HORIBA METRON

Mass Flow Controller

S48 32/HMT

* Full-scale flow rate

(10,20,30,50,100,200,300,500)mL/min
(1,2,3,5,10,20,30,50)L/min

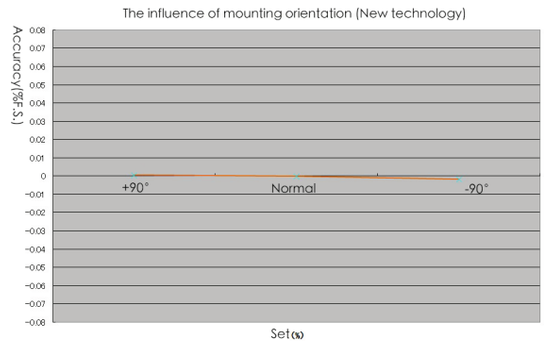
Usage of S48 32/MHT

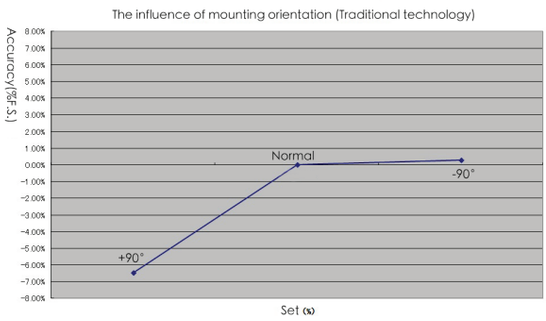
• Semiconductor • Analysis instruments • Metal-heat treatment • Metallurgy
• Vacuum deposition • Solar cell • Environment • Chemical industry

Characteristics of S48 32/HMT MFC

Convenient Installation——at any angle

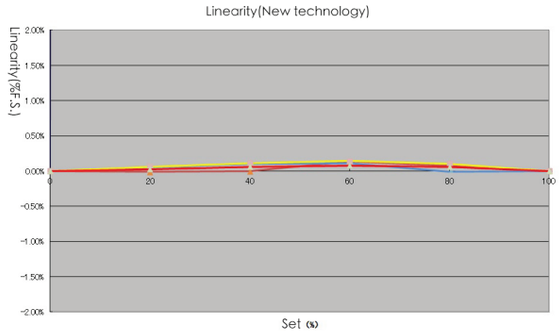
In different positions of the equipment or angles of installation, the gas flow of S48 series changes little, breaking the traditional MFC installation conditions and giving users convenience.

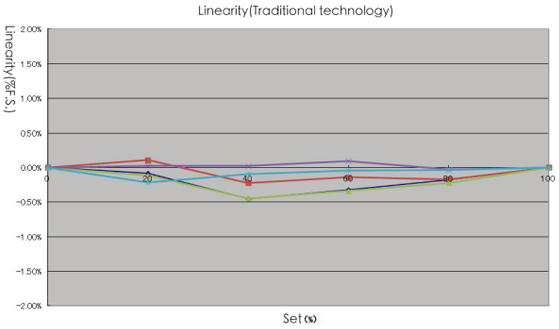




Fine Linearity—— multi-segment linear compensation

On the basis of original technology (two-segment linear correction), S48 series use advanced multi-segment linear adjustment technology, making the flow control accuracy of the lower part of the range higher and turndown ratio better.





Special Products

1) The MFC of low differential pressure

Advantage

The low differential pressure (0.015 ~0.3) MPa can be applied to a variety of fields, for example: atmospheric environmental monitoring.
This MFC meets the low-differential-pressure requirements of atmospheric environmental monitoring devices.
In addition, the users can select smaller and more economical suction pump, thereby they save the component costs and operating costs of the entire system.

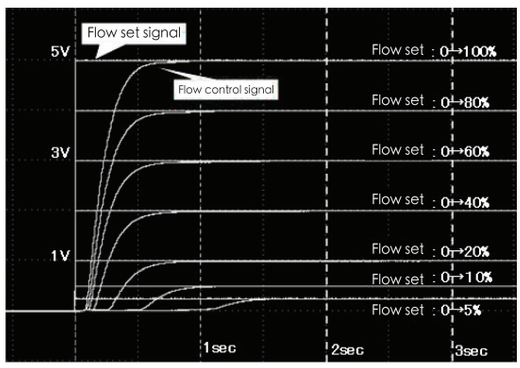
Specifications of general products	
Differential pressure (0.05~0.3) MPa	~5L/min
Differential pressure (0.1~0.3)MPa	5L~30L/min

Specifications of special products	
Differential pressure(0.015~0.3) MPa	~20L/min

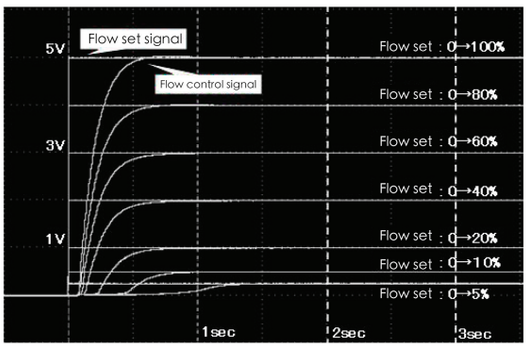
Fast Response

Response time (electricity / gas characteristic response time) of S48 series is less than 2s, making the system response faster and improving the level and accuracy of users' process and experiment.

Inlet pressure: 50kPa, Output pressure: 1atm; T98: Less than 1 sec



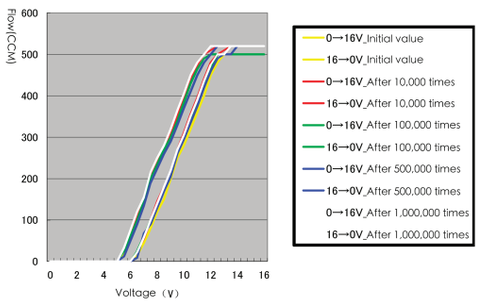
Inlet pressure: 300kPa, Output pressure: 1atm; T98: Less than 1 sec



The service life of solenoid valve : ≥1,000,000 times

The solenoid proportional valve of S48 32/HMT series has passed through the endurance test. It can be turned on/off more than 1,000,000 times repeatedly and all of the solenoid properties are within the specifications. It fully ensure the durability and reliability of the product.

The curve of Voltage-Flow rate



Low Zero Drift—effective suppression of the zero drift

Zero drift affects the accuracy of the values, but it cannot be avoided. S48 series have used advanced technology, so that the zero drift is always maintained at 0.06% F.S. (per year), improving the control precision of the target gas, reducing errors and improving the quality of products.

Global supply of spare parts—— sensors, bypasses,precision resistors and other key components imported from Japan

To ensure high product reliability and low failure rate, we have introduced the bypasses, precision resistors and other components from Japan. Advanced technologies make our products more mature and stable.

Good Selectivity

Power mode:
±15V dual power supply or 24V single supply.

Electric connector:
D-SUB15 or D-SUB9.

2) The MFC integrated with stop valve

Advantage

- A more compact product of one-piece design
- Less installations, less leak
- Cost savings

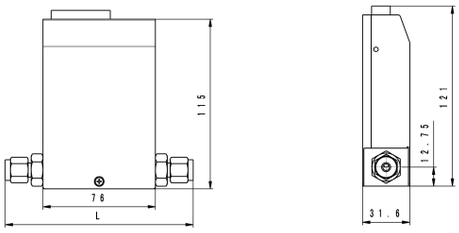
(Diagram of special products)

Table S48 32/HMT MFC technical specifications

number	item	S48 32/HMT	
1	Full-scale flow rate	(10,20,30,50,100,200,300,500)mL/min; (1,2,3,5,10,20,30,50)L/min	
2	Valve type	Solenoid valve	
3	Valve rest position	Normal close	
4	Mounting orientation	Free	
5	Flow rate control range	2%~100%	
6	Flow rate measuring range	(0~100)%	
7	Response time	*2s （T98, set value's±2% F.S.）	
8	Operation temperature	5℃~50℃	
9	Accuracy guaranteed temperature range	15℃~35℃	
10	Accuracy	±1.0%F.S.	
11	Linearity	±0.5%F.S.	
12	Repeatability	±0.2%F.S.	
13	Differential pressure	~5L/min (50~300)kPa 5L/min~30L/min (100~300)kPa 30L/min~50L/min (150~300)kPa	
14	Pressure resistance	3MPa	
15	Leak Integrity	1×10^{-8} Pa · m^3/s (He)	
16	Wetted materials	316L, PTFE, Viton	
17	Fittings	Swagelok:1/4″ Φ6mm VCR:1/4″	
18	Power supply	±15VDC(±5%) +15V＜100mA,-15V＜150mA	24V, 250mA
19	Flow rate setting signal	(0~5)VDC Input impedance>1MΩ	4~20mA,or 1~5VDC,or 0~5VDC
20	Flow rate output signal	(0~5)VDC Load output current capability≤3mA	4~20mA,or 1~5VDC,or 0~5VDC
21	Electrical connector	D-SUB15, D-SUB9	
22	Weight (kg)	0.9	

*Less than 1s products can be produced according to customer requirements.

S48 32/HMT MFC external dimentions



Fittings	L
Swagelok ∅6	127
Swagelok 1/4″	127
VCR 1/4″	124

Beijing HORIBA METRON Instruments Co., Ltd is co-founded by the world's top mass flow controller manufacturer - HORIBA STEC, and Chinese well-known mass flow controller manufacturer - Beijing METRON Instrument Co., Ltd. Beijing HORIBA METRON is a high-tech enterprise based on R & D, production, marketing of thermal mass flow controller.

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