

■ FEATURES

Model VP200 Current-to-Pneumatic Valve Positioner converts 4 to 20 mA DC or 10 to 50 mA DC signal to a pneumatic signal for control valve actuation.

A valve-stem-position feedback mechanism is provided. This positioner minimizes transmission lag, improves valve characteristics and response, and reduces flow-pressure variation effect.

■ STANDARD SPECIFICATIONS

Applicable Control Valve:

Diaphragm Actuator Single acting Cylinder Double acting Cylinder.

Materials:

Case: Aluminum die-cast
Paint: Polyurethane resin-baked finish
Color: Deep-sea moss-green (Munsell 0.6GY3.1/2.0 or equivalent)

Pressure Gauge Case:

Stainless steel JIS SUS 304

Input Signals:

4 to 20 mA DC or 10 to 50 mA DC

Input Resistance:

250 to 310 Ω (Input signal 4 to 20 mA DC)
80 to 105 Ω (Input signal 10 to 50 mA DC)

Output signals and pressure gauge scale:

No gauge in standard. Pressure gauge can be selected as option. The supply pressure unit on the name plate for non-gauge model is Pa.

Diaphragm, Single acting Cylinder			
Calibration unit	Supply Air Pressure	Pressure Gauge Scale	
		Supply Air	Output Signal
Pa	140 to 400 kPa	400kPa	400kPa
kgf/cm ²	1.4 to 4 kgf/cm ²	4 kgf/cm ²	4 kgf/cm ²
bar	1.4 to 4 bar	4 bar	4 bar
psi	20 to 60 psi	60 psi	60 psi

T01E.EPS

Double acting Cylinder			
Calibration unit	Supply Air Pressure	Pressure Gauge Scale	
		Supply Air	Output Signal
Pa	200 to 700 kPa	1 MPa	1 MPa
kgf/cm ²	2 to 7 kgf/cm ²	10 kgf/cm ²	10 kgf/cm ²
bar	2 to 7 bar	10 bar	10 bar
psi	30 to 105 psi	150 psi	150 psi

T02E.EPS

Input/Output Action:

Output increases or decreases as input increases (option in basic Suffix codes)



Manual Operation:

Available using Auto/Manual(A/M) transfer switch

Zero Adjustment Range:

-15 to 85 % of span

Span Adjustment Range:

Within 300 % of span

Split Range:

Available for 50 to 100 %

Valve-stem travel range:

10 to 100 mm (0.4 to 4 in)

Air Consumption and Output Capacity:

	Diaphragm, Single Acting Cylinder	Double Acting Cylinder
Air Supply Pressure	140 kPa (1.4 kgf/cm ²)	400 kPa (4 kgf/cm ²)
Maximum Air Consumption	5 NI/min	12.5 NI/min
Maximum Output Capacity	160 NI/min	330 NI/min

T03E.EPS

Ambient temperature:

-10 to 80°C (Operating Temperature Limits Code 1)
-30 to 40°C (Operating Temperature Limits Code 2)

Degrees of Protection:

IP53, NEMA3

Explosion-Proof Construction:

JIS Explosion-proof: Flameproof Exds IIC T6 X
Amb. Temp: -20 to 60°C

Note: In case the ambient temperature exceeds 50°C, use heat-resistant cables with maximum allowable temperature of 70°C or above.

JIS intrinsically safe type: i3aG5

Amb. Temp: -10 to 60°C

NK intrinsically safe type:

Amb. Temp: -10 to 60°C

EMC Conformity Standards: CE , N200

EN61326, AS/NZS 2064

Connections:

Air Connection: Rc 1/4 or 1/4 NPT female
 Electrical Connection: G 1/2, G 3/4, 1/2 NPT, and 3/4 NPT female
 Pressure Gauge Connection:
 Without pressure gauge(Standard Specification)

		Pressure gauge connection
Connections Codes	1 and 2	Rc 1/8 female
	3 and 4	1/8 NPT female

T04E.EPS

With pressure gauge(Optional)

		Pressure gauge connection	
		Optional codes /GP, /GM, and /GB	Optional code /GE
Connections Codes	1 and 2	Rc 1/8 female	1/8 NPT female
	3 and 4		

T05E.EPS

Mounting:

Front of Actuator with bracket or Valve yoke

Weight:

3.2 kg (7.1 lb)

■ PERFORMANCE SPECIFICATIONS

Linearity:

±1.0 % (for Diaphragm Actuator, Single Acting Cylinder)
 ±1.5 % (for Double Acting Cylinder)

Hysteresis:

Less than 1.0 % (for Diaphragm Actuator, Single Acting Cylinder)
 Less than 1.5 % (for Double Acting Cylinder)

■ MODEL AND SUFFIX CODES

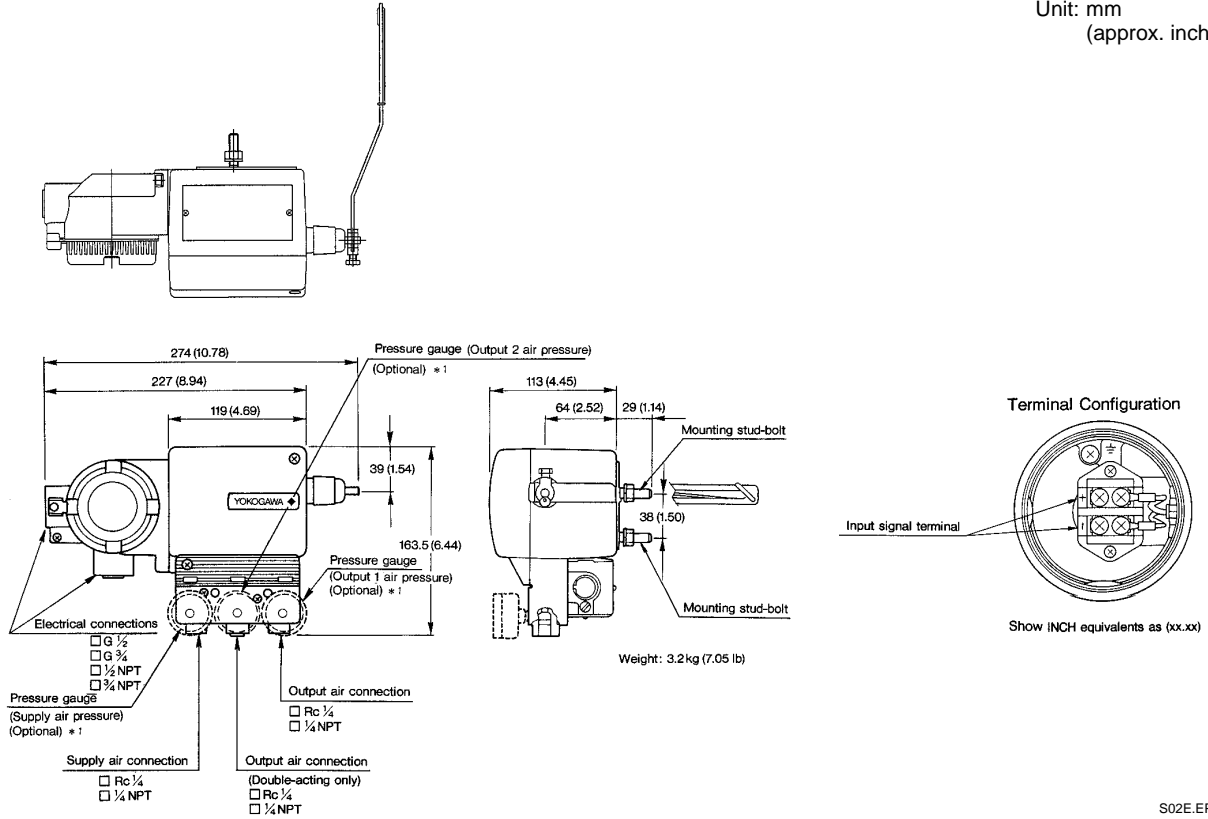
Model	Suffix Codes	Description
VP200	Current-to-pneumatic positioner
Input Signal	-A -B	4 to 20 mA DC 10 to 50 mA DC
Applicable Control Valve	L	Diaphragm Actuator: Direct output ^{*1} (small capacity, less than 0.51) Single Acting Cylinder: Direct output ^{*1} (small capacity, less than 0.51)
	M	Diaphragm Actuator: Direct output ^{*1} Single Acting Cylinder: Direct output ^{*1}
	N	Double Acting Cylinder
	P	Diaphragm Actuator: Reverse output ^{*2} (small capacity, less than 0.51) Single Acting Cylinder: Reverse output ^{*2} (small capacity, less than 0.51)
	Q	Diaphragm Actuator: Reverse output ^{*2} Single Acting Cylinder: Reverse output ^{*2}
Connections	1 2 3 4	Air Connections: Rc1/4, Electrical Connection: G1/2 female Air Connections: Rc1/4, Electrical Connection: G3/4 female Air Connections: 1/4NPT female, Electrical Connection: 1/2NPT female Air Connections: 1/4NPT female, Electrical Connection: 3/4NPT female
Operating Temperature Limits	1 2	-10 to 80°C -30 to 40°C
Optional Codes	/JF3 /G11 /G21 /JS1 /SCF-□ /NK /A1 /X1 /SS /GP /GM /GB /GE /GW /NM /NB /NE /LV /M1	JIS Flameproof type. Apply to connections code 1, 2 and 3. Packing adapter for JIS Flameproof Electrical connection: G 1/2 female, Applicable cable O.D.: 8 to 12 mm Packing adapter for JIS Flameproof Electrical connection: G 3/4 female, Applicable cable O.D.: 10 to 16 mm JIS Intrinsically safe type. Apply to only input signal code-A. ^{*3} Special Color Finished or Positioner Color NK (Nippon Kaiji Kyokai) intrinsically safe type. Apply to only input signal code-A. ^{*3} High pressure gauge for diaphragm-actuator or single acting cylinder. 1 MPa, 10 kgf/cm ² , 10 bar, 150 psi Epoxy resin-baked coating External screw material is SUS304 stainless steel. With pressure gauge. Pa calibration With pressure gauge. kgf/cm ² calibration With pressure gauge. bar calibration With pressure gauge. psi calibration With Double scale pressure gauge. Scale unit: Pa/kgf/cm ² Without pressure gauge. Supply pressure unit: kgf/cm ² Without pressure gauge. Supply pressure unit: bar Without pressure gauge. Supply pressure unit: psi With two levers (long and short) With lever (for Motoyama 3800 series valve)

T06E.EPS

*1: Direct output(increasing input signal increase actuator pressure)
 *2: Reverse output(increasing input signal decreases actuator pressure)
 *3: See page 4 for JIS- and NK-approved safety barrier.

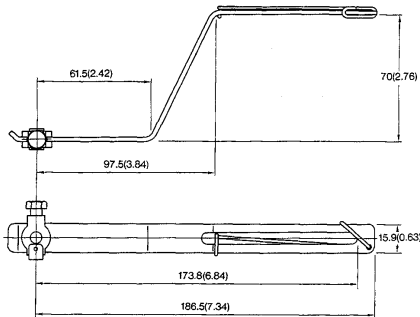
DIMENSIONS

Unit: mm
(approx. inch)

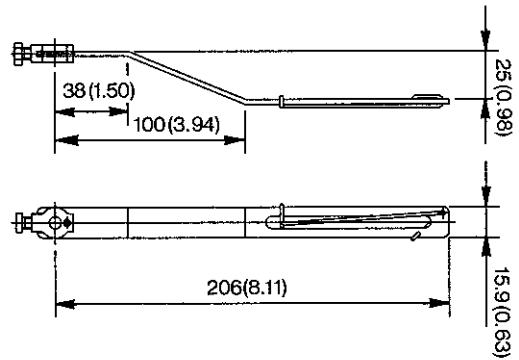


S02E.EPS

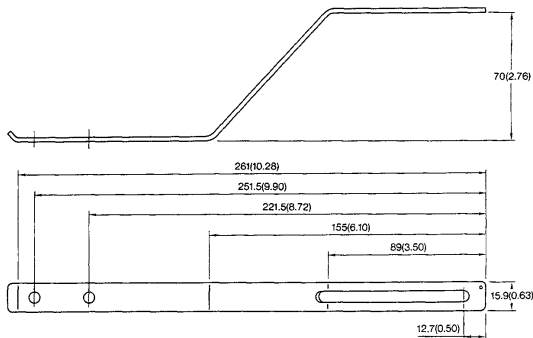
Lever 1 (Parts No. F9173CA)
(Suffix code: /LV)



Lever for Motoyama 3800 series valve
(Suffix code: /M1)



Lever 2 (Parts No. F9173CJ)
(Suffix code: /LV)



< Ordering Information >

Specify the following when ordering

1. Model, suffix codes, and optional codes
2. Tag Number (if required)

< Safety Barrier for JIS Intrinsically Safe Type >

BARD-800 Safety Barrier: Refer to GS 01B04S10-01E

< Safety Barrier for NK Intrinsically Safe Type >

BARD-400 Safety Barrier: Refer to GS 1B4S1-E

Distribué par :



2 rue René Laennec 51500 Taissy France

Fax: 03 26 85 19 08, Tel : 03 26 82 49 29

Email : hvssystem@hvssystem.com

Site web : www.hvssystem.com