



Electric needle valve for chemical liquid

# MNV Series

● Connection tube size: 3/8"



## Specifications

### 1. Valve/body

Item	MNV00-10BUP-1-G
Working fluid	Chemical liquids, pure water (*1)
Fluid temperature °C	20 to 195
Proof pressure MPa	0.5
Working pressure (A→B) MPa	0 to 0.2
Fluid differential pressure kPa	5 to 200 (differential pressure between ports A and B)
Setting range	0 to 600step (motor drive step) • 0step valve open side, home sensor detection • 600step valve closed side, with stopper
Operating ambient temperature °C	20 to 100
Operating ambient humidity%RH	20 to 85 (no condensation)
Storage ambient temperature °C	0 to 60
Storage ambient humidity%RH	20 to 85 (no condensation)
Mounting orientation	Unrestricted
Connection	Super 300 pillar fitting P series integrated 3/8" x 1/4" fitting for PFA tube
Orifice size mm	ø3.4
Degree of protection	Waterproof (IP65 or equivalent)
Weight kg	0.51

\*1: Check the compatibility of product structural materials, working fluids and atmosphere. It cannot be used for nitric acid, hydrochloric acid, hydrofluoric acid, ozone or organic fluids.

### 2. Motor

Type	2-phase stepper motor (bipolar)
Drive method	Full step (step angle: 1.8°)
Rated drive current mA/phase	350
Drive speed pps	650

### 3. Sensor

Power supply voltage	24 VDC ±10% Ripple (P-P) 10[%] or less
Current consumption	50 mA or less
Control output	NPN open collector output, 40 mA or less
Operation mode	Output ON when opening the valve open side from the origin position
Response frequency	1 kHz or more

### 4. Purge (\*2)

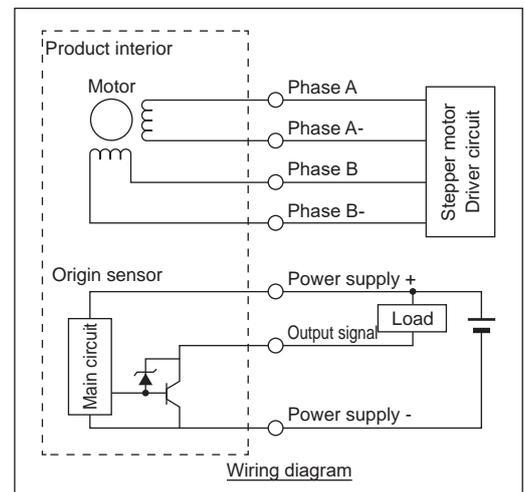
Purge flow rate L/min	15 to 30
Internal pressure kPa	0 to 100
Fluid temperature °C	10 to 30
Port size	IN port: Rc1/8, EXH port: Rc1/8
Purge supply fluid	Clean compressed air, equivalent to JIS grade 2.6.1 (JIS B 8392-1:2003)

\*2: Purge must be performed. Also, be sure to adjust the flow rate to the specified flow rate by providing a speed control valve on the supply side.

### 5. Cable

Conductor sectional area	AWG#24, approx. 0.2 [mm <sup>2</sup> ]
Conductor material	Tin plated annealed copper wire
Lead wire coating O.D.	Approx. 1.14 [mm]
Lead wire insulation material	ETFE
Cable finish O.D.	Approx. 4.4 [mm]
Coating sheath material	FEP, black
Cable length	3 m

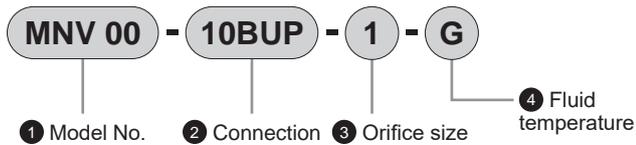
### 6. Wiring



Insulator color	Access point
Green	Motor Phase A
Yellow	Motor Phase A-
White	Motor Phase B
Red	Motor Phase B-
Orange	Origin sensor Power supply +
Blue	Origin sensor Power supply -
Gray	Origin sensor Output signal
Black	NC

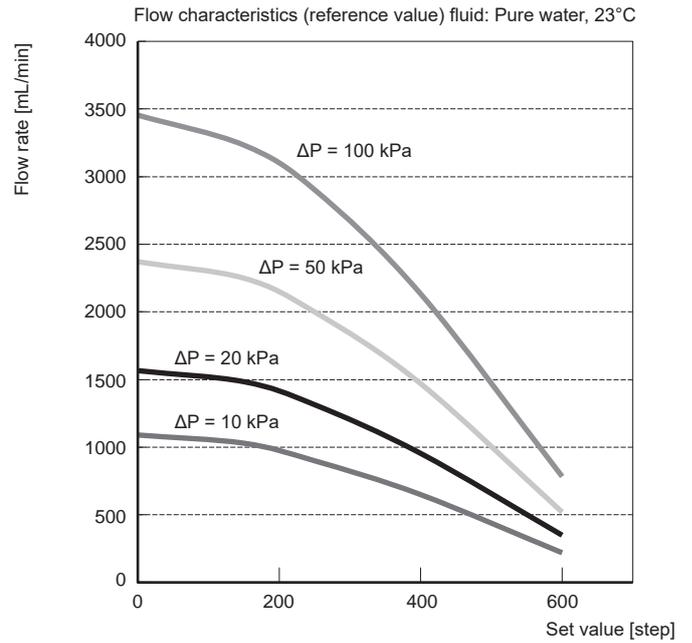
⚠ Always read the precautions and product specifications on Intro Pages 7 to 14 before use.

### How to order



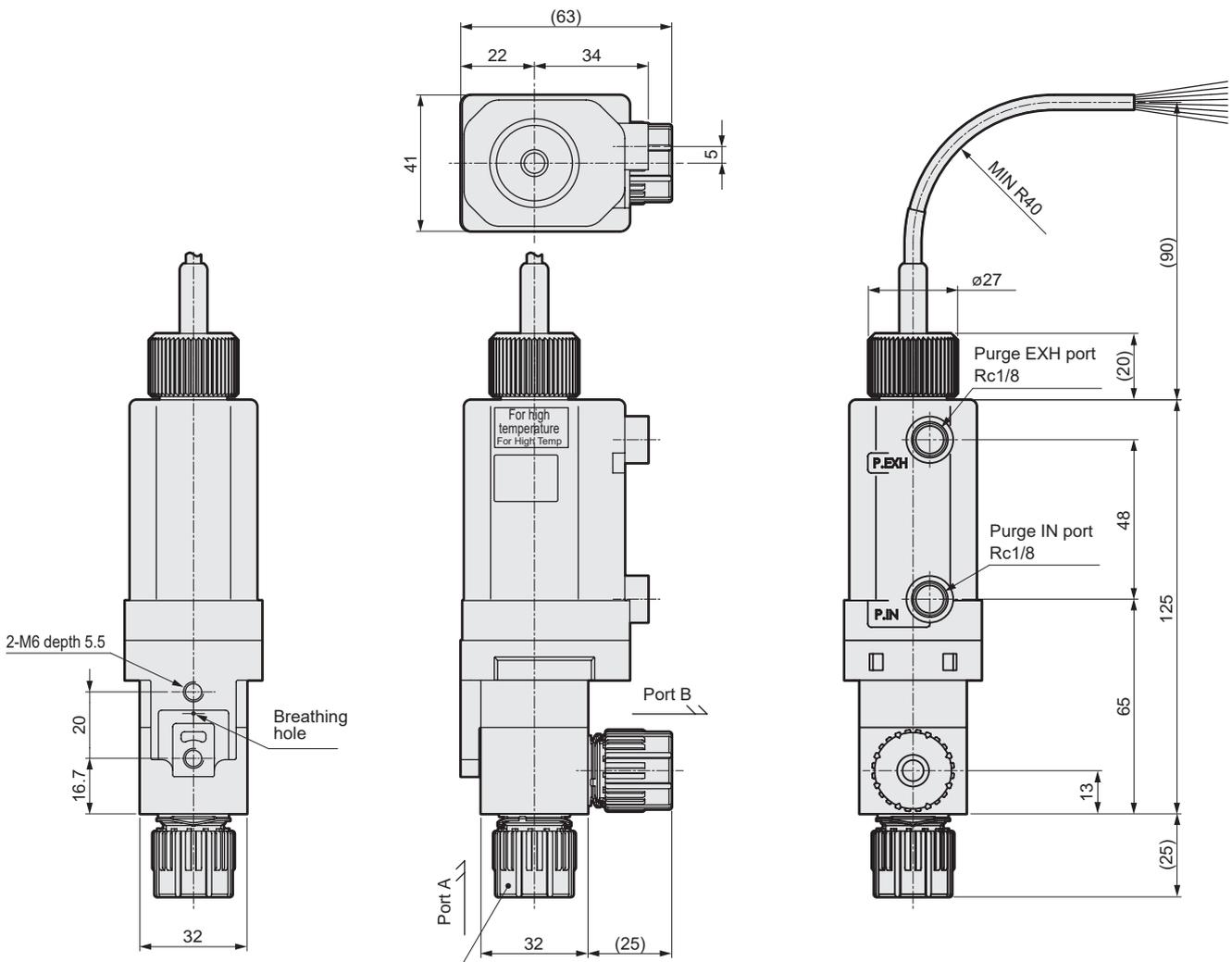
Code	Description
<b>① Model No.</b>	
MNV 00	
<b>② Connection</b>	
10BUP	Super 300 pillar fitting P series integrated 3/8"×1/4" Tube connection
<b>③ Orifice size</b>	
1	ø3.4
<b>④ Fluid temperature</b>	
G	20 to 195°C

### Flow characteristics



\* The characteristics above are reference values. There are individual differences in the actual flow characteristics.

### Dimensions



2-3/8" × 1/4" Fitting for PFA tube  
Nippon Pillar Packing Co., Ltd. Super 300 pillar fitting P Series

Part3R	Part2	Part1	High pressure	Metal-free	Large bore size	Polyvinyl chloride	Drainage	Part3RN	Part2	High pressure	Metal-free	Large bore size	Single unit	Air operated	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
			Air operated valve						Manual valve				Drip prevention valve	Integrated	Regulator	Flow rate adjusting valve					