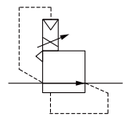
ITVX2000 Series High Pressure Electro-Pneumatic Regulator







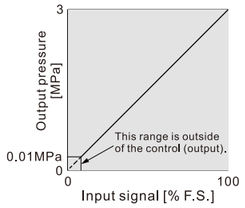


Fig. 2. Input/output characteristics chart

Ordering Code

ITVX2000 Series High Pressure Electro-Pneumatic Regulator

ITVX 2 0 3 0 - 0 1 □ 3 □ S □

Body size
2: ITVX2000

Pilot type
0: Built-in regulator type

Set pressure
3: 0.01 to 3.0MPa

Supply voltage
0: DC24V

Input signal

0	Current type DC4 to 20mA (Sink type)
1	Current type DC0 to 20mA (Sink type)
2	Voltage type DC0 to 5V
3	Voltage type DC0 to 10V

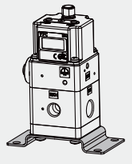
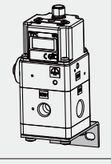
Monitor output

1	Analog output DC1 to 5V
2	Switch output/NPN output
3	Switch output/PNP output
4	Analog output DC4 to 20mA (Sink type)

Thread type
Nil: Rc
N: NPT
F: G*
* Complies with ISO1179-1 (2007).

Port size
3: 3/8*
* The exhaust port size is 1/4". The exhaust port sizefor the built-in regulator and the solenoid valve is M5.

Bracket

Nil	Without bracket
B	Flat bracket 
C	L-bracket 

Cable connector type

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

Pressure display unit
Nil: MPa
2: kgf/cm²
3: bar
4: psi

VPC PNEUMATIC®
IS09001 CE

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Specifications

Model		ITVX2000
Min. supply pressure		Whichever is higher: 0.5 MPa or the set pressure +0.2 MPa
Max. supply pressure		5MPa*2)
Set pressure range*3)		0.01 to 3.0MPa
Power supply	Voltage	DC24V±10%
	Current consumption	0.12A or less
Input signal	Current type*4)	DC4 to 20mA, DC0 to 20mA (Sink type)
	Voltage type	DC0 to 5V, DC0 to 10V
Input impedance	Current type	500Ω or less
	Voltage type	6 to 6.5 kΩ(at ordinary temperature)
Output signal (Monitor output)*5)	Analog output	DC1 to 5 V (Output impedance: Approx. 1 kΩ) Output accuracy: ±6% or less (Full span)
		DC4 to 20 mA (Sink type) Load impedance: 250Ω or less Output accuracy: ±6% or less (Full span)
	Switch output	NPN open collector output: Max. 30 V, 80 mA Hysteresis: ±3% (Full span), Self-diagnosis: ±5% or less (Full span)
		PNP open collector output: Max. 80 mA Hysteresis: ±3% (Full span), Self-diagnosis: ±5% or less (Full span)
Linearity		±1% or less (Full span)
Hysteresis		1% or less (Full span)
Repeatability		±1% or less (Full span)
Sensitivity		±1% or less (Full span)
Temperature characteristics		±0.12% or less (Full span)/℃
Output pressure display	Accuracy	±2% or less (Full span) ±1 digit
	Min. unit*6)	MPa: 0.01, kgf/cm²: 0.1, bar: 0.1, psi: 1
Working medium		Air, N_2, O_2, Ar
Working temperature		0 to 50℃ (No condensation)
Weight		Approx.570g (Without options)

*1) Characteristics shown above are based on the piping conditions of Fig. 1.

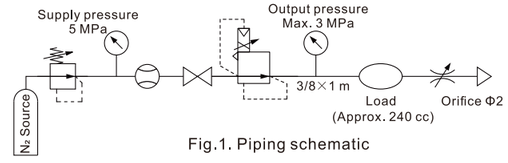

Fig.1. Piping schematic

*2) When oxygen is used as a fluid, the maximum supply pressure must be less than 1 MPa.
*3) Refer to Fig. 2 for the relationship between set pressure and input signal.
*4) 2-wire type DC4 to 20 mA is not available. Power supply voltage DC24 V is required.
*5) Select either analog output or switch output. Further, when switch output is selected, select either NPN output or PNP output. When measuring analog output of DC1 to 5 V with a load impedance less than 100 kΩ, the analog output may not obtain the output accuracy of ±6% or less (F.S.).
*6) Adjustment of numerical values such as the zero/span adjustment is set based on the minimum units for output pressure display. Note that the unit cannot be changed.
*7) This product is only for blowing gas. This product does not have sufficient pressure control for applications other than blowing (driving, sealing, etc.).

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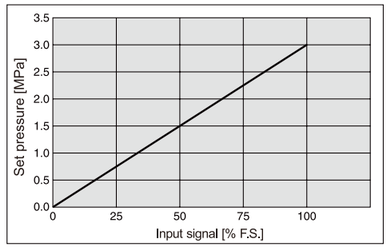
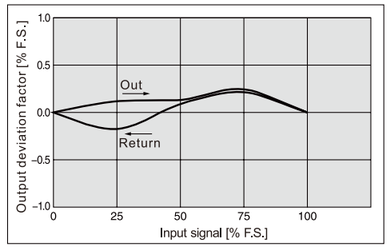
ITVX2000 Series

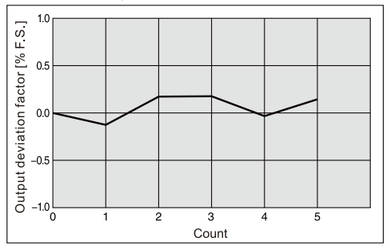
Linearity



Hysteresis

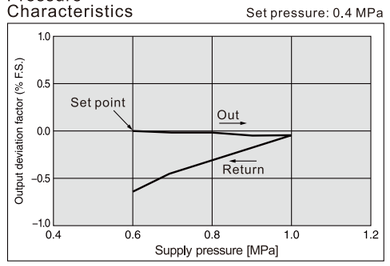


Repeatability



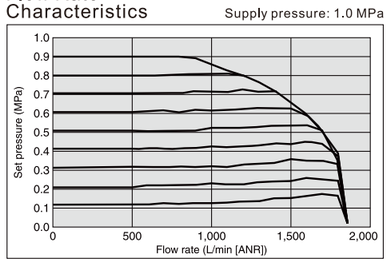
Pressure Characteristics

Set pressure: 0.4 MPa



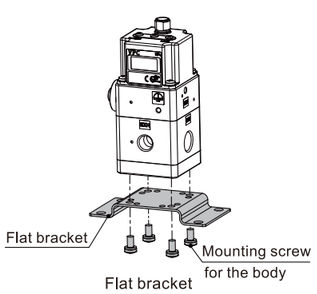
Flow Rate Characteristics

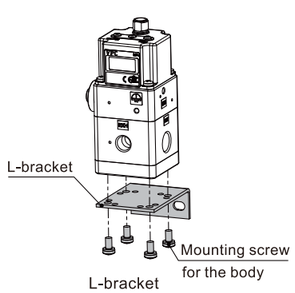
Supply pressure: 1.0 MPa

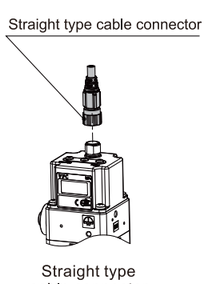


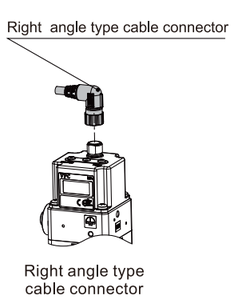
Option/Accessory Type

Description		Part no.
Flat bracket assembly (including mounting screws)		P398020-600
L-bracket assembly (including mounting screws)		P398020-601
Power cable connector	Straight type 3 m	P398020-500-3
	Right angle type 3 m	P398020-501-3









ISO9001 CE

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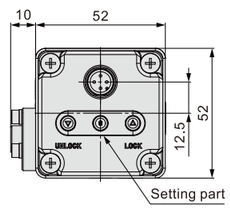
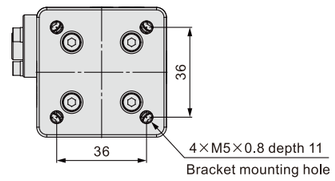
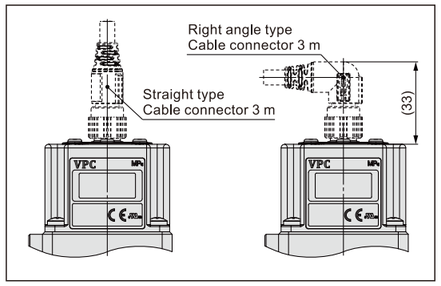
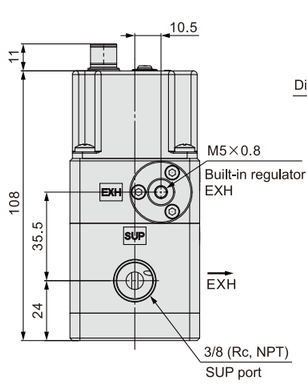
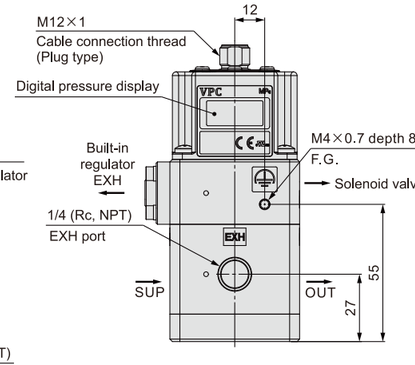
Main Dimensions

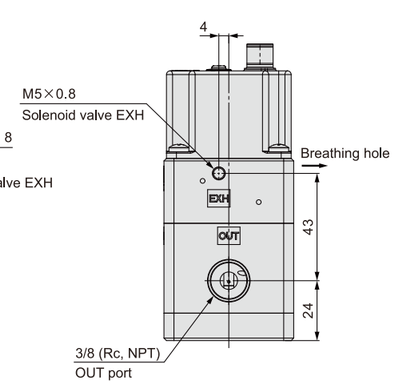




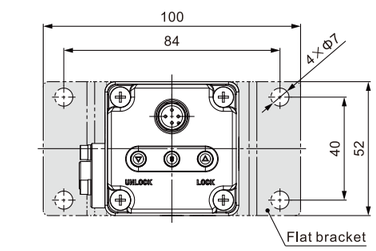


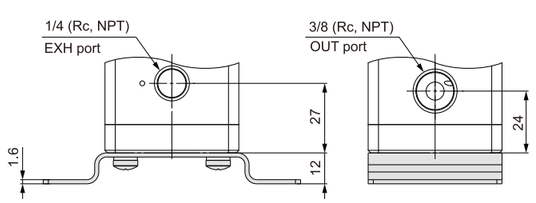




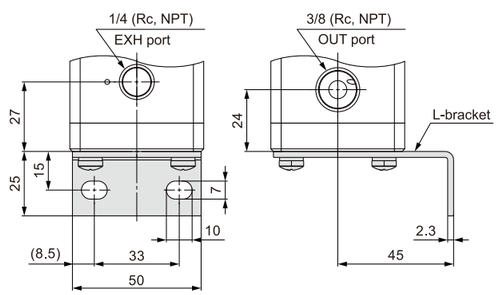


With flat bracket





With L-bracket



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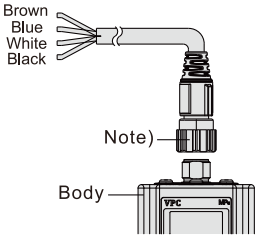
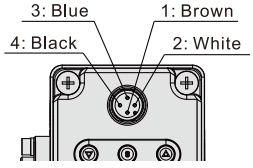
Wiring

⚠ Caution

Connect the cable to the connector on the body with the wiring arranged as shown below.
Proceed carefully,as incorrect wiring can cause damage.
Further, use DC power with sufficient capacity and a low ripple.

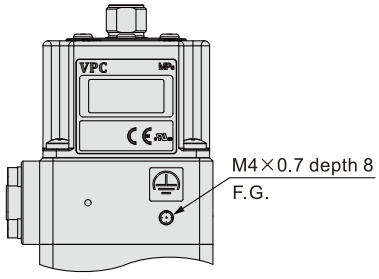




Note) The cable is also available in a right angle type. A right angle type connector is attached facing left (toward the SUP port).
Do not attempt to rotate, as the connector does not turn.

F.G. (Grounding)

Ground the frame ground (F.G.) terminal at the front of the main body. If the F.G. terminal port is not used, this product may not operate properly due to the noise.

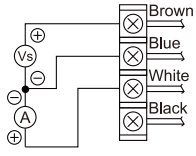


Current Signal Type
Voltage Signal Type

1	Brown	Power supply
2	White	Input signal
3	Blue	GND (COMMON)
4	Black	Monitor output

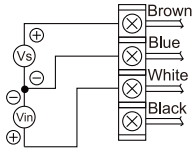
Wiring diagram

Current signal type



Vs: Power supply DC24V
A: Input signal DC4 to 20 mA
DC0 to 20 mA

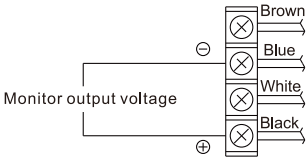
Voltage signal type



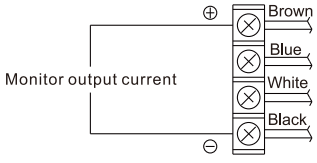
Vs: Power supply DC24V
A: Input signal DC0 to 5 V
DC0 to 10 V

Monitor output wiring diagram

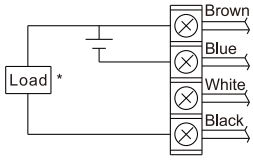
Analog output: Voltage type



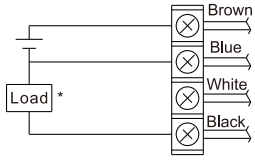
Analog output: Current type (Sink type)



Switch output: NPN type



Switch output: PNP type



* When DC80 mA or more is applied, detecting device for overcurrent starts activating and then emits an error signal. (Error number “5”)