

Flow sensor

# WFK7000 Series

(Large flow rate type)

Flow rate range: 10 to 50, 20 to 100, 40 to 200L/min.



Refer to Intro 32 for details.

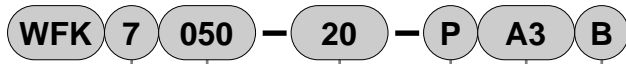


## Specifications

Descriptions		WFK7050-20	WFK7050-25	WFK7100-25	WFK7100-32	WFK7200-32	WFK7200-40
Working conditions	Flow measuring range L/min	10 to 50		20 to 100		40 to 200	
	Port size Rc	3/4	1	1	1 1/4	1 1/4	1 1/2
	Connection section material	Stainless steel: SCS13					
	Pressure loss MPa	0.045 (50L/min.)		0.045 (100L/min)		0.045 (200L/min.)	
	Working fluid	Clean water, industrial water					
	Max. working pressure MPa	1.0					
	Withstanding pressure MPa	1.5					
	Fluid temperature °C	1 to 70					
	Ambient temperature °C	0 to 50 (85%RH or less)					
	Indicator	5 digit LED display					
Integrated flow		Max. 9 digits, H and L separately displayed When power supply turns off, counter is reset					
Output	Alarm output	Point	1 point (NPN/PNP transistor open collector)				
		Rated	MAX 50mA				
	Analog output	Internal voltage drop	2.0V or less				
		Precision	0 to 5 VDC (linear output) standard ± 2.5%F.S. ±1 digit				
Alarm output response time sec		Approx. 1.0 (Note)					
Power supply		12 to 24 VDC ±10% (Max. 100mA) 15 to 24 VDC for option A3					
Cable		Attachment (3m, 4 conductors, O.D. φ 6, conductor 0.5mm <sup>2</sup> , with connector)					
Installation attitude		Horizontal or vertical					
Protective structure		IP64 or equivalent					
Weight g		4400	4200		4000		3800

Note: Time to reach 70% of the original output when flow rate is instantly set to zero from the normal (usage) flow rate.

### How to order



**A** Port shape material

**B** Flow rate range

**C** Port size  
Note 1

**D** Alarm output type

**E** Analog output

**F** Bracket  
Note 5

Symbol	Descriptions			
<b>A Port shape, material</b>				
7	Shape: female thread	Material: stainless steel (SCS13)		
<b>B Flow rate range</b>				
050	10 to 50L/min.			
100	20 to 100L/min.			
200	40 to 200L/min.			
<b>C Port size</b>				
	Flow rate range	050	100	200
20	Rc3/4	●	-	-
25	Rc1	●	●	-
32	Rc1 1/4	-	●	●
40	Rc1 1/2	-	-	●
20N	3/4NPT	●	-	-
25N	1NPT	●	●	-
32N	1 1/4NPT	-	●	●
40N	1 1/2NPT	-	-	●
<b>D Alarm output type</b>				
Blank	NPN transistor open collector			
P	PNP transistor open collector			
<b>E Analog output</b>				
Blank	0 to 5 VDC	Note 2		
A1	4 to 20mA DC	Note 3		
A2	1 to 5 VDC			
A3	0 to 10 VDC			
A4	Without analog output			
A5	2 points alarm output	Note 4		
<b>F Bracket</b>				
Blank	None			
B	With bracket			

### ⚠ Note on model no. selection

- Note 1: When using American taper pipe thread, add "N" to the port size.
- Note 2: If CKD monitor (WM10\*\* [refer to page 1482]) is connected, select analog output 0 to 5 VDC.
- Note 3: When selecting analog output A1: 4 to 20mA DC, alarm function can not be used.
- Note 4: When selecting analog output A5: 2 points alarm output, analog output can not be used.
- Note 5: For option B, a bracket and set screw are attached.  
**When ordering a bracket only, indicate part name: bracket assembly 2, model no.: WFK-FL-251256.**

### <Example of model number>

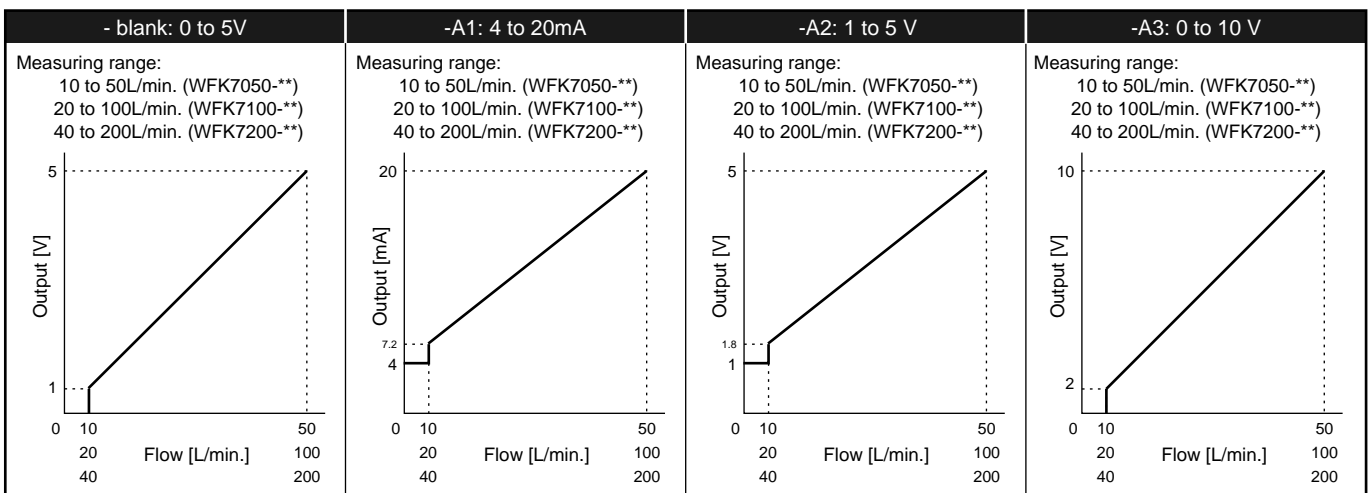
#### WFK7050-20-PA3B

Model: Flow sensor large flow rate type

- A** Port shape, material: Shape: female thread, Material: stainless steel
- B** Flow rate range: 10 to 50L/min.
- C** Port size: Rc3/4
- D** Alarm output type: PNP transistor open collector
- E** Analog output: 0 to 10 VDC
- F** Bracket: With bracket

### Analog output

#### ● WFK7050-\*\*/WFK7100-\*\*/WFK7200-\*\*



### Connecting load conditions

Descriptions	Blank [0 to 5]	-A1 [4 to 20 mA]	-A2 [1 to 5 V]	-A3 [0 to 10 V]
Allowable load	50k Ω and over	500k Ω or less	50k Ω and over	50k Ω and over

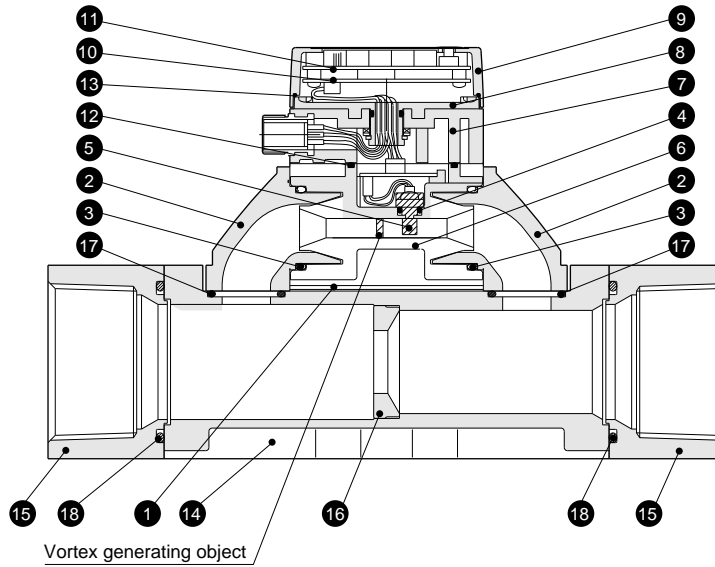
Refrigerating type dryer  
Desiccant type dryer  
High polymer membrane dryer  
Air filter  
Auto. drain / others  
F.R.L. (Module unit)  
F.R.L. (Separate)  
Compact F.R.  
Precise regulator  
F.R.L. (Related products)  
Clean F.R.  
Electro pneumatic regulator  
Air booster  
Speed control valve  
Silencer  
Check valve / others  
Joint / tube  
Vacuum filter  
Vacuum regulator  
Suction plate  
Magnetic spring buffer  
Mechanical pressure SW  
Electronic pressure SW  
Contact / close contact cont. SW  
Air sensor  
Pressure SW for coolant  
Small flow sensor  
Small flow controller  
Flow sensor for air  
Flow sensor for water  
Total air system  
Total air system (Gamma)

Ending

Karman's vortex type for water  
Flow sensor

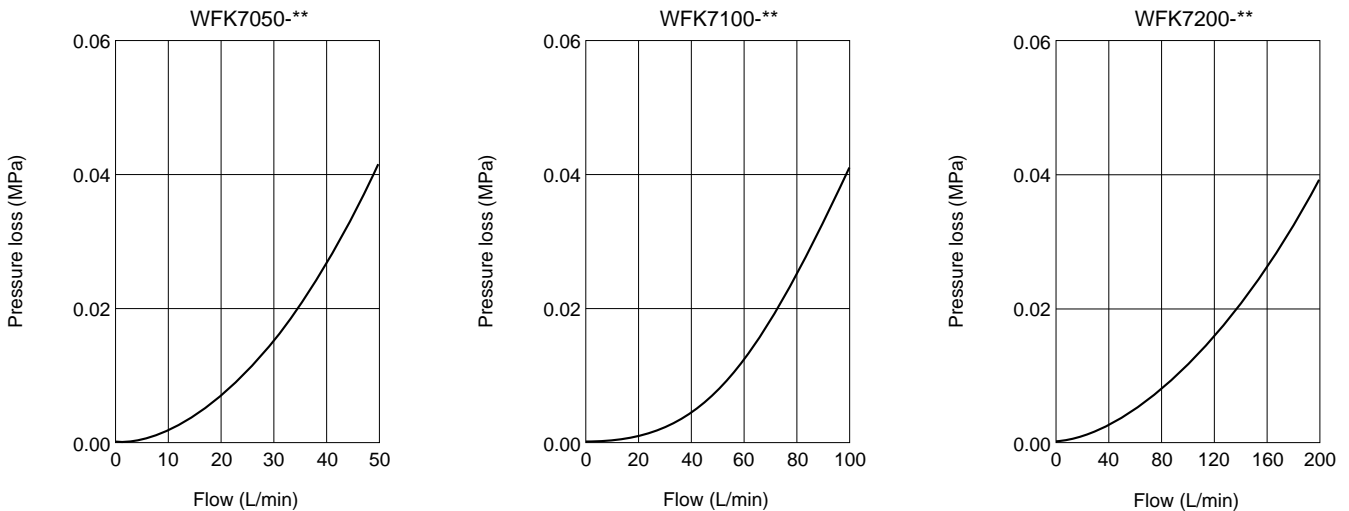
# WFK7000 Series

## Internal structure and parts list



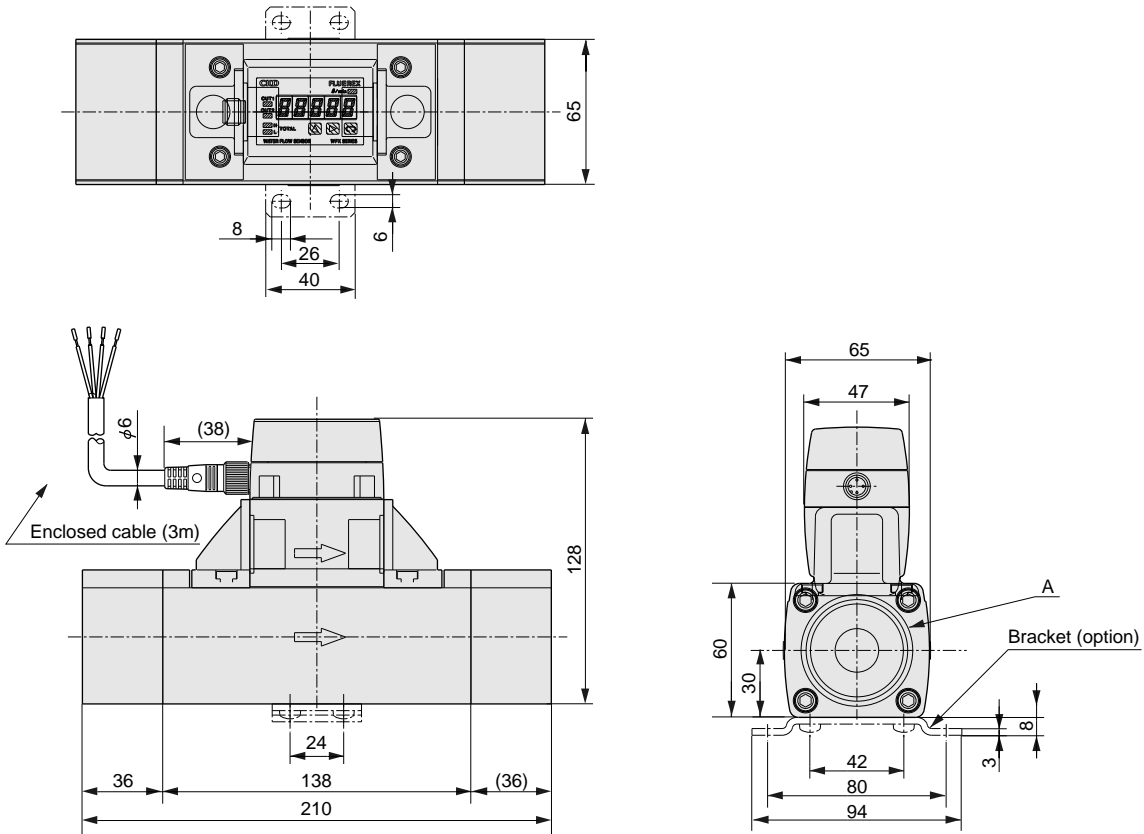
No.	Parts name	Material	Quantity	No.	Parts name	Material	Quantity
1	Body	SCS13 : Stainless steel casting	1	10	CPU circuit board	- : -	1
2	Sub-attachment	SCS13 : Stainless steel casting	2	11	Display circuit board	- : -	1
3	O ring	NBR : Nitrile rubber	2	12	Sleeve packing seal	NBR : Nitrile rubber	1
4	O ring	NBR : Nitrile rubber	1	13	Case packing seal	NBR : Nitrile rubber	1
5	Vortex street detecting element	PPS : Polyphenylene sulfide	1	14	Main body	SCS13 : Stainless steel casting	1
6	Sleeve	PPS : Polyphenylene sulfide	1	15	Main attachment	SCS13 : Stainless steel casting	2
7	Connector case	ABS : ABS resin	1	16	Orifice	SUS304 : Stainless steel	1
8	Case B	ABS + PC : ABS + PC alloy	1	17	O ring	NBR : Nitrile rubber	2
9	Case A	ABS : ABS resin	1	18	O ring	NBR : Nitrile rubber	2

## Pressure loss



- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Auto. drain / others
- F.R.L. (Module unit)
- F.R.L. (Separate)
- Compact F.R.
- Precise regulator
- F.R.L. (Related products)
- Clean F.R.
- Electro pneumatic regulator
- Air booster
- Speed control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum filter
- Vacuum regulator
- Suction plate
- Magnetic spring buffer
- Mechanical pressure SW
- Electronic pressure SW
- Contact / close contact conf. SW
- Air sensor
- Pressure SW for coolant
- Small flow sensor
- Small flow controller
- Flow sensor for air
- Flow sensor for water
- Total air system
- Total air system (Gamma)
- Ending

### Dimensions



Model no.	A
WFK7050-20	Rc3/4
WFK7050-25	Rc1
WFK7100-25	Rc1
WFK7100-32	Rc1 1/4
WFK7200-32	Rc1 1/4
WFK7200-40	Rc1 1/2
WFK7050-20N	3/4NPT
WFK7050-25N	1NPT
WFK7100-25N	1NPT
WFK7100-32N	1 1/4NPT
WFK7200-32N	1 1/4NPT
WFK7200-40N	1 1/2NPT

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Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

Karman's vortex type for water Flow sensor