

# Transmitters: Relay Valve

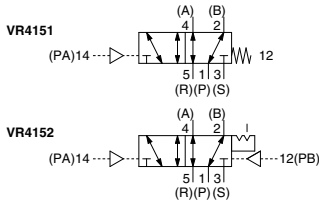
RoHS

# VR4151/4152 Series

Appropriate output sequences are affected according to the signal received from the mechanical valve. It is equivalent to the auxiliary relay of an electrical system.



Symbol



## Specifications

|                               |                       |   |       |      |
|-------------------------------|-----------------------|---|-------|------|
| Fluid                         |                       | Air   |       |      |
| Operating pressure            |                       | 0 to 1.0 MPa  |       |      |
| Pilot pressure                |                       | 0.15 to 1.0 MPa   |       |      |
| Ambient and fluid temperature |                       | -5 to 60°C (No freezing)  |       |      |
| Flow rate characteristics     |                       | C[dm <sup>3</sup> /(s·bar)]                                     | b     | Cv   |
| Side ported                   | 1(P) ↔ 2(B)/4(A)      | 1.6   | 0.15  | 0.38 |
|                               | 2(B)/4(A) ↔ 3(S)/5(R) | 1.5   | 0.2   | 0.36 |
| Bottom ported                 | 1(P) ↔ 2(B)/4(A)      | 1.6   | 0.2   | 0.38 |
|                               | 2(B)/4(A) ↔ 3(S)/5(R) | 1.5   | 0.25  | 0.36 |
| Port size                     |                       | 1/8   |       |      |
| Weight                        |                       | Side ported   | 350 g |      |
|                               |                       | Bottom ported   | 300 g |      |
| Lubrication                   |                       | Not required (Use turbine oil Class 1 ISO VG32, if lubricated.) |       |      |

## Model

| Function                      | Sub-plate                     | Model        | Indicator |
|-------------------------------|-------------------------------|--------------|-----------|
| Single pilot                  | W/o sub-plate                 | VR4151-00-0  | —         |
|                               | W/ sub-plate                  | VR4151-00-1  | ○         |
|                               | W/ sub-plate<br>Side piping   | VR4151-01A-0 | —         |
|                               | W/ sub-plate<br>Side piping   | VR4151-01A-1 | ○         |
|                               | W/ sub-plate<br>Bottom piping | VR4151-01B-0 | —         |
| Double pilot                  | W/ sub-plate<br>Bottom piping | VR4151-01B-1 | ○         |
|                               | W/o sub-plate                 | VR4152-00-0  | —         |
|                               | W/ sub-plate                  | VR4152-00-1  | ○         |
|                               | W/ sub-plate<br>Side piping   | VR4152-01A-0 | —         |
|                               | W/ sub-plate<br>Side piping   | VR4152-01A-1 | ○         |
| W/ sub-plate<br>Bottom piping | VR4152-01B-0                  | —            |           |
| W/ sub-plate<br>Bottom piping | VR4152-01B-1                  | ○            |           |

VM

VMG

VR

VR51

VHK

VH

VHS□

VHS

## ⚠ Precautions

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 9 for 3/4/5 Port Solenoid Valve Precautions.

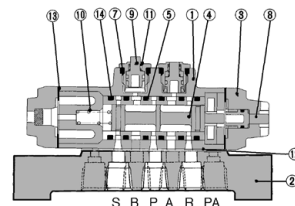
## Environment

### ⚠ Caution

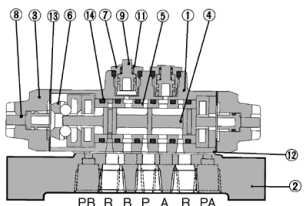
Operate the valve in an area in which the vibration does not exceed 5 G. Vibrations could cause the valve to malfunction.

## Construction

### VR4151



### VR4152

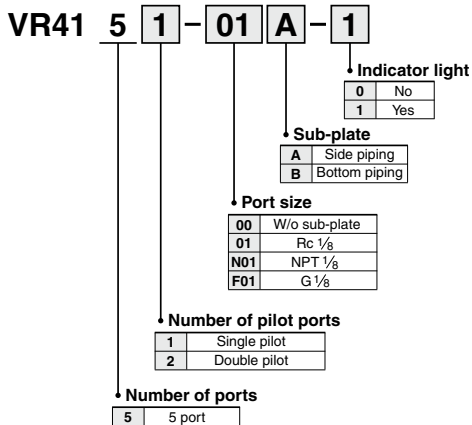


## Component Parts

| No. | Description     | Material        | No. | Description   | Material        |
|-----|-----------------|-----------------|-----|---------------|-----------------|
| 1   | Valve           | ADC             | 8   | Manual button | POM             |
| 2   | Sub-plate       | ZDC             | 9   | Piston        | POM             |
| 3   | Pilot cover     | ADC             | 10  | Spring        | Steel           |
| 4   | Spool           | Stainless steel | 11  | Spring        | Stainless steel |
| 5   | Sleeve          | Stainless steel | 12  | Gasket        | NBR             |
| 6   | Detent assembly |                 | 13  | Gasket        | NBR             |
| 7   | Piston cover    | Brass           | 14  | O-ring        | NBR             |

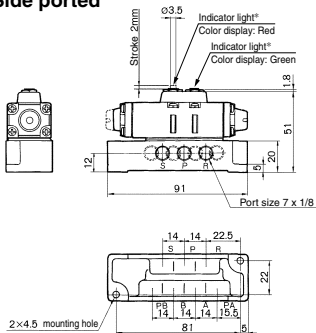
# VR4151/4152 Series

## How to Order

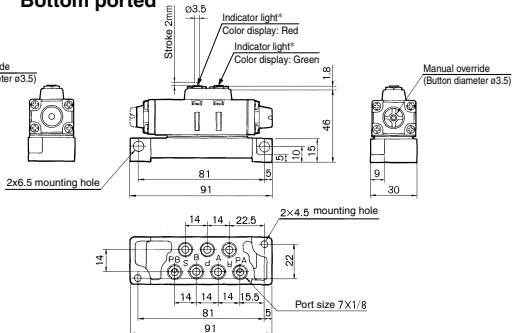


## Dimensions

### Side ported



### Bottom ported



\* When "no indicator light" is selected, the plug is attached.

# Transmitters: Shuttle Valve



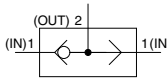
# VR1210/1220 Series

Relay valves for controlling the pneumatic signal lines.

This valve is also called "OR valve". As the air is supplied to either IN side, it is output from the OUT side. When the air pressure levels are different, the air with higher pressure flows to the OUT side.



Symbol



## Model/Specifications

| Model                         |                              | VR1210-01                | VR1220-02 |
|-------------------------------|------------------------------|--------------------------|-----------|
| Max. operating pressure       |                              | 1.0 MPa                  |           |
| Min. operating pressure       |                              | 0.05 MPa                 |           |
| Ambient and fluid temperature |                              | -5 to 60°C (No freezing) |           |
| Flow rate characteristics     | C [dm <sup>3</sup> /(s·bar)] | 1.3                      | 2.9       |
|                               | b                            | 0.2                      | 0.2       |
| Port size                     |                              | 1/8                      | 1/4       |
| Weight                        |                              | 24 g                     | 45 g      |

## How to Order

VR12 1 0 - 01

•Port size Applicable model

|    |     |         |
|----|-----|---------|
| 01 | 1/8 | VR 1210 |
| 02 | 1/4 | VR 1220 |

•Thread type

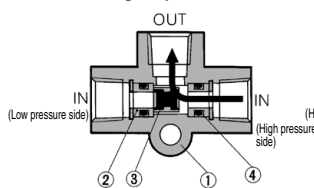
|     |     |
|-----|-----|
| Nll | Rc  |
| N   | NPT |
| F   | G   |

•Body size

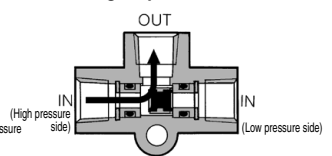
|   |              |
|---|--------------|
| 1 | 1/8 standard |
| 2 | 1/4 standard |

## Construction

When right port has higher pressure



When left port has higher pressure

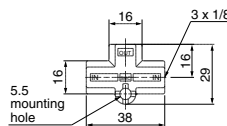


## Component Parts

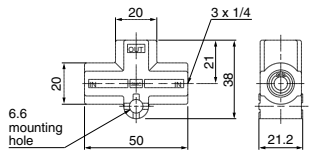
| No. | Description | Material | Note            | No. | Description | Material   | Note |
|-----|-------------|----------|-----------------|-----|-------------|------------|------|
| 1   | Valve body  | ADC      | Platinum silver | 3   | Valve       | Brass, NBR |      |
| 2   | Valve guide | Brass    |                 | 4   | O-ring      | NBR        |      |

## Dimensions

VR1210



VR1220



# Transmitters: Shuttle Valve with One-touch Fittings **VR1210F/1220F Series**

RoHS

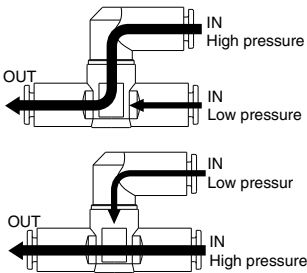
## Relay valves for controlling pneumatic signal lines



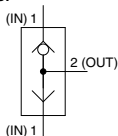
### Related Products



When the difference in input air pressure between two IN sides is 0.05 MPa or more, the air with higher pressure constantly flows to the OUT side.



### Symbol



## Model

| Model   | Applicable tubing O.D. |   |   |   |    |           |       |      |       |      |
|---------|------------------------|---|---|---|----|-----------|-------|------|-------|------|
|         | Metric size            |   |   |   |    | Inch size |       |      |       |      |
|         | 3.2                    | 4 | 6 | 8 | 10 | 1/8"      | 5/32" | 1/4" | 5/16" | 3/8" |
| VR1210F | ●                      | ● | ● | ● | ●  | ●         | ●     | ●    | ●     | ●    |
| VR1220F |                        |   | ● | ● | ●  |           |       | ●    | ●     | ●    |

## Specifications

|   |                                 |
|---|---------------------------------|
| Proof pressure                            | 1.5 MPa                         |
| Max. operating pressure                   | 1.0 MPa                         |
| Min. operating pressure                   | 0.05 MPa                        |
| Ambient and fluid temperature             | -5 to 60°C (No freezing)        |
| Applicable tubing material <sup>(1)</sup> | Nylon, Soft nylon, Polyurethane |

Note 1) Use caution about the maximum operating pressure when soft nylon and polyurethane is used. (Refer to Best Pneumatics No. 7.)

Note 2) Brass components are all electroless nickel plated as standard. (Copper-free and fluorine-free)

## Flow rate characteristics

| Model                     | VR1210F                     |       |        |       | VR1220F |       |        |       |
|---------------------------|-----------------------------|-------|--------|-------|---------|-------|--------|-------|
|                           | Metric size                 | ø3.2  | ø4     | ø6    | ø8      | ø10   | ø10    | ø10   |
| Applicable tubing O.D.    | Inch size                   | ø1/8" | ø5/32" | ø1/4" | ø5/16"  | ø1/4" | ø5/16" | ø3/8" |
| Flow rate characteristics | C[dm <sup>3</sup> /(s·bar)] | 0.5   | 0.7    | 1.3   | 1.5     | 1.4   | 2.1    | 3.1   |
|                           | b                           | 0.25  | 0.25   | 0.25  | 0.25    | 0.25  | 0.25   | 0.25  |

## How to Order

VR 12 **1** 0 F - **06**

- Body size**

|   |              |
|---|--------------|
| 1 | 1/8 standard |
| 2 | 1/4 standard |
- Shuttle valve**
- Applicable tubing O.D.**

| Metric size | Inch size |
|-------------|-----------|
| 23          | ø3.2*     |
| 04          | ø4        |
| 06          | ø6        |
| 08          | ø8        |
| 10          | ø10       |
| 01          | ø1/8"     |
| 03          | ø5/32"    |
| 07          | ø1/4"     |
| 09          | ø5/16"    |
| 11          | ø3/8"     |

With One-touch fittings

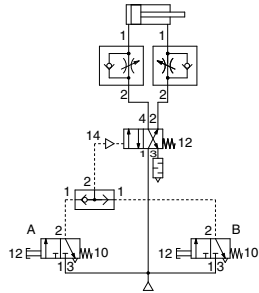
\* For ø3.2, use ø1/8" tubing.

# Transmitters: Shuttle Valve with One-touch Fittings **VR1210F/1220F Series**

## Example of Operating Circuit

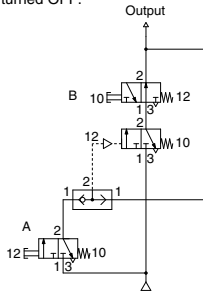
### OR circuit

- If either A or B is turned ON, cylinder is actuated.



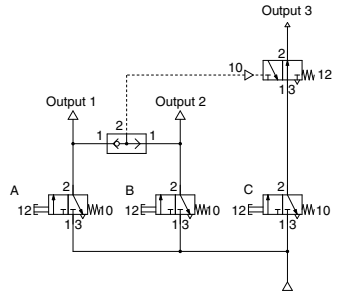
### Self-hold circuit

1. If A is turned ON, the output turns ON.
2. Even though A is turned OFF, the output remains in ON state.
3. If B is turned ON in 2. state, the output is turned OFF.

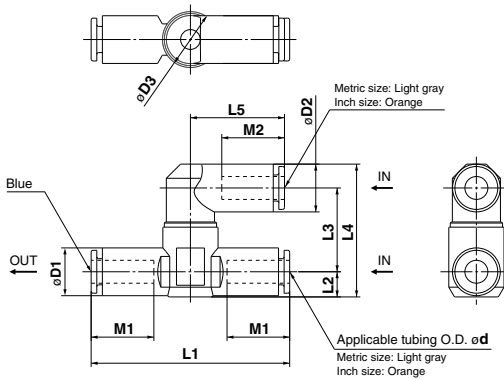


### Interlock circuit

- When either A or B is turned ON, even though C turns ON, the output 3 will not be turned ON.
- Only when both A and B are in OFF state, if C turns ON, the output 3 is turned ON.



## Dimensions



### Metric Size

| Model      | d   | D1   | D2   | D3   | L1   | L2  | L3   | L4   | L5   | M1   | M2   | Weight (g) | Compatible holder (Note) |
|------------|-----|------|------|------|------|-----|------|------|------|------|------|------------|--------------------------|
| VR1210F-23 | 3.2 | 11.4 | 8.4  | 14.8 | 52   | 6.2 | 19.4 | 29.8 | 17.5 | 12.7 | 12.9 | 21.4       | TMH-06J                  |
| VR1210F-04 | 4   | 11   | 10.4 |      | 53   | 6   | 20.3 | 31.5 | 21.9 | 16.5 | 15.8 | 15.6       | —                        |
| VR1210F-06 | 6   | 12.8 | 12.8 |      | 53.2 | 6.7 | 22.5 | 35.6 | 25.2 | 16.8 | 16.8 | 23.0       | TMH-06                   |
| VR1210F-08 | 8   | 15.2 | 15.2 |      | 60.4 | 8   |      | 38.2 | 28.2 | 18.7 | 18.7 | 24.0       | TMH-08                   |
| VR1220F-06 | 6   | 12.8 | 12.8 | 19.8 | 59   | 7.4 | 23.9 | 37.7 | 25.2 | 16.8 | 16.8 | 27.2       | TMH-06                   |
| VR1220F-08 | 8   | 15.2 | 15.2 |      | 65   | 8.2 |      | 39.7 | 28.2 | 18.7 | 18.7 | 31.9       | TMH-08                   |
| VR1220F-10 | 10  | 18.5 | 18.5 |      | 71.6 | 9.8 | 25.8 | 44.8 | 31   | 20.8 | 20.8 | 43.2       | TMH-10                   |

### Inch Size

| Model      | d     | D1   | D2   | D3   | L1   | L2  | L3   | L4   | L5   | M1   | M2   | Weight (g) | Compatible holder (Note) |
|------------|-------|------|------|------|------|-----|------|------|------|------|------|------------|--------------------------|
| VR1210F-01 | 1/8"  | 11.4 | 8.4  | 14.8 | 52   | 6.2 | 19.4 | 29.8 | 17.5 | 12.7 | 12.9 | 21.4       | TMH-06J                  |
| VR1210F-03 | 5/32" | 11   | 10.4 |      | 53   | 6   | 20.3 | 31.5 | 21.9 | 16.5 | 15.8 | 15.6       | —                        |
| VR1210F-07 | 1/4"  | 13.2 | 13.2 |      | 54.4 | 7   | 22.5 | 36.2 | 25.6 | 16.8 | 16.8 | 23.5       | TMH-07                   |
| VR1210F-09 | 5/16" | 15.2 | 15.2 |      | 60.4 | 8   |      | 38.2 | 28.2 | 18.7 | 18.7 | 24.0       | TMH-09                   |
| VR1220F-07 | 1/4"  | 13.2 | 13.2 | 19.8 | 59   | 7.4 | 23.9 | 37.9 | 25.6 | 16.8 | 16.8 | 31.4       | TMH-07                   |
| VR1220F-09 | 5/16" | 15.2 | 15.2 |      | 65   | 8.2 |      | 39.7 | 28.2 | 18.7 | 18.7 | 31.9       | TMH-09                   |
| VR1220F-11 | 3/8"  | 17.9 | 18.5 |      | 69.8 | 9.4 | 25.8 | 44.5 | 31   | 20.8 | 20.8 | 53.0       | —                        |

Note) It is possible to use a TMH series holder to secure the VR12. The compatible models and holder models are shown above.

# Transmitters: AND Valve with One-touch Fittings VR1211F Series

RoHS

## Relay valves for controlling pneumatic signal lines



### Related Products



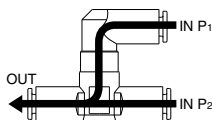
### Mounting example



Holder/TMH series  
[\(Click here for details.\)](#)

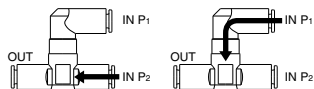
Only when air is supplied to both P<sub>1</sub> and P<sub>2</sub> does air flow to the OUT side.

When air pressure differs, pressure in the lower amount flows to the OUT side.

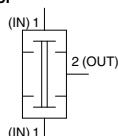


If air is supplied only to either P<sub>1</sub> or P<sub>2</sub>, it does not flow to the OUT side.

Note) Air may flow to the OUT side for a moment until the valve switches. (About 1/100 second)  
If there is any effect on the connected equipment due to the above air flow, install a speed controller, etc. on the OUT side, and adjust to prevent this effect before use.



### Symbol



## Model

| Model   | Applicable tubing O.D. |   |   |           |       |      |
|---------|------------------------|---|---|-----------|-------|------|
|         | Metric size            |   |   | Inch size |       |      |
|         | 3.2                    | 4 | 6 | 1/8"      | 5/32" | 1/4" |
| VR1211F | ●                      | ● | ● | ●         | ●     | ●    |

## Specifications

|   |                                 |
|---|---------------------------------|
| Proof pressure                                      | 1.5 MPa                         |
| Max. operating pressure                             | 1.0 MPa                         |
| Min. operating pressure                             | 0.05 MPa                        |
| Ambient temperature and operating fluid temperature | -5 to 60°C (No freezing)        |
| Applicable tubing material <sup>(1)</sup>           | Nylon, Soft nylon, Polyurethane |

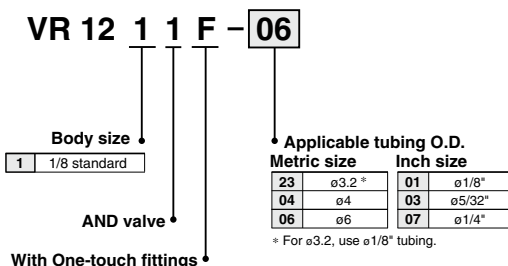
Note 1) Use caution about the maximum operating pressure when soft nylon and polyurethane is used. (Refer to Best Pneumatics No. 7.)

Note 2) Brass components are all electroless nickel plated as standard.  
(Copper-free and fluorine-free)

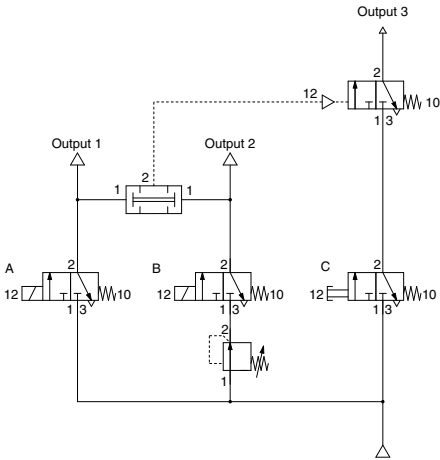
## Flow rate characteristics

| Model                  | VR1211F                   |                             |        |      |       |
|------------------------|---------------------------|-----------------------------|--------|------|-------|
|                        | Metric size               | ø3.2                        | ø4     | ø6   | —     |
| Applicable tubing O.D. | Inch size                 | ø1/8"                       | ø5/32" | —    | ø1/4" |
|                        | Flow rate characteristics | C[dm <sup>3</sup> /(s·bar)] |        |      |       |
|                        | b                         | 0.3                         | 0.4    | 0.5  | 0.6   |
|                        |                           | 0.25                        | 0.25   | 0.25 | 0.25  |

## How to Order

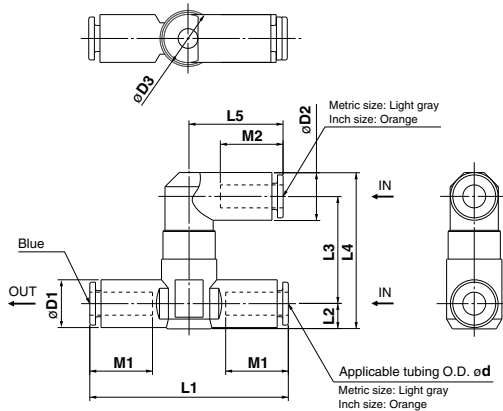


## Example of Operating Circuit



- If both A and B are turned ON, which are in different pressure conditions, both output 1 and 2 will turn ON
- Only when output 1 and 2 are in the ON state, and C turns ON, will output 3 turn ON.
- If either A or B is turned OFF, output 3 will not be turned ON, even if C is turned ON.

## Dimensions



### Metric Size

| Model      | d   | D1   | D2   | D3   | L1   | L2  | L3   | L4   | L5   | M1   | M2   | Weight (g) | Compatible holder (Note) |
|------------|-----|------|------|------|------|-----|------|------|------|------|------|------------|--------------------------|
| VR1211F-23 | 3.2 | 11.4 | 8.4  | 14.8 | 52   | 6.2 | 25.7 | 36.1 | 17.5 | 12.7 | 12.9 | 26.4       | TMH-06J                  |
| VR1211F-04 | 4   | 11   | 10.4 |      | 53   | 6   | 26.6 | 37.8 | 21.9 | 16.5 | 15.8 | 20.8       | —                        |
| VR1211F-06 | 6   | 12.8 | 12.8 |      | 53.2 | 6.7 | 28.8 | 41.9 | 25.2 | 16.8 | 16.8 | 25.0       | TMH-06                   |

### Inch Size

| Model      | d     | D1   | D2   | D3   | L1   | L2  | L3   | L4   | L5   | M1   | M2   | Weight (g) | Compatible holder (Note) |
|------------|-------|------|------|------|------|-----|------|------|------|------|------|------------|--------------------------|
| VR1211F-01 | 1/8"  | 11.4 | 8.4  | 14.8 | 52   | 6.2 | 25.7 | 36.1 | 17.5 | 12.7 | 12.9 | 26.4       | TMH-06J                  |
| VR1211F-03 | 5/32" | 11   | 10.4 |      | 53   | 6   | 26.6 | 37.8 | 21.9 | 16.5 | 15.8 | 20.8       | —                        |
| VR1211F-07 | 1/4"  | 13.2 | 13.2 |      | 54.4 | 7   | 28.8 | 42.5 | 25.6 | 16.8 | 16.8 | 27.0       | TMH-07                   |

Note) It is possible to use a TMH series holder to secure the VR12. The compatible models and holder models are shown above.

# Transmitters: Time Delay Valve

# VR2110 Series

RoHS

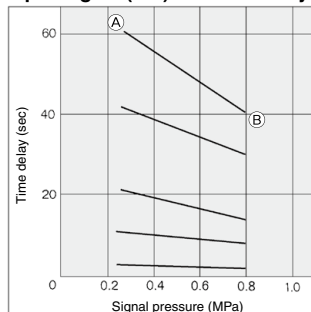
**Combination of adjustable orifice and fixed flow allows transmission of a pneumatic signal after a fixed time period.**



Symbol

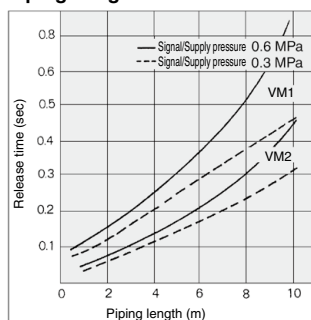


**Input Signal (PIL) vs. Time Delay**



Example (A) is the point, which is set by the input signal pressure 0.25 MPa, with a delay time of 60 sec. With the same status, if the input signal pressure is increased to 0.8 MPa, the delay time varies to the (B) point (= 40 sec).

**Piping Length vs. Release Time**



If the input signal (PIL) is turned OFF, the release time of the time delay valve changes depending upon the effective area of the valve and the length of piping. Please refer to the above graph for the standard values.

## Model/Specifications

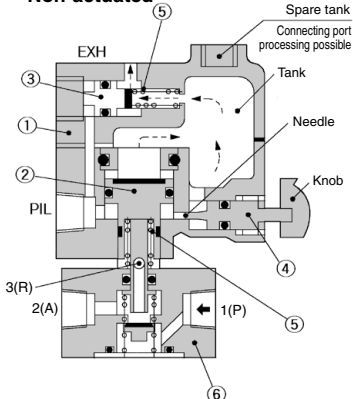
| Model                           |                             | VR2110-01                         |
|---------------------------------|-----------------------------|-----------------------------------|
| Supply pressure                 |                             | 0 to 1.0 MPa                      |
| Signal pressure                 |                             | 0.25 to 0.8 MPa                   |
| Time delay                      |                             | 0.5 to 60 s                       |
| Repeatability*                  |                             | ±10% F.S. (Representative valve)  |
| Operating and fluid temperature |                             | -5 to 60°C (No freezing)          |
| Flow rate characteristics       | C[dm <sup>3</sup> /(s·bar)] | 0.6 [1(P)→2(A)], 0.5 [2(A)→3(R)]  |
|                                 | b                           | 0.2 [1(P)→2(A)], 0.15 [2(A)→3(R)] |
| Port size                       |                             | 1/8                               |
| Weight                          |                             | 480 g                             |

\*) The dispersion is shown excluding the first actuation when actuated 4 times continuously.

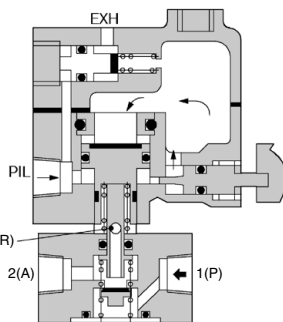
\*) The accuracy may differ from the values above due to the actual conditions, such as pressure fluctuations, temperature changes, operation intervals, changes over time, etc., so be sure to check the actual machine.

## Construction

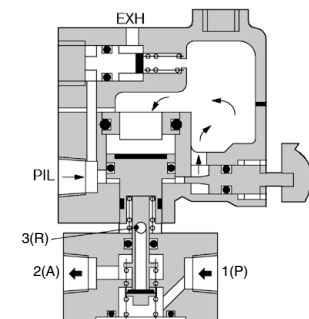
### Non-actuated



### Actuated before time set



### Actuated after time set



## Component Parts

| No. | Description         | Material   | Note            | No. | Description      | Material  | Note                               |
|-----|---------------------|------------|-----------------|-----|------------------|-----------|------------------------------------|
| 1   | Valve body          | ADC        | Platinum silver | 5   | Return spring    | Steel     |                                    |
| 2   | Differential piston | Brass, NBR |                 | 6   | Mechanical valve | Body: ZDC | VM130□□1□□A<br>(Body color: White) |
| 3   | Exhaust piston      | Brass, NBR |                 |     |                  |           |                                    |
| 4   | Needle              | Brass      |                 |     |                  |           |                                    |



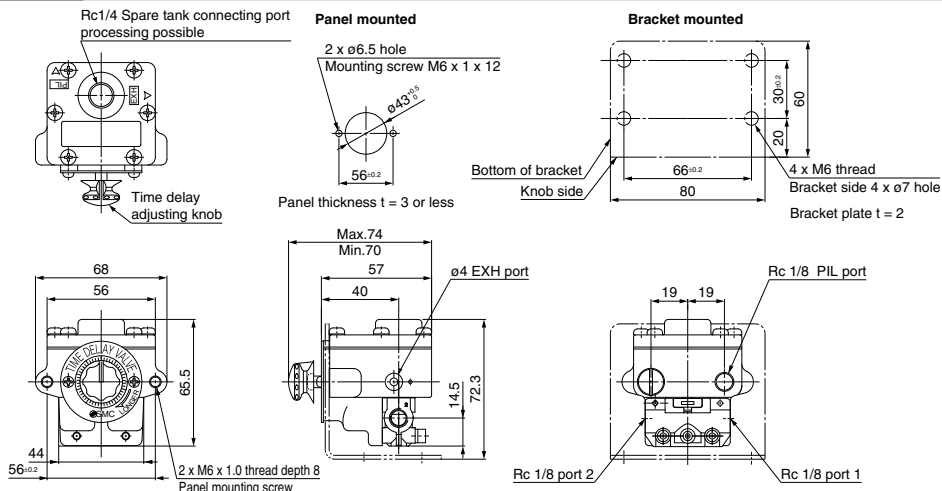
## How to Order

VR2110 - **01** -   

| Port size  |         |
|------------|---------|
| <b>01</b>  | Rc 1/8  |
| <b>N01</b> | NPT 1/8 |
| <b>F01</b> | G 1/8   |

| Option      |  |
|-------------|--|
| <b>X3</b>   | Secondary tank connection port<br>Rc 1/4 |
| <b>X102</b> | N.O. N.C. common type<br>(With VM430)    |

## Dimensions



## ⚠ Precautions

**For safety instructions, be sure to read back page 50 or the operation manual before using the product.**

### Pneumatic Pressure

#### ⚠ Caution

- Use regulated air using a regulator for input signal air. When the input signal air fluctuates, there will be larger differences in the delayed time, making it impossible to obtain the intended functions. Make sure to regulate the air using a regulator to avoid any influence of pressure fluctuation due to air consumption of other equipment.

### Operation

#### ⚠ Warning

- The time delay adjusting knob should be operated by hand only. Do not over tighten the knob. If operating the knob with pliers or a tool or when the knob is over tightened, the needle at the adjusting part may be damaged causing an operation failure. The knob should be operated by hand only. Do not tighten the knob further than the fully closed position of the needle (the position at which the needle stops rotating when it is tightened gently by hand).

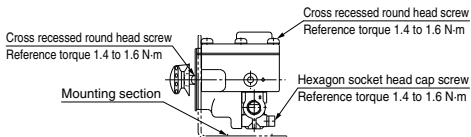
#### ⚠ Caution

- Differences in the delayed time may be larger due to adhesion of the seal when the product is operated for the first time following an extended period of non-operation. When the product is operated after an extended period of non-operation, the tolerance for the accuracy of repeatability for the time delay may be outside of the  $\pm 10\%$  range. To eliminate this issue, run the time delay valve a number of cycles prior to operation.

### Maintenance

#### ⚠ Warning

- Perform inspection on a regular basis as necessary, such as at the beginning of operation, to verify that the time delay valve operates properly.
- Check whether the bolts on the mounting surface or the VR21 body are loose or damaged. If the bolts are loose, refer to the drawing below and use a hexagon wrench or a Phillips head screwdriver to tighten them.



VM

VMG

VR

VR51

VHK

VH

VHS□

VHS

# Transmitters: Pneumatic-electric Relay

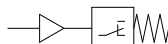


# VR3200/3201/3202 Series

**Pneumatic-electric relay converts pneumatic signal to electric relay.**



Symbol



## ⚠ Precautions

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions and pages 3 to 9 for 3/4/5 Port Solenoid Valve Precautions.

## Piping

### ⚠ Warning

When connecting a pipe fitting to the IN port, place the wrench over the hexagon portion of the lid.

If the wrench is placed over the microswitch body, the neck of the microswitch could break.

## Operation

### ⚠ Caution

1. When the air in a continually supplied state for long periods of time, the recovery time may be delayed due to the adherence of the seal.

Use caution when supplying air continually for long periods of time.

## Model/Specifications

| Model                         | VR3200-□01               | VR3201-□01                                     | VR3202-□01                                       |
|-------------------------------|--------------------------|--|--|
| Construction                  | Open type                | Splashproof (IP44 equivalent)<br>Conduit: G1/2 | Splashproof/Conduit with ground terminal: Pg13.5 |
| Weight                        | 130 g                    | 260 g  | 260 g  |
| Operating pressure            | 0.1 to 1.0 MPa           |  |  |
| Ambient and fluid temperature | -5 to 60°C (No freezing) |  |  |
| Contacts                      | 1ab                      |  |  |
| Port size                     | 1/8                      |  |  |
| Standard                      | —                        |  | EN60947-5-1:2017 (Note)                          |

Note) Voltage is up to 30 VDC. Voltage other than that will be inapplicable.

## Microswitch Rating

| Voltage | Non-inductive load (A) |      |            |      | Inductive load (A) |      |                     |      |
|---------|------------------------|------|------------|------|--------------------|------|---------------------|------|
|         | Resistance load        |      | Light load |      | Inductive load     |      | Electric motor load |      |
|         | N.C.                   | N.O. | N.C.       | N.O. | N.C.               | N.O. | N.C.                | N.O. |
| 125 VAC | 15                     | 15   | 3          | 1.5  | 15                 | 15   | 5                   | 2.5  |
| 250 VAC | 15                     | 15   | 2.5        | 1.25 | 15                 | 15   | 3                   | 1.5  |
| 8 VDC   | 15                     | 15   | 3          | 1.5  | 15                 | 15   | 5                   | 2.5  |
| 14 VDC  | 15                     | 15   | 3          | 1.5  | 10                 | 10   | 5                   | 2.5  |
| 30 VDC  | 6                      | 6    | 3          | 1.5  | 5                  | 5    | 5                   | 2.5  |
| 125 VDC | 0.5                    | 0.5  | 0.5        | 0.5  | 0.05               | 0.05 | 0.05                | 0.05 |
| 250 VDC | 0.25                   | 0.25 | 0.25       | 0.25 | 0.03               | 0.03 | 0.03                | 0.03 |

## How to Order

VR320 0 - 01

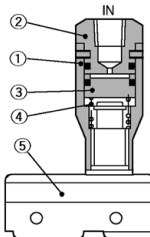
Port size

|     |         |
|-----|---------|
| 01  | Rc 1/8  |
| N01 | NPT 1/8 |
| F01 | G 1/8   |

Construction

|   |   |
|---|---|
| 0 | Open type   |
| 1 | Splashproof (IP44 equivalent)                                   |
| 2 | Splashproof with ground terminal (IP44 equivalent)/CE-compliant |

## Construction



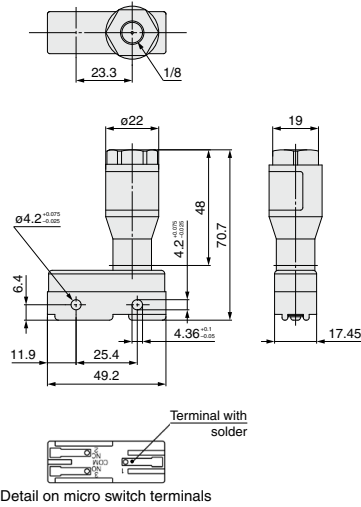
## Component Parts

| No. | Description | Material | Note | No. | Description | Material        | Note          |
|-----|-------------|----------|------|-----|-------------|-----------------|---------------|
| 1   | Body        | Brass    |      | 4   | Spring      | Stainless steel |               |
| 2   | Cap         | Brass    |      | 5   | Microswitch |                 | Contacts 1 ab |
| 3   | Piston      | POM      |      |     |             |                 |               |

Transmitters: **VR3200/3201/3202 Series**  
 Pneumatic-electric Relay

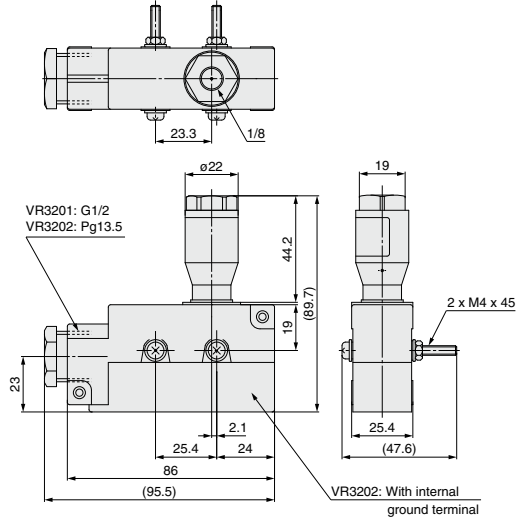
**Dimensions**

**VR3200**



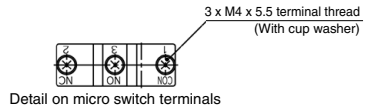
Detail on micro switch terminals

**VR3201, VR3202**



VR3201: G1/2  
 VR3202: Pg13.5

VR3202: With internal ground terminal



Detail on micro switch terminals

|       |
|-------|
| VM    |
| VMG   |
| VR    |
| VR51  |
| VHK   |
| VH    |
| VHS □ |
| VHS   |

# Transmitters: Pneumatic Indicator VR3100 Series

RoHS

Indicates the presence of pneumatic pressure. It is equivalent to the pilot lamp of an electrical system.



Symbol

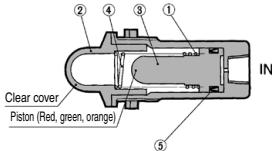


## Model/Specifications

| Model                   | VR3100-01R               | VR3100-01G | VR3100-01O |
|-------------------------|--------------------------|------------|------------|
| Color of indicator      | Red                      | Green      | Orange     |
| Operating pressure      | 0.1 to 0.8 MPa           |            |            |
| Ambient and fluid temp. | -5 to 60°C (No freezing) |            |            |
| Frequency               | 100 c.p.m. or less       |            |            |
| Port size               | Rc 1/8                   |            |            |
| Weight                  | 40g                      |            |            |

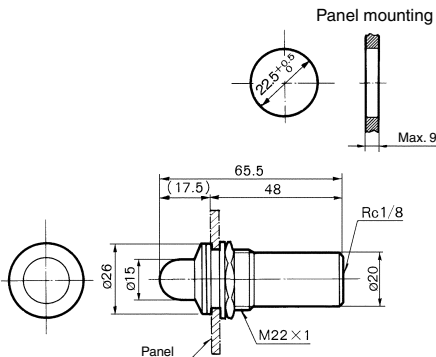
\* When the air is in a continually supplied state for long periods of time, the recovery time may be delayed due to the adherence of the seal.  
Use caution when supplying air continually for long periods of time.

## Construction



| No. | Description      | Material        | Note |
|-----|------------------|-----------------|------|
| 1   | Body             | Aluminum alloy  |      |
| 2   | Indicator window | Acrylic         |      |
| 3   | Piston           | POM             |      |
| 4   | Return spring    | Stainless steel |      |
| 5   | O-ring seal      | NBR             |      |

## Dimensions



# Transmitters: Miniature Pneumatic Indicator VR3110 Series

RoHS

This is an ultra-compact air indicator light to monitor the presence of air pressure.

It is equivalent to the pilot lamp of an electrical system.



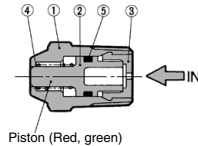
Symbol



## Model/Specifications

| Model                   | VR3110-01R               | VR3110-01G |
|-------------------------|--------------------------|------------|
| Color of indicator      | Red                      | Green      |
| Operating pressure      | 0.15 to 1.0 MPa          |            |
| Ambient and fluid temp. | -5 to 60°C (No freezing) |            |
| Frequency               | 300 c.p.m. or less       |            |
| Port size               | R 1/8                    |            |
| Weight                  | 6g                       |            |

## Construction



| No. | Description | Material        | Note |
|-----|-------------|-----------------|------|
| 1   | Body        | Brass           |      |
| 2   | Piston A    | POM             |      |
| 3   | Plug        | PE              |      |
| 4   | Spring      | Stainless steel |      |
| 5   | O-ring      | NBR             |      |

## Dimensions

