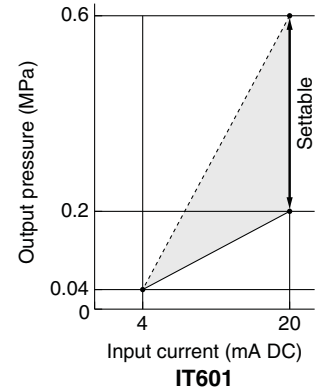
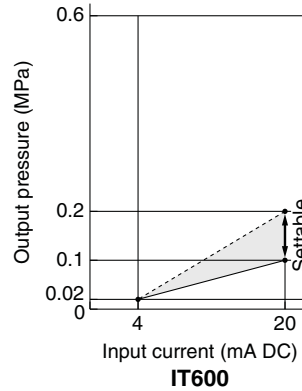


Electro-Pneumatic Transducer

Series IT600

- **The air pressure in proportion to the current signal can be output.**
Can be used as input pressure signal in combination with the pneumatic-positioner.
- **Wide output pressure range/0.02 to 0.6 MPa**
The maximum pressure can be set freely through the span adjustment.
- **Fast response**
The pilot valve capacity is large and the large flow can be obtained. Therefore, the response is excellent when operating the actuator directly or controlling the inner pressure of the tank with a large capacity.
- **Independent electric unit/Explosion-proof (flameproof) construction**
The span adjustment, zero-point adjustment, and inspection maintenance can be performed with the body cover removed even in a hazardous place where the explosion or fire may occur.
- **Easy span adjustment**
As the span adjustment mechanism uses a vector mechanism, the span adjustment can be performed smoothly.

Output pressure setting range



How to Order

IT60 0 - 0 0 0 - 0

Output pressure

0	0.02 to 0.2 MPa
1	0.04 to 0.6 MPa

Input current

0	4 to 20 mA DC
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Options

Nil	None
B	Bracket (2 ^B pipe installation)
J	Hexagon wrench (for tightening terminal cover)

Pressure gauge*

0	None
1	0.2 MPa
2	0.3 MPa
3	1 MPa
4	0.4 MPa
6	0.6 MPa

External wiring connection

0	Flameproof threaded-joint metal conduit and normal joint not requiring explosion-proof design
1	Flameproof packing type cable gland

Seal type

0	None
1	Applicable cable O.D. 7 to 7.9 mm
2	Applicable cable O.D. 8 to 8.9 mm
3	Applicable cable O.D. 9 to 9.9 mm
4	Applicable cable O.D. 10 to 10.9 mm
5	Applicable cable O.D. 11 to 11.5 mm
6	A complete set of 5 types of flameproof packing

Specifications

Item	Model	IT600	IT601
		Low pressure	High pressure
Input current		4 to 20 mA DC	
Input impedance		235 Ω (4 to 20 mA, 20°C)	
Supply air pressure		0.14 to 0.24 MPa	0.24 to 0.7 MPa
Output pressure		0.02 to 0.1 MPa (Max. 0.2 MPa)	0.04 to 0.2 MPa (Max. 0.6 MPa)
Linearity		Within ±1.0% F.S.	
Hysteresis		Within 0.75% F.S.	
Repeatability		Within ±0.5% F.S.	
Air consumption		7 L/min (ANR) (SUP = 0.14 MPa)	22 L/min (ANR) (SUP = 0.7 MPa)
Ambient and fluid temperature		-10 to 60°C	
Air connection port		Rc1/4 female thread	
Electrical connection		Rc1/2 female thread	
Explosion-proof construction		Explosion-proof (flameproof) construction d2G4 (Certificate no. T28926)	
Material		Aluminum die-cast body	
Weight		3 kg	

Replacement Parts

Part no.	Description	Note
P255010-1	Pilot valve unit	IT600
P255010-19	Pilot valve unit	IT601

Positioners

Regulators

Relays/Valves

Electro-Pneumatic Transducers

Actuators

Detection Conversion Unit

Solenoid Valves

Air Preparation Equipment

Industrial Filters

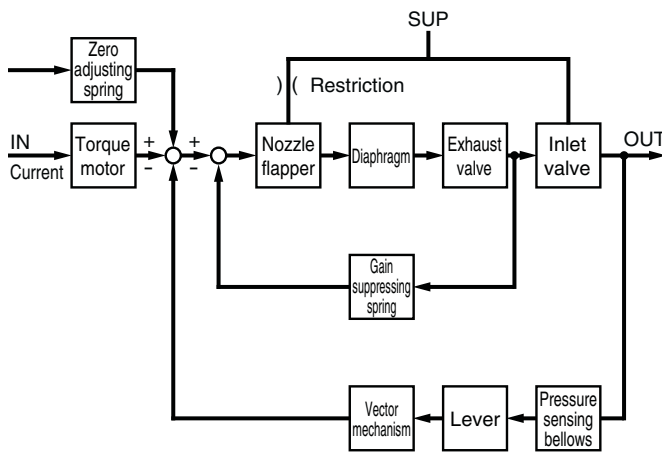
Piping Materials

Principle of Operation

When the input current increases, armature ① in the torque motor will be subjected to a clockwise torque, pushing flapper lever ② to the left. As a result, the clearance of nozzle flapper ③ will increase and the nozzle back pressure will decrease. This moves exhaust valve ⑩ of pilot valve ⑤ to the left, causing the output air pressure of OUT1 to increase.

The output pressure thus increased is passed through the path inside the pilot valve to pressure sensing bellows ⑥, where it is converted to the force. This force acts on vector mechanism ⑦ via lever ⑪. Because the force will balance the force

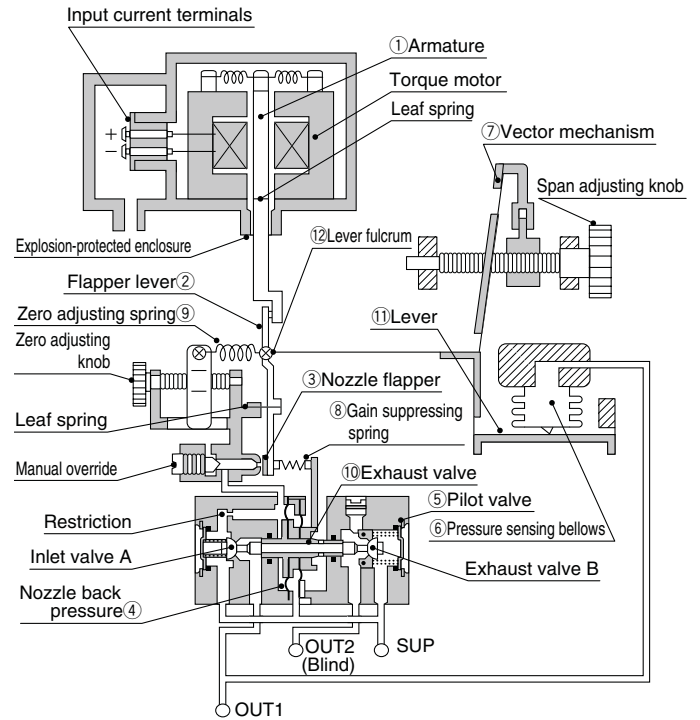
Block diagram illustrating operating principle



generated by means of the input current at lever fulcrum ⑫, the output air pressure proportional to the input current will be obtained.

Gain suppression spring ⑧ functions to immediately feedback the movement of the exhaust valve to the flapper lever, thereby contributing to loop stability.

Zero point and span adjustments are performed by varying the tension force of zero adjusting spring ⑨ and the angle of the vector mechanism, respectively.



Dimensions

