Contact our sales office for delivery dates and prices as this is a special model.

Specialized Product P.G. Point to Group information

Electro-Pneumatic Regulator (Residual pressure relief specification) CE

ITV103□-□□□□□□□-DIT00243

Features

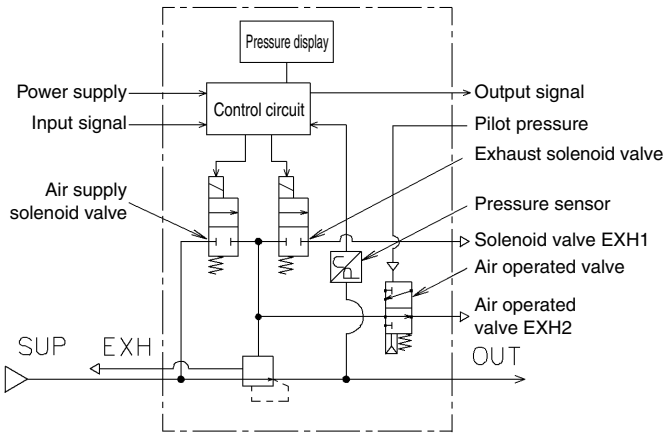
• Exhaust the residual pressure on the OUT side when the pilot pressure is 0 MPa!

When the power is cut off due to a power failure, the residual pressure on the OUT side can be exhausted by setting the pilot pressure to 0 MPa. This is useful for when carrying out maintenance and inspection on the OUT side system of the ITV.

• Pressure range: 0.005 to 0.5 MPa

* Note that this product does not have specifications which cause the pilot pressure to automatically become 0 MPa when the power is cut off.

Working Principle



⚠ Caution To ensure the safest possible operation of this product, please be sure to thoroughly read the "Safety Instructions" in our "Best Pneumatics" catalog before use.

SMC Corporation 4-14-1, SOTO-KANDA, CHIYODA-KU, TOKYO 101-0021, JAPAN **URL: http://www.smcworld.com**

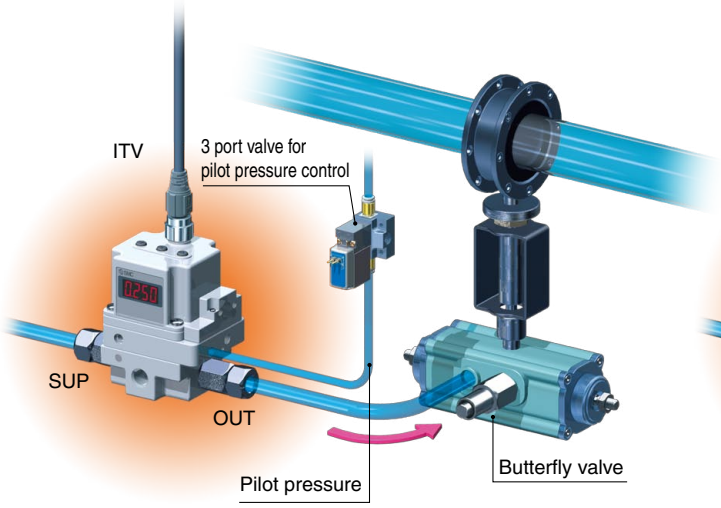
SP164X-004E
P: UW

■Application examples

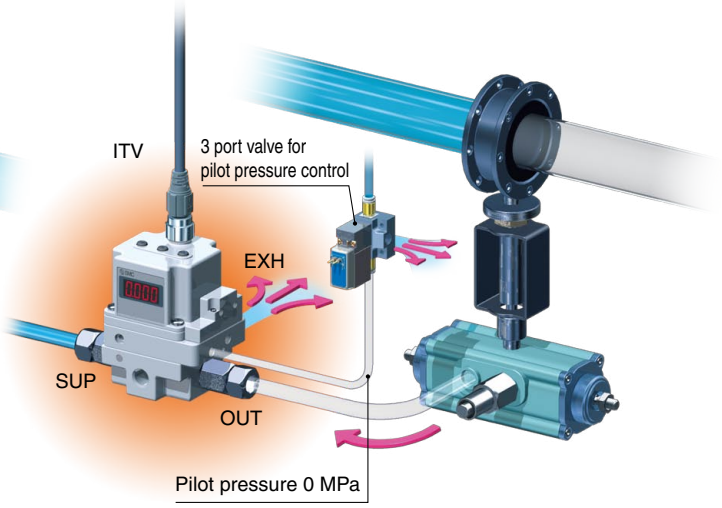
In the case of a butterfly valve

When a butterfly valve needs to be closed in order to carry out maintenance and inspection after the power was cut off due to a power failure, the residual pressure between the OUT side of the ITV and the butterfly valve can be exhausted by setting the pilot pressure to the ITV to 0 MPa. This enables the equipment to be closed.

Power ON



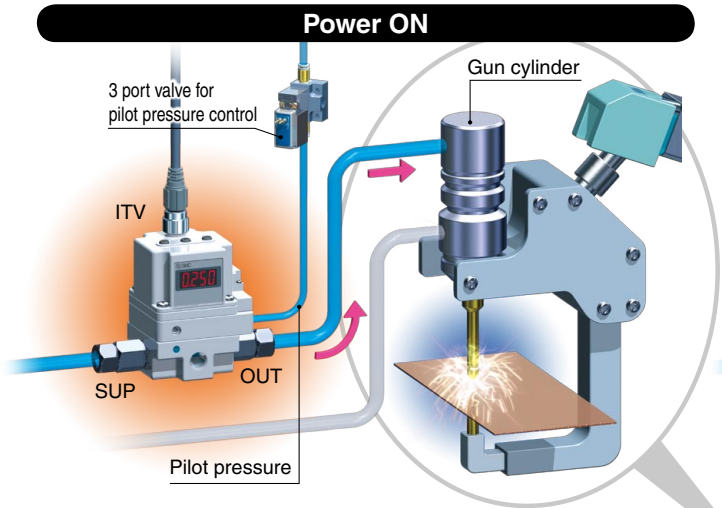
Power OFF



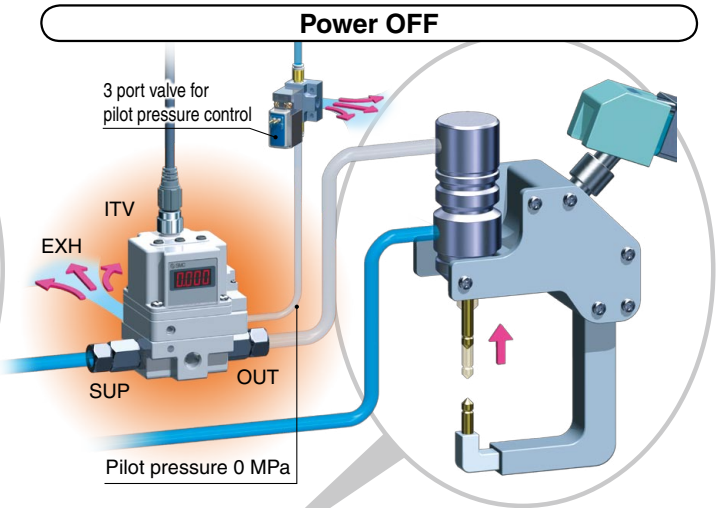
In the case of a spot welding gun cylinder

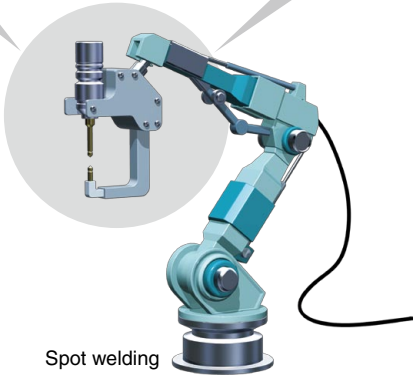
When a welding gun needs to be returned to the standby position in order to carry out maintenance and inspection after the power was cut off due to a power failure, the residual pressure between the OUT side of the ITV and the gun cylinder can be exhausted by setting the pilot pressure to the ITV to 0 MPa. This enables the welding gun to be separated from the workpiece and returned to the standby position.

Power ON



Power OFF





How to Order

ITV103 0 – 0 1 □ 1 □ S □ – DIT00243

Pressure range

3	0.005 to 0.5 MPa

Power supply voltage

0	24 VDC ±10%
1	12 to 15 VDC

Input signal

0	Current type 4 to 20 mA DC
1	Current type 0 to 20 mA DC
2	Voltage type 0 to 5 VDC
3	Voltage type 0 to 10 VDC
40	Preset input (Negative common)

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 (Preset input only)

Pipe thread type

Nil	Rc
N	NPT
T	NPTF
F	G

Port size

1	1/8
2	1/4

Bracket∗1

Nil	Without bracket
B	Flat bracket
C	L-bracket

∗1 Bracket is included.

Cable connector type

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

Pressure display unit

Nil	MPa
2∗1	kgf/cm²
3	bar
4∗1	psi
5	kPa

∗1 This is only for overseas sales as SI units are to be used within Japan under Japan's New Measurement Act.

Specifications

Minimum supply pressure		Set pressure +0.1 MPa
Maximum supply pressure		0.7 MPa
Set pressure range∗1		0.005 to 0.5 MPa
Maximum pilot pressure		0.7 MPa
Minimum pilot pressure		0.3 MPa or the supply pressure, whichever is higher
Power supply	**Voltage**	24 VDC ±10%, 12 to 15 VDC
	Current consumption	0.12 A or less (ITV10□0), 0.18 A or less (ITV10□1)
Input signal	**Current type**	4 to 20 mA DC, 0 to 20 mA DC (Sink type)
	Voltage type	0 to 5 VDC, 0 to 10 VDC
	Preset input type	4 points (Negative common)
Input impedance	**Current type**	250 Ω or less
	Voltage type	Approx. 6.5 kΩ
	Preset input type	Approx. 4.7 kΩ (ITV10□0), Approx. 2.0 kΩ (ITV10□1)
Output signal (Monitor output)	**Analog output**	1 to 5 VDC, 4 to 20 mA DC (Sink type)
	Switch output	NPN output, PNP output
Linearity		±1%F.S. or less
Hysteresis		0.5%F.S. or less
Repeatability		±0.5%F.S. or less
Sensitivity		0.2%F.S. or less
Temperature characteristics		±0.12%F.S./°C or less
Output pressure display	**Accuracy**	±2%F.S. ±1 digit or less
	Minimum unit∗2	MPa: 0.001, kgf/cm²: 0.01, bar: 0.01, psi: 0.1, kPa: 1
Ambient and fluid temperature		0 to 50°C (No freezing or condensation)
Enclosure		Equivalent to IP65
Weight		Approx. 250 g (without option)

∗1 When the product is in an "as-shipped" condition, the output pressure when a 0% input signal is applied is 0 MPa. However, there are some cases in which there is a residual pressure of 0.005 MPa or less. If the pressure needs to be reduced to 0 MPa, install a 3 port valve on the output side to exhaust the residual pressure.

∗2 Adjustment of a numerical value such as zero or span adjustment is set based on the minimum unit of the output pressure display. Note that this unit cannot be changed.

∗ When the pilot pressure becomes 0 MPa, the output pressure in the product is exhausted. If the product is operated without supplying the pilot pressure, the built-in solenoid valve may sometimes continue to operate and emit a humming noise. This may greatly affect the life of the solenoid valve, so when the pilot pressure is cut off, be sure to switch OFF the power to the product.

∗ Supply pilot pressure to the pilot port for air operated valves.

∗ Refer to the **Web Catalog** for details of the bracket and the cable connector.

Dimensions

[mm]