



Smart Positioner MP100



Features

- Auto-Tuning function
- LCD and Buttons for no-communicator operation
- Setting available in Explosive Environment
- Lightning Arrester Equipped
- 17 points Custom-setting Flow Characteristics
- Analogue Feedback & HART Communication Function (Option)



Specifications

Items	Specification
Input Signal	4~20 mA (Minimum range: 4 mA) / Minimum Operating: 3.8 mA *1 (Voltage Across Terminals: 10.5 V Typ.)
Supply Air Pressure	0.14~0.70 MPa
Stroke / Angle	Linear: 10~100 mm Rotary: Lever Angle 40~100 deg.
Air Connection	Standard: Rc 1/4 (Rc 1/8 for Gauges) Option: 1/4 NPT (1/8 NPT for Gauges)
Electric Connection	Standard: G 1/2 (Except for NEPSI Certification) Option: 1/2 NPT or M20x1.5 (Except for TIIS Certification)
Enclosure Protection	IP66 (IEC 60529: 1989 / AMD2: 2013)
Housing Construction	Standard: non-Explosion Proof Option: Flameproof Ex d IIC T6
Ambient Temperature	Standard: -20~80°C Flameproof: -20~60°C
Flow Characteristics	Linear / Eq % / Quick Open / Custom Setting (17 points)
Manual Operation	A/M Switch (Only in Single Acting)
Mass	Approx. 3.8 kg
Housing Material	Aluminium Die-casting

*1 Whenever input current falls below this value, the positioner goes stand-by. Setting needs at least 4 mA input.
 * Supply air should be dry (dew point under than -30°C) and clean.
 * Air filter (smaller than 5µm) shall be placed just preceding of supply port.
 * Precision regulators are recommended for smart positioners.

Options

Function	Items	Specification
Analogue Feedback Function	Output Signal	DC 4~20 mA (Invertible)
	Input Voltage	Standard: 12~36 V DC Flameproof: 12~24 V DC
	Accuracy	±1.0 % to recognised value
Communication Function	HART Communication	HART7

* Whenever input current falls below 3.8 mA, the output current goes stand-by.

Performances

Items	Single Action	Double Action
Linearity	±1.0% F.S. *1	
Hysteresis	1.0% F.S. *1	
Air Consumption	SUP 0.14 MPa: 3.0 NI/min SUP 0.40 MPa: 6.5 NI/min Output Pressure 50%	SUP 0.40 MPa: 10 NI/min Output Pressure 75%
Maximum Airflow Capacity	SUP 0.14 MPa: 90 NI/min SUP 0.40 MPa: 200 NI/min	SUP 0.40 MPa: 200 NI/min
Surge Immunity (Lightning Protection)	IEC6100-4-5 Level 2 (1.0 kV ±10%) *2	

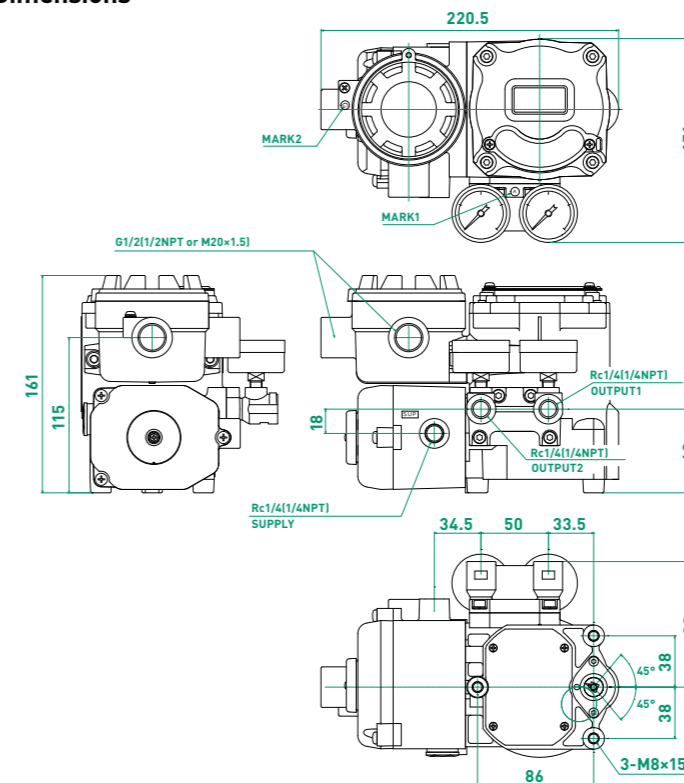
* Actual performance depends on each actuator.
 *1: At sensor angle range 90 deg.
 *2: Temporary malfunction may be occurred at surging but automatically recovers.

Notation Table

1	2	3a	3b	3c	4	5	6
MP1							
Items	Specification	Notation					
1 Series	Smart Positioner MP100	MP1					
2 Housing Construction	Standard (Non-Explosion Proof)	0					
	Flameproof Ex d IIC T6	6					
3a Air Connection	Single Acting Rc 1/4 (Gauge Rc 1/8)	1					
	Double Acting Rc 1/4 (Gauge Rc 1/8)	2					
	Single Acting 1/4 NPT (Gauge 1/8 NPT)	3					
	Double Acting 1/4 NPT (Gauge 1/8 NPT)	4					
3b Electric Connection	G 1/2 (Not available for NEPSI Certification)	1					
	1/2 NPT	2					
	M20 x 1.5 (Not available for TIIS Certification)	3					
3c Options	None	1					
	HART function	3					
4 Ambient Temperature	Feedback + HART function	4					
	Standard: -20~80°C	S					
5 Actuator	Flameproof: -20~60°C						
	Linear	L					
6 Pressure Gauges	Rotary	R					
	0.2MPa, 0.4MPa, 1.0MPa	M2, M4, M0					
	200kPa, 400kPa, 1000kPa	K2, K4, K0					
	30psi, 60psi, 150psi	P2, P4, P0 *1					
	2bar, 4bar, 10bar	B2, B4, B0					

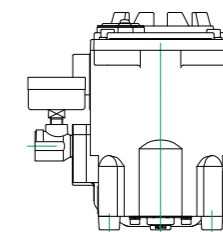
*1 No domestic sales in Japan due to Non-SI unit.

Dimensions



Air connections

Supply	Output	Gauge	MARK1
Rc 1/4	Rc 1/4	Rc 1/8	A
1/4 NPT	1/4 NPT	1/8 NPT	B
Rc 1/4	Rc 1/4	1/8 NPT	C



Electric Connections

Cable Entry Conduit	MARK 2
G1/2	G
1/2 NPT	N
M20x1.5	M