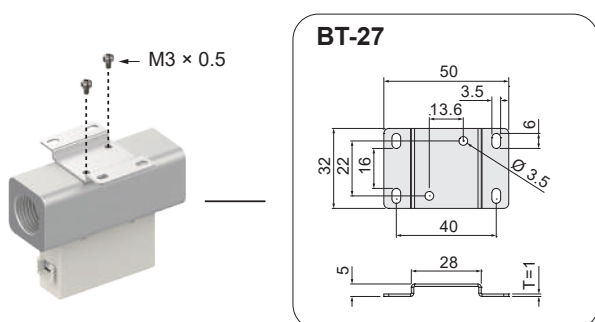


Flow Rate Range 202 (Port Size : Rc3/4", G3/4")

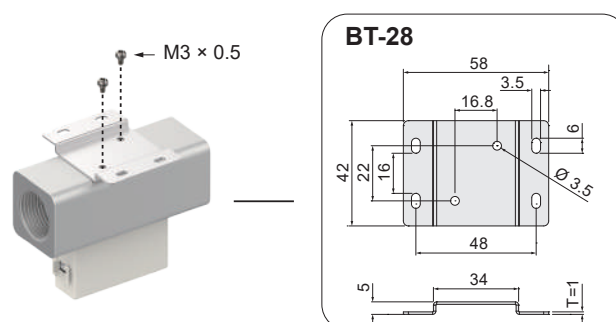


Optional Parts Dimensions

Mounting Bracket : BT-27 (Flow Rate Range 501, 102)



Mounting Bracket : BT-28 (Flow Rate Range 202)



Unit : mm