MPC

Panel Mount Mass Flow Controller

The MPC is an ultrafast response flow rate sensor that utilizes Yamatake proprietary technology. By integrating a Micro Flow sensor, an ultra-compact proportional solenoid valve, a new flow channel system, and advanced control technology, Yamatake has developed a mass flow controller which can be mounted from the front of the control panel.

Specifications

Model No.		MPC9500	MPC0002	MPC0005	MPC0020
Valve type		Proportional solenoid valve			
Standard full-scale flow rate (values for nitrogen*1)		0.500L/min (standard)	2.00L/min (standard)	5.00L/min (standard)	20.0L/min (standard)
Standard compatible gas types		Nitrogen/air, argon, carbon dioxide (CO_2). Gas must be dry and without corrosive components (chlorine, sulfur, acid, etc.). It must also be clean, without dust or oil mist.			
Gas pressure	Standard differential pressure*2	0.2MPa (inlet pressure: 0.2MPa (gauge), outlet pressure: 0.0MPa (gauge))			
	Required differential pressure*3	0.3MPa max.			
Number of event outputs		2			
Number of external contact inputs		2			
Communications	System	(1) PC loader connection; (2) RS-485 (3-wire)			
	Transmission speed	2400, 4800, 9600, 19200, 38400bps (19200bps only for loader communications)			
Power		24Vdc			
Current consumption		300mA max.			
Mass		Approx. 300g			

Notes *1: L/min (standard) indicates the volumetric flow rate per minute (L/min) adjusted for 20°C, 1 atmosphere. The reference temperature can also be changed to 0°C and 25°C. The controllable flow rate range varies according to the gas type. See table.

*2. Temperature and pressure during calibration.

*3. Operation is possible even at less than the required differential pressure.

● Gas Type and Control Flow Rate Ranges Unit: L/min (standard)

The controllable flow rate range varies according to the gas type.

Gas type \ Model No.	MPC9500	MPC0002	MPC0005	MPC0020
Air/nitrogen	0.020 to 0.500	0.08 to 2.00	0.10 to 5.00	0.4 to 20.0
Argon	0.020 to 0.500	0.08 to 2.00	0.10 to 5.00	0.4 to 20.0
Carbon dioxide	0.012 to 0.300	0.040 to 1.200	0.06 to 3.00	0.3 to 16.0

Selection Guide ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚ Example: MPC0020BBRN010000

Segment	Model No. selection		Description
I	Basic No.	MPC	Panel mount mass flow controller
II	Flow rate range	9500	0.02 to 0.500L/min (standard)*1
		0002	0.08 to 2.00L/min (standard) *1
		0005	0.10 to 5.00L/min (standard)*1
		0020	0.4 to 20.0L/min (standard)*1
III	Model	B	Integrated display
IV	Material of gas-contacting parts	B	Brass (Ni-plated)
V	Connection method	R	Rc 1/8"
VI	Gas type	N	Air/nitrogen, argon, carbon dioxide*2
VII	(Not used)	0	–
VIII	Option 1	0	Event output
		1	Analog input/output + event output
		2	RS-485 communications (CPL) function + event output*3
IX	Option 2	0	None
X	Option 3	0	None
XI	Option 4	0	None
		D	With inspection data
		Y	With traceability certification
XII	Design code	0	Product version

Notes *1: L/min (standard) indicates the volumetric flow rate per minute (L/min) adjusted for 20°C, 101.325kPa. The reference temperature can also be changed to 0°C, 25°C and 35°C.

*2. Air/nitrogen is the factory setting. This controller can also be used for argon and carbon dioxide (CO_2) gases by changing the gas type setting in the function setup. The controllable flow rate range varies according to the gas type. See table.

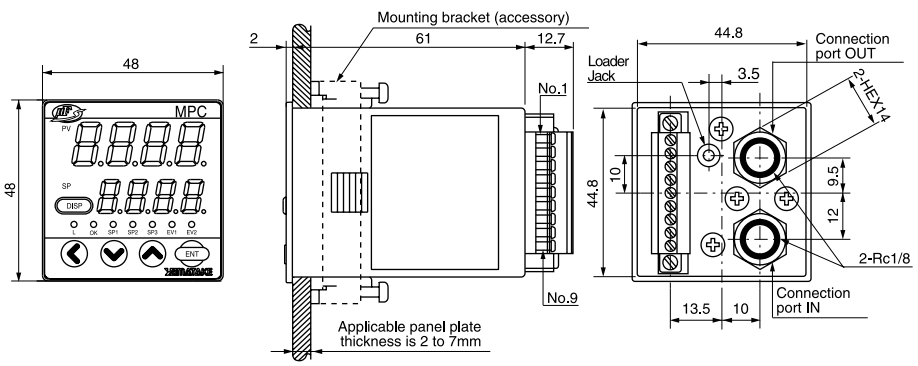
*3. There is no analog input/output function.

Accessories (sold separately)

Model No.	Description
81446927-001	Case set
81446917-001	Mounting bracket
MLP200A100	Loader Package (with CD-ROM and dedicated communications cable)

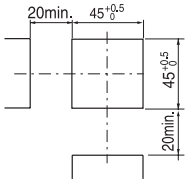
Dimensions (Unit: mm)

• MPC

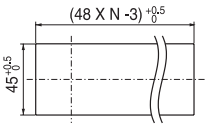


• Panel cutout

Individual mounting



Side-by-side mounting



(N: Number of mounted units)