販売終了

Flow sensor for compressed air (flow rate sensor)

PF500D to PF8000D / PF16000E Series

Flow sensor for compressed air with various functions

• Flow rate range: 25 to 500, 50 to 1000, 100 to 2000
200 to 4000, 400 to 8000 and 800 to 16000Nℓ/min

CAD DATA AVAILABLE.

Specifications

Descriptions			PF500D -10	PF500D -15	PF1000D -10	PF1000D -15	PF2000D -10	PF2000D -15	PF4000D -15	PF4000D -25	PF8000D -25	PF8000D -40	PF16000E -50
Spec.	Diversion range	Nℓ/min	25 to 500		50 to 1000		100 to 2000		200 to 4000		400 to 8000		800 to 16000
	Port size		Rc3/8	Rc1/2	Rc3/8	Rc1/2	Rc3/8	Rc1/2	Rc1/2	Rc1	Rc1	Rc1 1/2	Rc2
Working conditions	Applicable fluid		Compressed air / N_2 gas										
	Working air quality		Atmospheric dew point -17°C or less (* 1)										
	Max. working pressure	MPa	1.5										
	Min. working pressure	MPa	0.1										
	Withstanding pressure	MPa	2.25										
	Ambient temperature and humidity		0 to 50°C, 85%RH or less										
	Fluid temperature	°C	0 to 40										
Accuracy	Linearity		± 1.5%F.S (0.7MPa, 20°C)										± 2.5%F.S. * 2
	Pressure characteristics		± 1.5%F.S (0.1 to 1.5MPa, 0.7MPa standard)										
	Temperature characteristics		± 2.0%F.S (0 to 40°C, while 20°C standard)										
	Output response time	sec	Approx. 1.25										Approx. 2.5
	Display		5 digits LED display										
	Min. display flow rate	* 3	10N ℓ/min		20N ℓ/min		30N ℓ/min		50N ℓ/min		100N ℓ/min		0.2Nm³/min
	Integrating flow rate		Max. 9 digits However, display switched by change key										
Output	Analog output		Standard: DCO to 5V Option: DC4 to 20mA, 1 to 5V and 0 to 10V										
	Switch output		Relay contact (1ch, a contact)										
	Pulse output (option)	* 4	10N ℓ/pulse								100N ℓ/pulse		
	Power supply		AC100V ± 10%(Max. 10W)										
	Cable		Auxiliaries (3m connector, 0.5mm² conductor)										
	Set value holding function		Semipermanent due to EEPROM										
Installation	Installation attitude		Both vertical and horizontal (resin cover facing downward excluded)										
	Installation strait piping section		Not required										Upper stream: 10D Down stream : 5D * 5
	Protective structure		Equivalent to IP64 (sensor section only)										
	Mass	kg	1.5						2.0		2.2		5.0

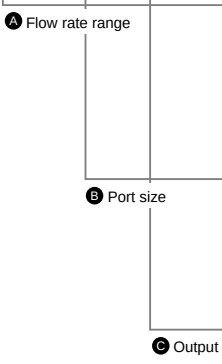
* 1: If foreign matter, moisture or oil is contained in the compressed air, detecting flow rate is failed, so " sensor error " is displayed.
Install a filter, refrigerating type dryer and oil mist filter before a flow sensor.
* 2: Same conditions as PF8000D; 0.7MPa, 20°C are applied.
* 3: If lower than min. flow rate range, 0 is indicated. Also, for indicated value under flow rate range, accuracy is not guaranteed.
* 4: Refer to descriptions of integrating pulse output on Page 1022 for details of pulse output.
* 5: 1D shows pipe inner diameter, so prepare 10D= approx. 530mm and 5D= approx. 265mm long strait piping section.

JIS symbol

販売終了

How to order

PF 4000D – 15 – A1



Symbol	Descriptions	Model					
		PF500D	PF1000D	PF2000D	PF4000D	PF8000D	PF16000E
Ⓐ Flow rate range							
500D	25 to 500N ℓ/min	●					
1000D	50 to 1000N ℓ/min		●				
2000D	100 to 2000N ℓ/min			●			
4000D	200 to 4000N ℓ/min				●		
8000D	400 to 4000N ℓ/min					●	
16000E	800 to 16000N ℓ/min						●
Ⓑ Port size							
10	Rc3/8	●	●	●			
15	Rc1/2	●	●	●	●		
25	Rc1				●	●	
40	Rc1 1/2					●	
50	Rc2						●
Ⓒ Output							
Blank	Analog output DC0 to 5V (standard)	●	●	●	●	●	●
A1	Analog output DC4 to 20mA	●	●	●	●	●	●
A2	Analog output DC1 to 5V	●	●	●	●	●	●
A3	Analog output DC0 to 10V	●	●	●	●	●	●
A6	Integrating pulse output	●	●	●	●	●	●

Above circled combination can be manufactured.

[Example of model number]

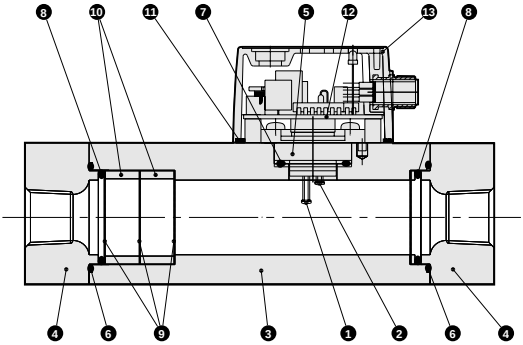
PF4000D-15-A1

Model: PF4000D
Ⓐ Flow rate range : 200 to 4000N ℓ/min
Ⓑ Port size : Rc1/2
Ⓒ Output : Analog output DC4 to 20mA

販売終了

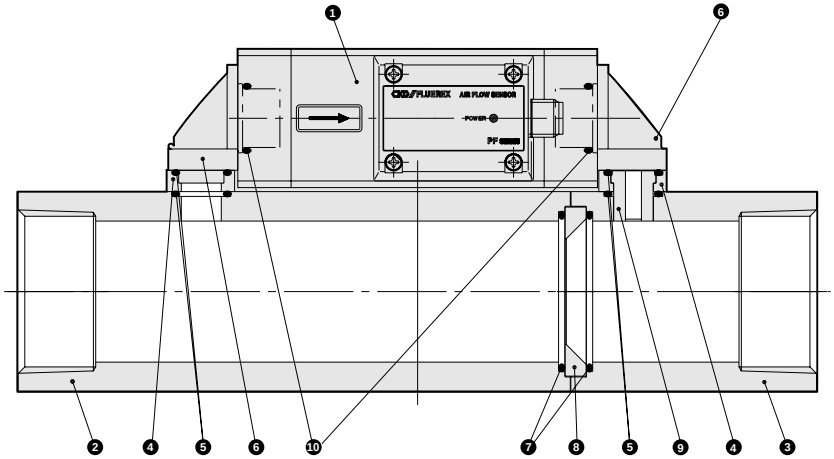
Internal structure and parts list

• PF500D to PF8000D



No.	Parts name	Material		No.	Parts name	Material	
1	Platinum thin film sensor 1	Ceramic / platinum		8	O ring	NBR	Nitrile rubber
2	Platinum thin film sensor 2	Ceramic / platinum		9	Mesh	SUS304	Stainless steel
3	Body	A6063	Aluminum alloy	10	Collar	A6063	Aluminum alloy
4	Attachment	A6063	Aluminum alloy	11	Gasket	NBR	Nitrile rubber
5	Sensor base	PBT	PBT	12	Sensor circuit board	—	
6	O ring	NBR	Nitrile rubber	13	Sensor cover	ABS	ABS resin
7	O ring	NBR	Nitrile rubber				

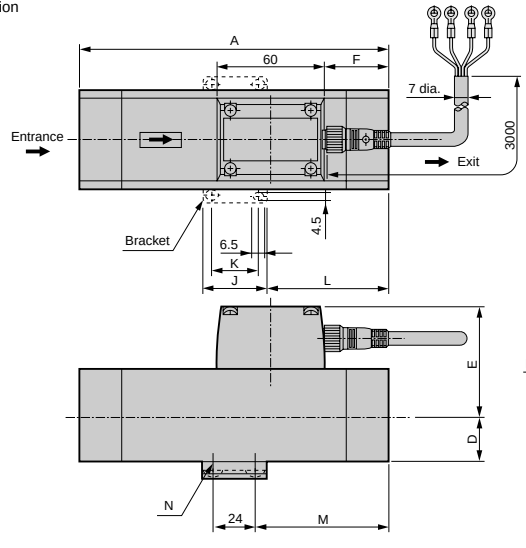
• PF16000E



No.	Parts name	Material		No.	Parts name	Material	
1	Separate flow sensor section	Refer to the figure above.		6	Sub attachment	SUS304	Stainless steel
2	Body 1	A6063	Aluminum alloy	7	O ring	NBR	Nitrile rubber
3	Body 2	A6063	Aluminum alloy	8	Orifice	C3604	Copper alloy
4	Spacer	A6063	Aluminum alloy	9	Aspirator	C3604	Copper alloy
5	O ring	NBR	Nitrile rubber	10	O ring	NBR	Nitrile rubber

• PF500D to PF8000D
Sensor section

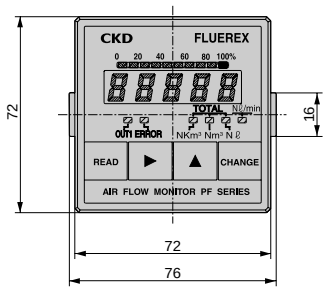
CAD (File name: Page 1026 or Ending 30)

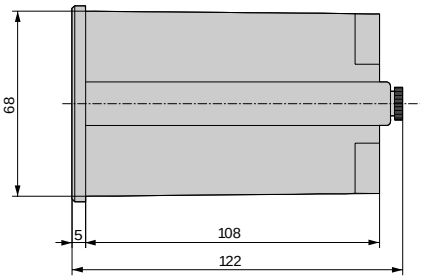


End of model no.	Port size
-10	Rc3/8
-15	Rc1/2
-25	Rc1
-40	Rc1 1/2

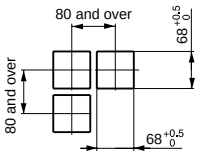
Model no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
PF500D / 1000D / 2000D-**	135	52	82	22.5	59.5	24	72	64	33	36	26	49.5	55.5	M4 thread length 4.5
PF4000D-**	176	57	91	27	64	38	72	64	33	36	26	70	76	M4 thread length 4.5
PF8000D-**	188	66	99	31	68	44	84	74	42	40	28	74	82	M5 thread length 3.6

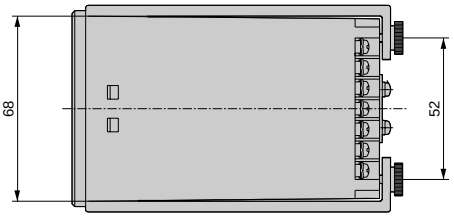
Monitor section





• Panel cut dimension
Standard panel cut dimension is shown as below.
(Note) Appropriate panel plate thickness is 1 to 4mm.



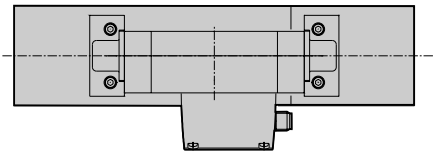


販売終了

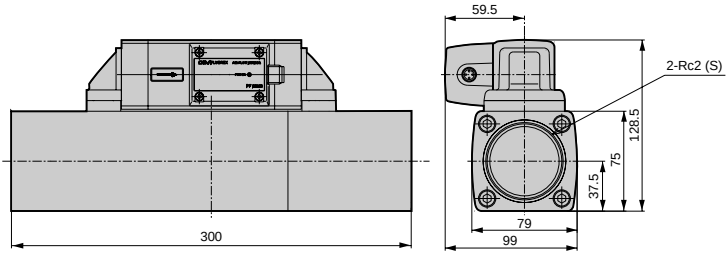
Dimensions

• PF16000E
Sensor section

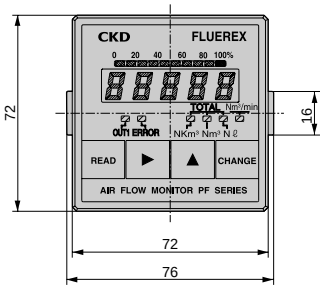
CAD (File name: Page 1026 or Ending 30)

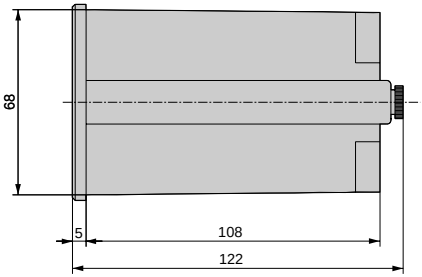


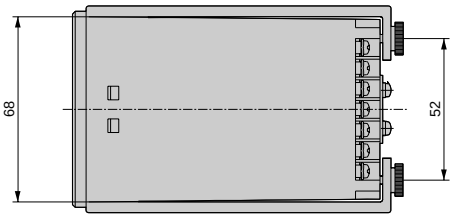
Note 1: This product is always used with applicable monitor PFM16000E.
Note 2: When installation, the flow direction must be as same as flow direction on name plate.



Monitor section







• Panel cut dimension
Standard panel cut dimension is as shown below.
(Note) Appropriate panel plate thickness is 1 to 4mm.