

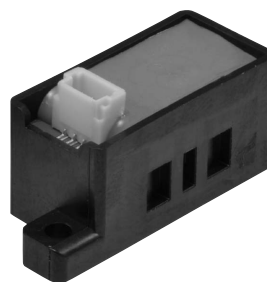
Compact Air Mass Flow Sensor | MCS200 Series



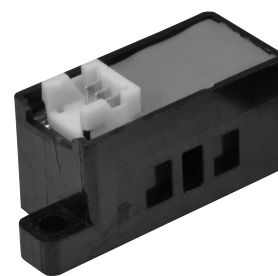
The compact air mass flow sensors in the MCS200 series can be used with atmosphere analyzers to measure air flow rate or with gas analyzers to measure nitrogen flow rate, and can be used to confirm vacuum suction of minute electronic parts.

Compared to the MCS100 series, these sensors are smaller and lighter.

Connection to piping is made through manifolds.



MCS200S, L



MCS200R

Specifications

MCS200S high-accuracy model

Model No.	MCS200S9500	MCS200S0001	MCS200S0003
Flow rate measurement range	0 to 500 mL/min	0 to 1 L/min	0 to 3 L/min
	Values are converted to volumetric flow per minute at 20 °C and 1 atmosphere (101.325 kPa (abs))		
Measured gas	Air, nitrogen. (Gas must be clean and dry, without corrosive components such as chlorine, sulfur and acid, and without dust or oil mist.)		
Response	5 ms max. (95% response to a step change in flow rate)		
Output signal	1 to 5 Vdc (non-linear characteristic), allowable load resistance: 1 MΩ or more		
Operating temperature range	-10 to +60 °C (for both ambient temperature and measured gas temperature)		
Operating pressure range	-100 to +200 kPa (however, the guaranteed range for pressure characteristics is -70 to +200 kPa)		
Rated power supply voltage	24 Vdc, 10% or less ripple (with 24 Vdc power)		
Power consumption	12 mA or less		
Weight	Approx. 5 g (excluding cable)		

MCS200R chuck sensor (dual range)

Model No.	MCS200R9500	MCS200R0006
Flow rate measurement range	-500 to +500 mL/min	-6 to +6 L/min
	Value converted to volumetric flow per minute at 20 °C and 1 atmosphere (101.325 kPa (abs))	
Measured gas	Air/nitrogen. Gas must be clean and dry, without corrosive components such as chlorine, sulfur and acid, and without dust or oil mist.	
Response	5 ms max. (95% response to a step change in flow rate)	
Output signal	1 to 5 Vdc (non-linear characteristic), allowable load resistance: 1 MΩ or more	
Operating temperature range	-10 to +60 °C (for both ambient temperature and measured gas temperature)	
Operating pressure range	-100 to +200 kPa (however, the guaranteed range for pressure characteristics is -70 to +200 kPa)	
Rated power supply voltage	24 Vdc, 10% or less ripple (with 24 Vdc power)	
Power consumption	12 mA or less	
Weight	Approx. 5 g (excluding cable)	

MCS200L 5 Vdc flow sensor

Model No.	MCS200L0001	MCS200L0003
Flow rate measurement range	0 to 1 L/min	0 to 3 L/min
	Values converted to volumetric flow per minute at 20 °C and 1 atmosphere (101.325 kPa (abs))	
Measured gas	Air, nitrogen. Gas must be clean and dry, without corrosive components such as chlorine, sulfur and acid, and without dust or oil mist.	
Response	300 ms max. (95% response to a step change in flow rate)	
Output signal	0.5 to 3.5 Vdc (non-linear characteristic), allowable load resistance: 1 MΩ or more. The voltage output range at power supply voltage (v) of 5 V or less is from 0.5 to (v-1.5) V or more. Example: If the power supply voltage is 4.8 Vdc, the output voltage upper limit is 3.3 V (= 4.8-1.5).	
Operating temperature range	-10 to +60 °C (both for ambient temperature and measured gas temperature)	
Operating pressure range	-100 to +200 kPa (however, the guaranteed range for pressure characteristics is -70 to +200 kPa.)	
Rated power supply voltage	5 Vdc, 0.2% ripple or less	
Power consumption	6 mA or less	
Weight	Approx. 5 g (excluding cable)	

Model No. configuration

Name	Measurement range	Drive voltage	Connector specification	Model No.
Compact air mass flow sensor Flow sensor model (high accuracy)	0 to 500 mL/min	24 Vdc	Cable removed vertically	MCS200S9500
	0 to 1 L/min			MCS200S0001
	0 to 3 L/min			MCS200S0003
Compact air mass flow sensor Flow sensor model (5 Vdc)	0 to 1 L/min	5 Vdc	Cable removed vertically	MCS200L0001
	0 to 3 L/min			MCS200L0003
Compact air mass flow sensor Chuck sensor model (dual range)	-500 to +500 mL/min	24 Vdc	Cable removed horizontally	MCS200R9500
	-6 to +6 L/min			MCS200R0006

Optional parts (sold separately)

Name	Model No.	Description
Harness with dedicated connector	81446888-001	For MCS200S/L, harness length: 2 m
	81446888-002	For MCS200S/L, harness length: 3 m
	81447239-001	For MCS200R, harness length: 2 m
	81447239-002	For MCS200R, harness length: 3 m

1

DIGITAL
CONTROLLERS

2

RECORDERS,
INDICATORS

3

CONVERTERS

4

FLAME SAFEGUARD
SYSTEM

5

ACTUATORS

6

SENSORS

7

GAS FLOW
MEASUREMENT AND
CONTROL PRODUCTS

Compact Air Mass Flow Sensor | MCS200 Series

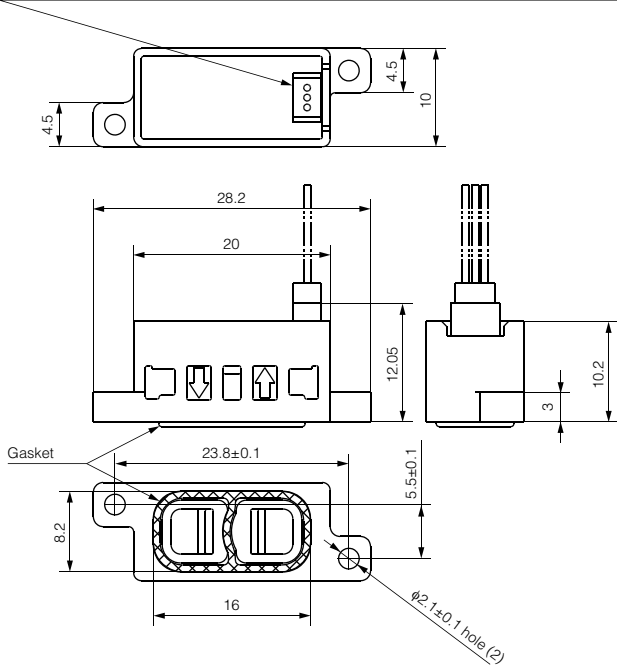


External dimensions

MCS200S, L

(Unit: mm)

Connector: BM03B-SRSS-G-TB, made by J.S.T. Mfg. Co., Ltd.
Counterpart: contacts matching SHR-03V-S-B: SSH-003GA-P0.2 (compatible with 32-28 AWG)



MCS200R

Connector: BM03B3.9-AGHS-GH-TF, made by J.S.T. Mfg. Co., Ltd.
Counterpart: AGHR-03V-1-H, SAGH-002GU-P0.3 (compatible with 30-26 AWG)

