

ELECTRO-PNEUMATIC POSITIONER

DATA SHEET

ZLA

The electro-pneumatic positioner converts a 4 to 20mA DC operation signal from an electronic controller, etc. into a pneumatic signal to drive a diaphragm control valve. The operating position is determined accurately by feedback via links to the positioner.

FEATURES

1. Various types
Flame-proof type, intrinsically safe explosion-proof type, split range type, etc. are available.
2. Compactness and light mass {weight} result in easy mounting.
Easily mounted because of light mass 3kg to a control valve by using its link mechanism and clamper.
3. A low input resistance of 200Ω permits two positioners to simultaneously operate.



SPECIFICATIONS

Input signal : 4 to 20mA DC, 4 to 12mA DC or 12 to 20mA DC

Input resistance : Approx. 200Ω (at 20°C)

Accuracy rating : ±1.0% of full range

Hysteresis : 0.75% of full range

Response time : Approx. 2 sec
(90% time of full range when using a valve having the top of 240mm diameter and lift of 16mm)

Lift adjusting range (Lever rotating range) :
10 to 100mm (6° to 40°)

Air supply pressure and output signal :

Air supply pressure [kPa] [kgf/cm ²]	Output signal [kPa] [kgf/cm ²]
140 {1.43}	19.6 to 98.1 {0.2 to 1.0}
160 {1.63}	39.2 to 117.7 {0.4 to 1.2}
240 {2.45}	39.2 to 196.1 {0.4 to 2.0}

Output signal pressure gauge :
JIS class 3 with the graduation angle of 270°

Input/output operations :
As specified by the customer
Normal action;
The output signal level increases as the input signal level increases.
Reverse action;
The output signal level decreases as the input signal level increases.

Nominal air consumption :

12N ℓ /min (at the supply air pressure of 140kPa{1.43kgf/cm²})
20N ℓ /min (at the supply air pressure of 240kPa{2.45kgf/cm²})

Maximum air consumption :

60N ℓ /min (at the supply air pressure of 140kPa{1.43kgf/cm²})
80N ℓ /min (at the supply air pressure of 240kPa{2.45kgf/cm²})

Ambient temperature :

-20 to +80°C
Intrinsically safe explosion-proof type;
-20 to +60°C
Flame-proof type;
-20 to +70°C

Ambient humidity :

Less than 95% RH

External dimensions (H × W × D) :

215 × 212 × 128mm

Mas{weight} : Approx. 3kg

Air pipe connection :

Rc1/4

Conduit connection :

G1/2

Waterproof structure :

Splash proofing (JIS C 0920)

Explosion-proof structure :

Intrinsically safe explosion-proofing
(JIS i3nG5)
Flame-proofing (JIS d2G4)

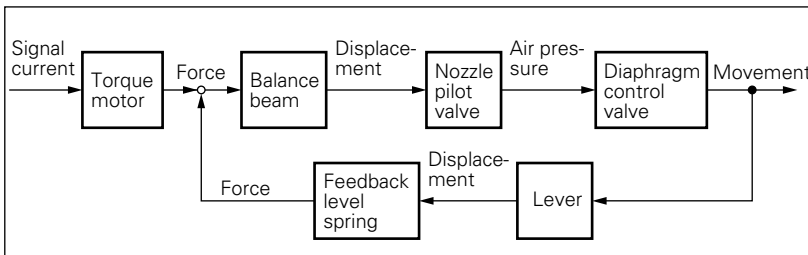
Finish color :

Silver (epoxy resin coating)
Acid and alkaliproofing treatment is applied to the standard products.

Mounting method :

Connected to the control valve yoke.
Small, medium and large valve stem securing links and clampers are available.

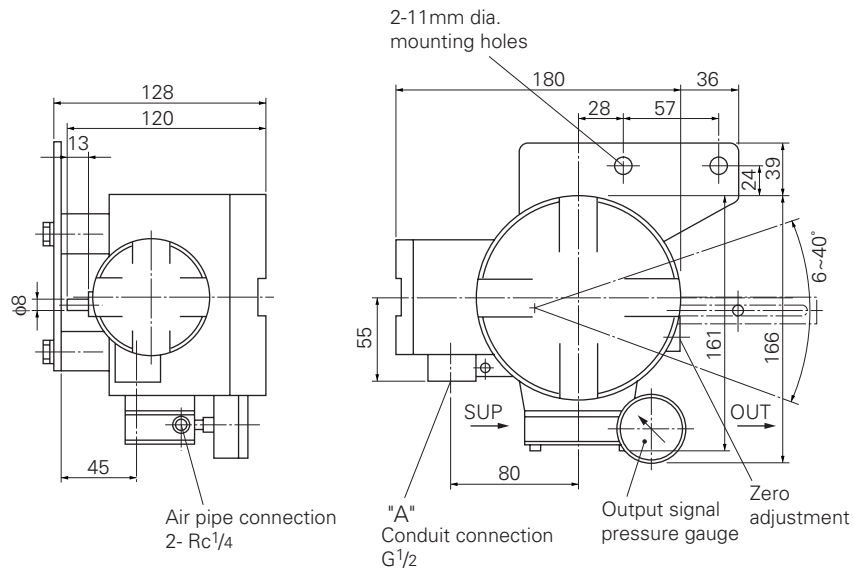
FUNDAMENTAL BLOCK DIAGRAM



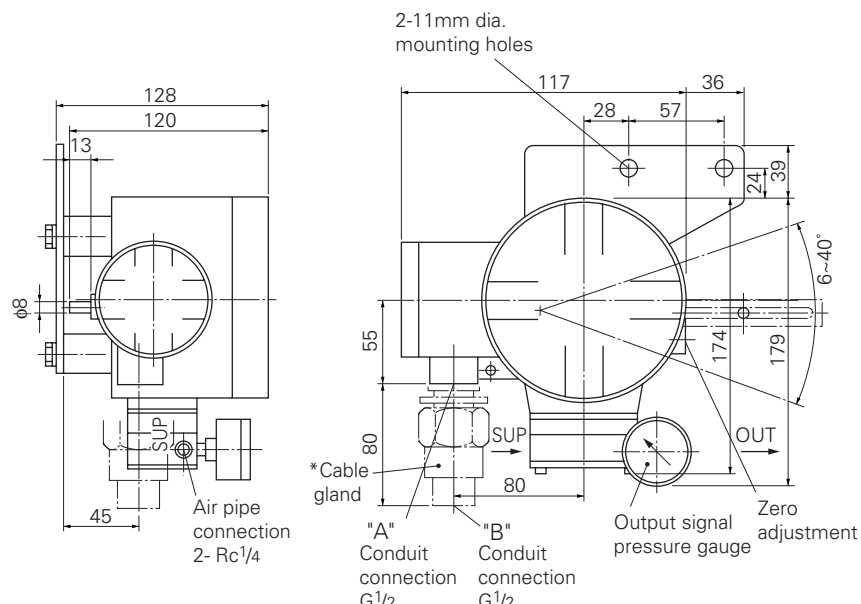
CODE SYMBOLS

1	2	3	4	5	6	7	8	Description
Z	L	A					6	Input signal 4 to 20mA DC
		1						4 to 20mA DC
		2						4 to 12mA DC
		3						12 to 20mA DC
								Output signal: input/output operation: air supply pressure
		A						19.6 to 98.1 kPa (normal action) ... 140kPa {0.2 to 1.0kgf/cm ² } {1.43kgf/cm ² }
		B						39.2 to 117.7 kPa (normal action) ... 160kPa {0.4 to 1.2kgf/cm ² } {1.63kgf/cm ² }
		C						39.2 to 196.1 kPa (normal action) ... 240kPa {0.4 to 2.0kgf/cm ² } {2.45kgf/cm ² }
		D						98.1 to 19.6 kPa (reverse action) ... 140kPa {1.0 to 0.2kgf/cm ² } {1.43kgf/cm ² }
		E						117.7 to 39.2 kPa (reverse action) ... 160kPa {1.2 to 0.4kgf/cm ² } {1.63kgf/cm ² }
		F						196.1 to 39.2 kPa (reverse action) ... 240kPa {2.0 to 0.4kgf/cm ² } {2.45kgf/cm ² }
								Explosion-proof structure
		Y						General use (Non-explosion-proof)
		A						Intrinsically safe explosion-proof structure (JIS i3nG5)
		B						Flame-proof structure (JIS d2G4 conduit pressure-resisting screw-coupled type lead in system)
		C						Flame-proof structure (JIS d2G4 flame-proof packing connection type)
								Link mechanism and clamper
		0						Non provided
		1						Provided with the small link mechanism and clamper
		2						Provided with the medium link mechanism and clamper
		3						Provided with the large link mechanism and clamper
								} See "Outline diagram"

OUTLINE DIAGRAM (Unit: mm)

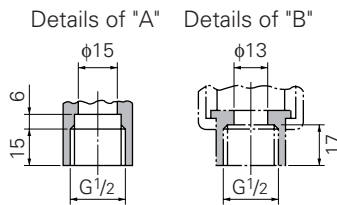


<GENERAL and INTRINSICALLY SAFE EXPLOSION-PROOF TYPES>

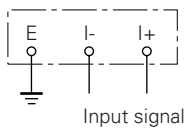


Note: * shows the part used for the flame-proof packing type which is used for 11mm diameter cable.

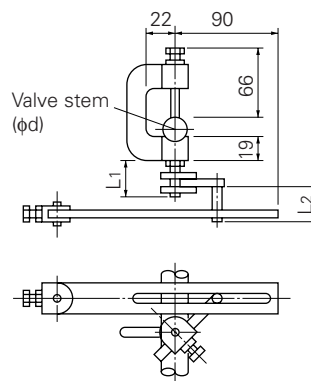
<FLAME-PROOF TYPE>



Connection diagram



Link mechanism and clamper



7th digit	L1	L2
1	35	30
2	50	55
3	112	55

RELATED DEVICES

Air set
Diaphragm type control valve
Opener (FXZ2 type)

ORDERING INFORMATION

1. Product name
2. Code symbol
3. Installation place and fitting bracket
4. Other requirements

⚠ Caution on Safety

*Before using this product, be sure to read its instruction manual in advance.

Fuji Electric Systems Co., Ltd.

Head Office

6-17, Sanbancho, Chiyoda-ku, Tokyo 102-0075, Japan
<http://www.fesys.co.jp/eng>

Sales Div.

International Sales Dept.

No.1, Fuji-machi, Hino-city, Tokyo, 191-8502 Japan
Phone: 81-42-585-6201, 6202 Fax: 81-42-585-6187
<http://www.fic-net.jp/eng>