

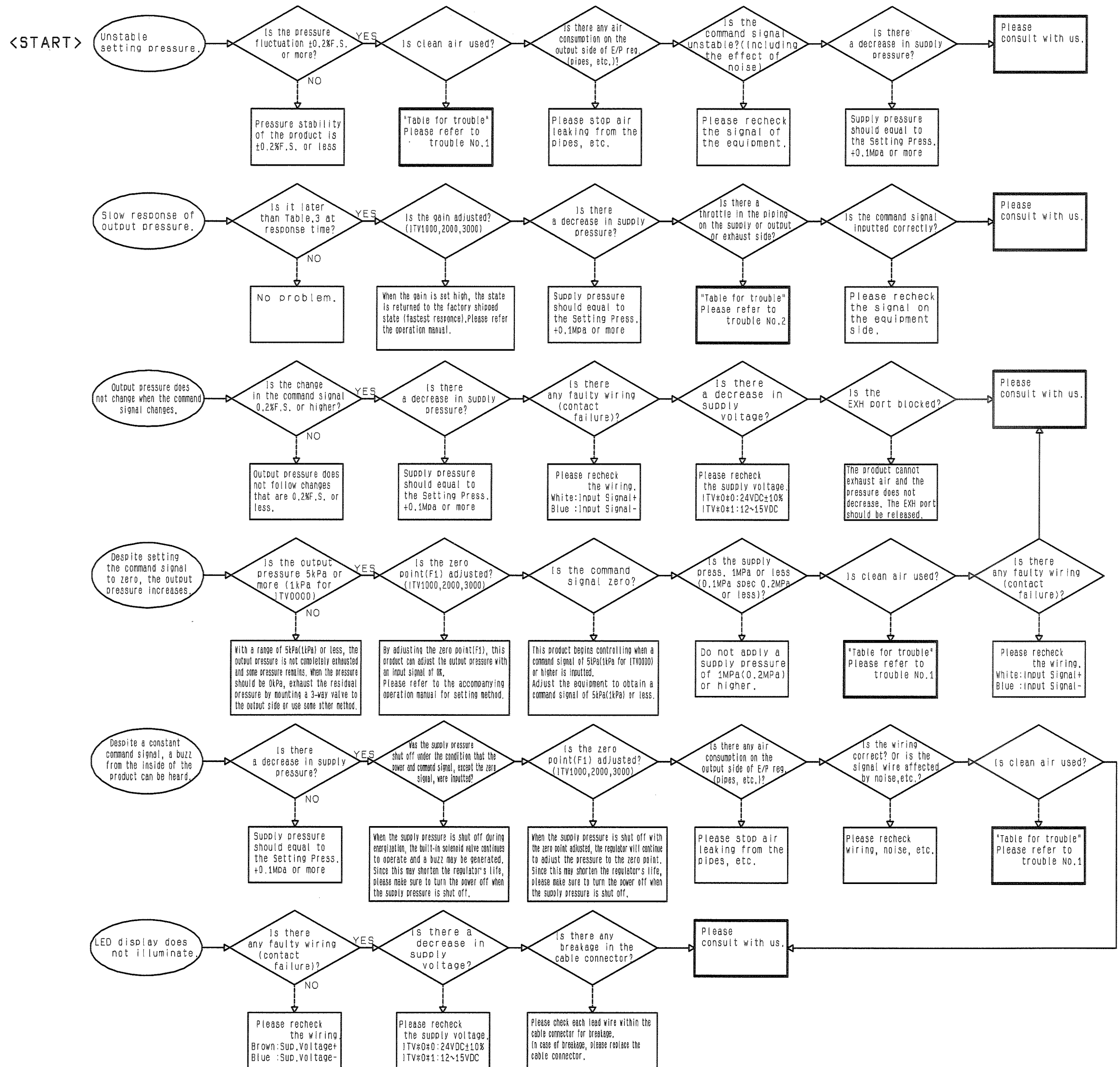
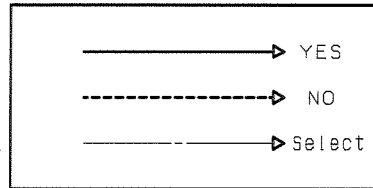
# E/P Regulator

## 《ITV Series》

### TroubleShooting

When the ITV series E/P regulator malfunctions, please refer to the corresponding items below. E/P regulator trouble may occur as a result of the operating environment (application). In such a case, please consult with us. This information refers to all standard types and is partially applicable to special models.

#### Explanation of arrow



#### E/P Regulator Q&A

Blows are the answers to some of the most frequently asked questions we get about the ITV series electro-pneumatic regulator. We hope that you will find this information informative.

##### ★ITV0000 Series

Q1. What does the red LED on the top mean?  
A1. It indicates the ON/OFF status; it lights when the product is in the "ON" state and it turns off when the product is in the "OFF" state. The LED blinks when the input signal is over the rated range. In such a case, please remove the power supply. It will then return to the normal state when the power is supplied again.

Q2. How is the Zero/Range adjustment performed?  
A2. It cannot be performed.

Q3. What is the hole above the OUT port?  
A3. It is a breathing hole for the internal components. Please do not block it.

Q4. I would like to mount it on a DIN rail.  
A4. A single regulator unit can be mounted on a DIN rail by attaching the following part(sold separately).

PART NUMBER	PART NAME	QTY
VQ1000-10A-1-60	DIN Rail MOUNTING BRACKET Subassy	1
AXT632-27-6	ROUND HEAD SCREW	1
M3x4	ROUND HEAD SCREW	2

Q5. I would like to connect a #6 tube.  
A5. This tube size cannot be connected directly to the regulator. Please purchase a reducer separately.

Q6. I would like to disassemble the regulator since something is wrong with it.  
A6. Please do not disassemble it because it will cause a failure. Please contact us for any problems.

Q6. I would like to order the bush-Ass'y for manifold.  
A6. The part number is "VVQ1000-80A-7-2".

##### ★ITV1000,2000,3000 Series

Q1. How is Zero / Range adjustment performed?  
A1. Please refer to the operation manual. They can be adjusted by setting F1 and F2 according to the "Setting method" information in the manual.

Q2. What is the M5 hole in the front of the product?  
A2. It is the exhaust port of the solenoid valve inside of the product.

- Q3. I would like to use this product in a manifold style.  
A3. A manifold type is available as a special product. Please refer to our catalog.
- Q4. Is a 2-wire type from 4 to 20 mA available?  
A4. This product requires a power supply voltage. Therefore, please prepare a power supply (12 to 15VDC or 24VDC +/- 10%) separately.
- Q5. I have purchased a product with the wrong parts number. Can I exchange it?  
A5. We will handle this issue as an after-sales service. Please contact us.
- Q6. Can I change the unit of measurement on the display?  
A6. Special equipment tools are required to change the unit. We will handle this issue as an after-sales service. Please contact us.
- Q7. The output pressure is exceeding the required level (overshooting). Can I prevent this?  
A7. It is possible to prevent the pressure from exceeding the required level by using the Gain adjustment. Please see the operation manual.
- Q8. I would like to have the LED display on another face (back or side).  
A8. Such products are available as made-to-order. Please contact us.
- Q9. An electricity failure occurred while the regulator was operating. How will the pressure change?  
A9. The regulator will temporarily maintain the output pressure level. However, the air will gradually be exhausted due to small leakage from the regulator. The time it takes for complete exhaustion depends on each regulator, since the quantity of leakage depends on the regulator.
- Q10. Are there any restrictions for the mounting orientation?  
A10. No.
- Q11. How long is the response time between the input signal and the output pressure.  
A11. The response time depends on the operating conditions. As a reference, please refer to the table3.
- Q12. I need a longer cable for remote operation.  
A12. A longer cable is available. Our recommended length is not more than 10m (standard length is 3m). The parts numbers are: P398020-500-# (straight type) and P398020-501-# (right angle type). Please replace # for the length (unit: meter).
- Q13. What type of grease is applied to the product?  
A13. Silicon grease.  
Please be advised that no grease is applied to the wetting parts of series ITV1000.
- Q14. What type of rubber is used for this product?  
A14. NBR is used for the standard products. Additionally, we are also supplying an ozone resistant specification, "80-".
- Q15. Are oil-free type products available?  
A15. Complete oil-free type products are not available. Only the wetting parts of the ITV1000 series have no grease.

- Q16. The LED display shows strange numerical values.  
A16. Please refer to the accompanying operation manual for error messages. When a wrong button is pressed during setup, or when the LED display is not showing what should be expected, please remove the power and start from the beginning again.

- Q17. Is a modular connection available for this product?  
A17. It is only available for the ITV2000 and ITV3000.  
Please refer to the table below for applicable models:

Applicable products and accessories	Applicable model	
	ITV20**	ITV30**
Air Filter	AF30	AF40
Mist Separator	AFM30	AFM40
L-Bracket	B310L	B410L
Spacer	Y30	Y40
Spacer with L-Bracket	Y30L	Y40L

- Q18. Are explosion-protection type products available?  
A18. They are not available.

- Q19. Is bus wiring possible for this product?  
A19. The ITV series has only 1 wire for the GND (power) and for the COMMON (signal). If many ITVs are operated with 1 PC and some D/A units, it is possible to have an incorrect signal transmission due to the technical problems caused by the type of wiring in the D/A units. Accordingly, please contact the PC manufacturer prior to use.

- Q20. I would like to disassemble the regulator since something is wrong with it.  
A20. Please do not disassemble it because it will cause a failure. Please contact us for any problems.

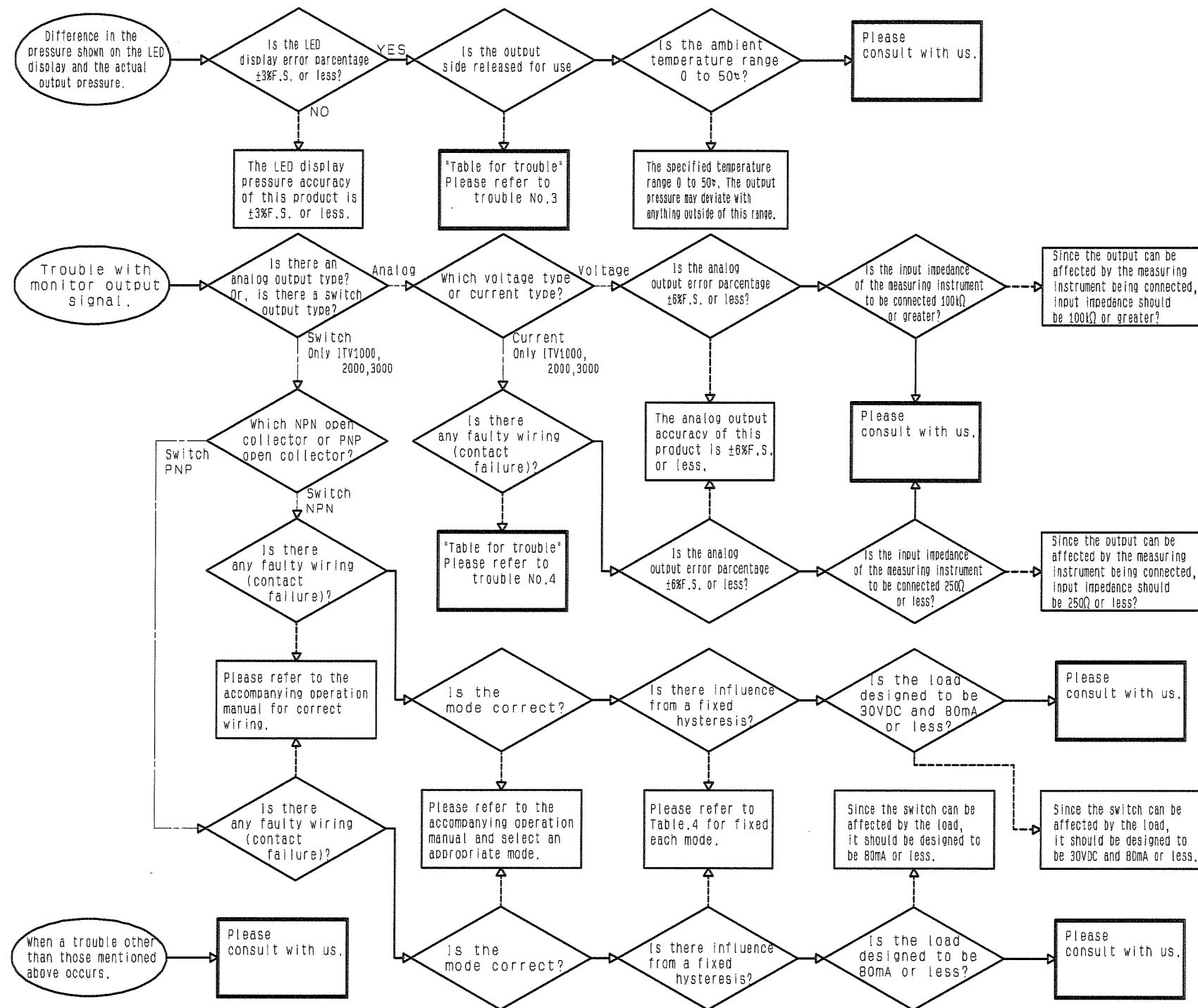


Table for trouble

Trouble No.	Measures
1	When clean air is not used, there is a possibility of foreign matter in the air entering the product. Replace the solenoid valve assembly and body assembly according to the maintenance procedure (ITV1000, 2000, 3000). Install an air filter with a nominal filtration rating of 5mm or less, to the supply side of the product. Perform maintenance on the air filter. Before piping work, clean and air flush all the pipes.
2	When there is a throttle in the piping, response time will become slow. When silencers are mounted, please check them for clogging.
3	When the outlet side is released for air blowing, etc., actual output pressure may be affected depending on the measuring point because the pressure drop is different. Since the LED display shows the pressure near the OUT port of the product, there may be a difference between the LED display pressure and the actual output pressure.
4	Analog output current is a sink type. Please refer to the accompanying operation manual for correct wiring. Regarding a source type, please contact us since it is available as a special product.

Table3. Reference data for response time

Model	Input Signal 50 to 100%			
	ITV0000	ITV1000	ITV2000	ITV3000
No Load	approx. 0.1S	0.2 to 0.3S	0.2 to 0.3S	0.3 to 0.4S
Load 1L	—	0.3 to 0.5S	0.3 to 0.5S	0.4 to 0.6S

Note) Since response time differs depending on the equipment, piping conditions and operating conditions, please consider the above data as a reference.

Table4. Fixation respondent difference Unit: kPa(%F.S.)

Unit of Pressure Display	Model	Window Comparator mode Hysteresis mode	Out of Range mode
MPa kgf/cm <sup>2</sup> bar kPa	ITV*01*(100kPa Type)	3.0(3.0)	5.0(5.0)
	ITV*03*(500kPa Type)	15.0(3.0)	25.0(5.0)
	ITV*05*(900kPa Type)	27.0(3.0)	45.0(5.0)
	ITV209*(-80kPa Type)	3.0(3.8)	4.0(5.0)
PSI	ITV*01*(100kPa Type)	3.4(3.3)	5.5(5.3)
	ITV*03*(500kPa Type)	14.5(3.0)	24.1(5.0)
	ITV*05*(900kPa Type)	27.6(3.1)	48.3(5.4)