

Compact Electro-Pneumatic Regulator Series ITV0000

Compact Vacuum Regulator Series ITV0009

Compact 15 mm

With a simplified high-density circuit board design, an extremely compact size has been achieved.



Lightweight 100 g

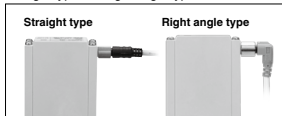
Realizes space-saving and reduction of weight for manifold use.

Stations can easily be increased or decreased due to DIN rail mount design.



■ Cable connectors

Straight type and right angle type are available.



■ Built-in One-touch fittings

■ With error indication LED

■ Brackets

Flat and L-brackets are available.



Flat bracket



L-bracket

● Equivalent to IP65

● Linearity: $\pm 1\%$ F.S. or less

Hysteresis: 0.5% F.S. or less

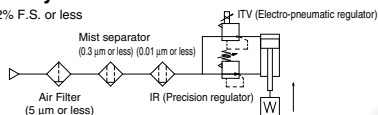
Repeatability: $\pm 0.5\%$ F.S. or less

● High-speed response time: 0.1 sec (Without load)

(Note) This is not a guaranteed value as it depends on the operating environment.

● High stability

Sensitivity 0.2% F.S. or less



Electro-Pneumatic Regulator Series ITV1000/2000/3000

Electronic Vacuum Regulator Series ITV209



ITV1000

ITV2000

ITV3000

ITV2090



Serial communications specifications to Series ITV1000/2000/3000 are standardized.

● Reduced wiring

Applicable Fieldbus protocols



RS-232C specification to serial communications is standardized.

● Sensitivity: 0.2% F.S. or less

● Linearity: $\pm 1\%$ F.S. or less

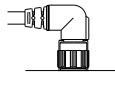
● Hysteresis: 0.5% F.S. or less

● IP65

● Cable connections in 2 directions

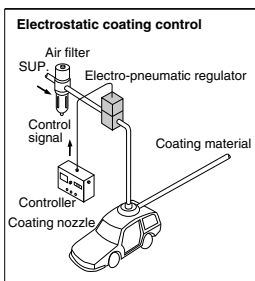
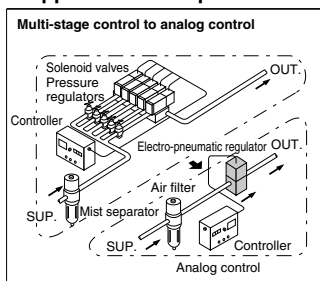
Straight type

Right angle type



● Grease-free specification (Series ITV1000)

● Application examples









Electro-Pneumatic Regulator

Electronic Vacuum Regulator

Series *ITV*

● Stepless control of air pressure proportional to an electrical signal.

| | Series | Model | Set pressure range | Input signal | Port size | Page | ARJ |
|-----------------------------|--|---|--|---|---|------------|-----------------|
| Electro-Pneumatic Regulator | Series <i>ITV0000</i> |  ITV001 □ | 0.001 to 0.1 MPa | Current type: 4 to 20 mA DC (Sink type) Current type: 0 to 20 mA DC (Sink type) Voltage type: 0 to 5 VDC Voltage type: 0 to 10 VDC | Built-in One-touch fittings Metric size: ø4 Inch size: ø5/32 | 806 | AR425 to 935 |
| | | ITV003 □ | 0.001 to 0.5 MPa | | | | ARX |
| | | ITV005 □ | 0.001 to 0.9 MPa | | | | AMR |
| | Series <i>ITV1000</i> |  ITV101 □ | 0.005 to 0.1 MPa | Current type: 4 to 20 mA DC (Sink type) Current type: 0 to 20 mA DC (Sink type) Voltage type: 0 to 5 VDC Voltage type: 0 to 10 VDC Preset input (4 points/16 points) 10 bit digital input CC-Link compatible | 1/8, 1/4 | 814 | ARP |
| | | ITV103 □ | 0.005 to 0.5 MPa | | | | IR |
| | | ITV105 □ | 0.005 to 0.9 MPa | | | | IRV |
| | Series <i>ITV2000</i> |  ITV201 □ | 0.005 to 0.1 MPa | Current type: 4 to 20 mA DC (Sink type) Current type: 0 to 20 mA DC (Sink type) Voltage type: 0 to 5 VDC Voltage type: 0 to 10 VDC Preset input (4 points/16 points) 10 bit digital input CC-Link compatible DeviceNet™ compatible PROFIBUS DP compatible RS-232C communication | 1/4, 3/8 | 814 | VEX |
| | | ITV203 □ | 0.005 to 0.5 MPa | | | | SRH |
| | | ITV205 □ | 0.005 to 0.9 MPa | | | | SRP |
| Series <i>ITV3000</i> |  ITV301 □ | 0.005 to 0.1 MPa | DeviceNet™ compatible PROFIBUS DP compatible RS-232C communication | 1/4, 3/8, 1/2 | 814 | SRF | |
| | ITV303 □ | 0.005 to 0.5 MPa | | | | VCHR | |
| | ITV305 □ | 0.005 to 0.9 MPa | | | | ITV | |
| Electro-Pneumatic Regulator | Series <i>ITV009</i> □ |  ITV009 □ | -1 to -100 kPa | Current type: 4 to 20 mA DC (Sink type) Current type: 0 to 20 mA DC (Sink type) Voltage type: 0 to 5 VDC Voltage type: 0 to 10 VDC | Built-in One-touch fittings Metric size: ø4 Inch size: ø5/32 | 836 | IC |
| | | ITV209 □ | -1.3 to -80 kPa | | | | ITVX |
| | | ITV209 □ | -1.3 to -80 kPa | | | | PVQ |
| Electronic Vacuum Regulator | Series <i>ITV209</i> □ |  ITV209 □ | -1.3 to -80 kPa | Current type: 4 to 20 mA DC (Sink type) Current type: 0 to 20 mA DC (Sink type) Voltage type: 0 to 5 VDC Voltage type: 0 to 10 VDC Preset input (4 points/16 points) 10 bit digital input CC-Link compatible DeviceNet™ compatible PROFIBUS DP compatible RS-232C communication | 1/4 | 843 | VEF VEP |
| | | ITV209 □ | -1.3 to -80 kPa | | | | VER |
| | | ITV209 □ | -1.3 to -80 kPa | | | | VEA |
| | | | | | | | VY1 |
| | | | | | | | VBA VBAT |
| | | | | | | | AP100 |

Electro-Pneumatic Regulator

Series *ITV1000/2000/3000*



How to Order

ITV **3** **0** **1** **0** - **0** **1** **2** **S** -

Model

| | |
|---|-----------|
| 1 | 1000 type |
| 2 | 2000 type |
| 3 | 3000 type |

Pressure range

| | |
|---|---------|
| 1 | 0.1 MPa |
| 3 | 0.5 MPa |
| 5 | 0.9 MPa |

Power supply voltage

| | |
|---|--------------|
| 0 | 24 VDC |
| 1 | 12 to 15 VDC |

Note) Communication models (CC, DE, PR, RC), 16 points preset input and 10 bit digital input are available only for 24 VDC.

• **Made to Order Specifications**
Refer to pages 816, 832, and 833 for details.

Pressure display unit

| | |
|--------------------|---------------------|
| Nil | MPa |
| 2 ⁽¹⁰⁰⁾ | kgf/cm ² |
| 3 | bar |
| 4 ⁽¹⁰⁰⁾ | psi |
| 5 | kPa |

Note) Under Japan's new Measurement Act, this is only for overseas sales (SI units are to be used inside Japan). For the communication models, CC, DE, PR and RC, only "Nil" is available as it does not have a pressure display.

Input signal/ Communication model

| | |
|----|---|
| 0 | Current type 4 to 20 mA DC (Sink type) |
| 1 | Current type 0 to 20 mA DC (Sink type) |
| 2 | Voltage type 0 to 5 VDC |
| 3 | Voltage type 0 to 10 VDC |
| 40 | 4 points preset input |
| 52 | 16 points preset input (Switch output/NPN output) |
| 53 | 16 points preset input (Switch output/PNP output) |
| 60 | 10 bit digital input |
| CC | CC-Link |
| DE | DeviceNet™ |
| PR | PROFIBUS DP |
| RC | RS-232C communication |

Monitor output

| | |
|-----|---|
| 1 | Analog output 1 to 5 VDC |
| 2 | Switch output/NPN output |
| 3 | Switch output/PNP output |
| 4 | Analog output 4 to 20 mA DC (Sink type) |
| Nil | None |

Thread type

| | |
|-----|------|
| Nil | Rc |
| N | NPT |
| T | NPTF |
| F | G |

Cable connector type

| | |
|---|-------------------------|
| S | Straight type 3 m |
| L | Right angle type 3 m |
| N | Without cable connector |

Note) Even when a cable connector is selected, communication cable is not included in the communication models, CC, DE and PR. Please order it separately. Refer to the below.
For 10 bit digital input, right angle type cannot be selected.

Bracket *

| | |
|-----|-----------------|
| Nil | Without bracket |
| B | Flat bracket |
| C | L-bracket |

* Bracket is included.

Port size

| | |
|---|-----------------------------|
| 1 | 1/8 (1000 type) |
| 2 | 1/4 (1000, 2000, 3000 type) |
| 3 | 3/8 (2000, 3000 type) |
| 4 | 1/2 (3000 type) |

For communication cables, use the parts listed below (refer to M8/M12 connector in Best Pneumatics No.1 for details) or order the product certified for the respective protocol (with M12 connector) separately.

| Application | Communication cable part number | Note |
|---------------------------|---------------------------------|--|
| CC-Link compatibility | PCA-1567720 (Socket type) | Dedicated Bus adapter supplied with the product. |
| | PCA-1567717 (Plug type) | |
| DeviceNet™ compatibility | PCA-1557633 (Socket type) | T-branch connector not supplied. |
| | PCA-1557646 (Plug type) | |
| PROFIBUS DP compatibility | PCA-1557688 (Socket type) | T-branch connector not supplied. |
| | PCA-1557691 (Plug type) | |