



Eurovacuum

Vacuum Pressure Switch
119800



The Vacuum Pressure Switch (119800) is widely used in machine tools, industrial machines, compressors, chemical plants, power plants, machineries for ships and for automatic pressure control.

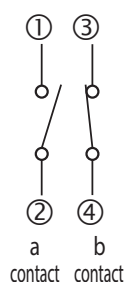
Specifications:

| | |
|--------------------------------------|------------------------|
| Operating pressure range: | -100 to -1000 mbar |
| Hysteresis adjusting range: | 70 to 530 mbar |
| Proof pressure: | 5 bar |
| Repeatability: | ±20 mbar |
| Body material in contact with media: | brass, phosphor bronze |
| Ambient temp.: | 5 to 80°C |
| Port size: | G 3/8 BSP |
| Weight: | 1.3 kg |

Media

This switch is intended for use with for non corrosive gases, air and inert gasses. The type of operating gasses is limited by the material (brass, phosphor bronze) of the parts in contact with these gasses.

Contacts



When rising pressure

① – ② = ON

③ – ④ = OFF

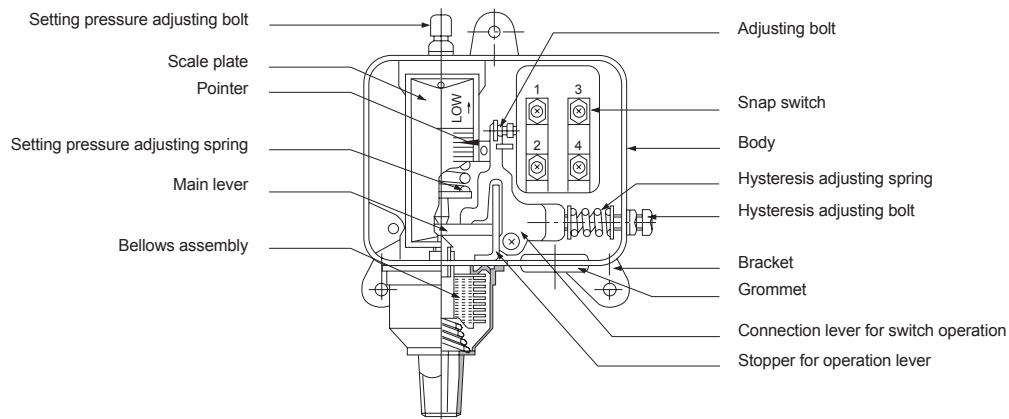
Rated Voltage

| Rated voltage (V) | Non inductive (A) | | Inductive load (A) | |
|-------------------|-------------------|------------|--------------------|------------|
| | load resistance | light load | Inductive load | Motor load |
| AC 110 | 12 | 2 | 12 | 3 |
| 220 | 10 | 1 | 10 | 1.5 |
| 440 | 6 | 1 | 3 | 1 |
| 550 | 5 | 0.8 | 2 | 0.5 |
| DC 24 | 3 | 2.5 | 3 | 2.5 |
| 48 | 1.5 | 1.2 | 1.5 | 1.25 |
| 110 | 0.5 | 0.25 | 0.5 | 0.2 |
| 220 | 0.25 | 0.1 | 0.25 | 0.1 |

Insulation resistance: 100 MΩ or more at 500 VDC by megameter

Voltage resistance: 2000 VAC/1 min.

Construction



Maintenance

NOTICE

Bellows assembly is available for maintenance. When replacing other parts, please contact Eurovacuum, since it cannot be repaired by user.

Operating environment

! DANGER

Never use in an environment where flammable fluids or gases are used. This product is not explosion-proof and may trigger an explosion.

Wiring

! WARNING

Do not have the internal wiring attached to the connection lever for switch operation. It may malfunction.

! CAUTION

1. The grommet size of open type switch is $\varnothing 17$. It is possible to connect the electric piping 1/2B without grommet.

2. Max. diameter of an electric cord usable for bulb gland is shown as below.

Cable gland Max. diameter of an electric cord

20a $\varnothing 12$

20b $\varnothing 13$

20c $\varnothing 15$

3. Terminal thread type is M4.

! CAUTION

Mounting is possible in either horizontal or vertical orientations.

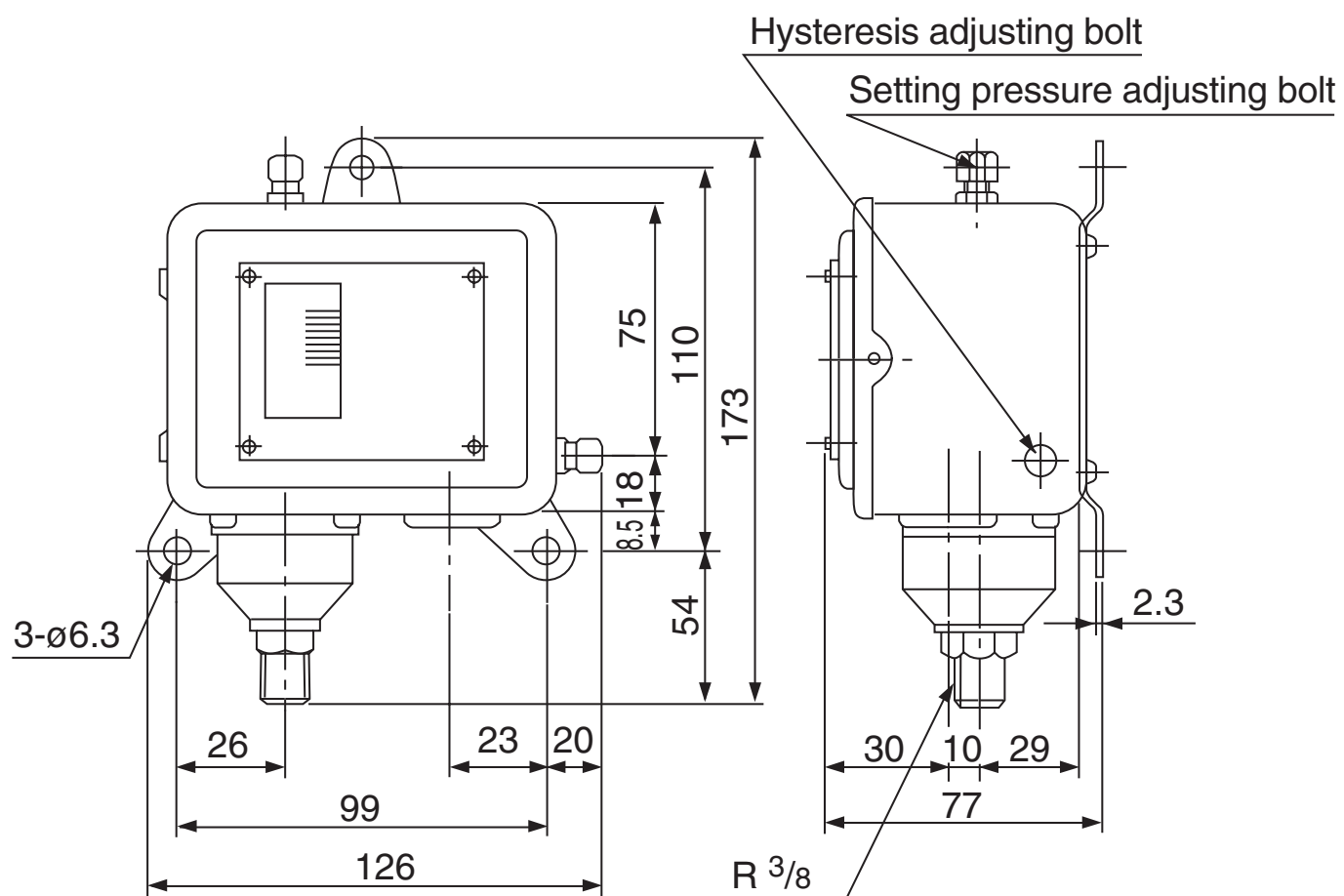
Pressure settings

! CAUTION

1. Set the pressure by adjusting the setting pressure adjusting bolt to the right to increase and to the left to decrease.
2. Adjust the hysteresis with hysteresis adjusting bolt. In case of switch with scale plate, adjust the hysteresis with a flat head screwdriver tightening the adjusting bolt in the thread cap. Turn to the right to increase and to the left to decrease.
3. Hysteresis must be within the specified range in this catalog, operation may be unstable when activated out of the specified range.
4. Scale plate is only for reference. Use the gauge to get the correct pressure value.
5. Set pressure scale at the value of the pressure increase.

Dimensions

VPS 119800



Safety instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by labels of “**Caution**”, “**Warning**” or “**Danger**”. To ensure safety, be sure to observe JIS B 8370 (*JIS B 8370: General Rules for Pneumatic Equipment*) and other safety practices.

CAUTION

Operator error could result in injury or equipment damage.

WARNING

Operator error could result in serious injury or loss of life.

DANGER

In extreme conditions, there is a possible result of serious injury or loss of life.

WARNING

The compatibility of vacuum equipment is the responsibility of the person who designs the vacuum system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific vacuum system must be based on specifications or after analysis and/or tests to meet your specific requirements. The expected performance and safety assurance will be the responsibility of the person who has determined the compatibility of the system. This person should continuously review the suitability of all items specified, referring to the latest catalog information with a view to giving due consideration to any possibility of equipment failure when configuring a system.

WARNING

Only trained personnel should operate vacuum operated machinery and equipment.

Vacuum can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair should be performed by trained and experienced operators.

WARNING

Do not service machinery/equipment or attempt to remove components until safety is confirmed.

1. Inspection and maintenance of machinery/equipment should only be performed once measures to prevent falling or runaway of the driver objects have been confirmed.
2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.
3. Before machinery/equipment is restarted, take measures to prevent shooting-out of cylinder piston rod, etc.

WARNING

Contact Eurovacuum if the product is to be used in any of the following conditions:

1. Conditions and environments beyond the given specifications, or if used outdoors.
2. Installation on equipment in conjunction with atomic energy, railway, air navigation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, clutch and brake circuits in press applications, or safety equipment.
3. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

Common precautions

Be sure to read before handling.

For detailed precautions on every series, refer to main text.

Selection

WARNING

Confirm the specifications.

This product is designed for use in vacuum air applications only. Do not use the product outside their design parameters. Please contact Eurovacuum when using the products in applications

Mounting

WARNING

1. Instruction manual

Install the products and operate them only after reading the instruction manual carefully and understanding its contents. Also keep the manual where it can be referred to as necessary.

2. Securing the space for maintenance

When installing the products, please allow access for maintenance.

3. Tightening torque

When installing the products, please follow the listed torque specifications.

Piping

WARNING

1. Before piping

Make sure that all debris, cutting oil, dust, etc., are removed from the piping.

2. Wrapping of pipe tape

When screwing piping or fittings into ports, ensure that chips from the pipe threads or sealing material do not get inside the piping. Also, when the pipe tape is used, leave 1.5 to 2 thread ridges exposed at the end of the threads.

Air supply

WARNING

1. Operating media

Please consult with Eurovacuum when using the product in applications other than vacuum. Regarding products for general media, please ask Eurovacuum about applicable media.

2. Install an air dryer, aftercooler, etc.

Excessive condensate in a vacuum system may cause valves and other equipment to malfunction. Installation of an air dryer, after cooler etc. is recommended.

3. Drain flushing

If condensate in the drain bowl is not emptied on a regular basis, the bowl will over flow and allow the condensate to enter the vacuum lines. If the drain bowl is difficult to check and remove, it is recommended that a drain bowl with auto-drain option be installed.

4. Use clean air

If the compressed air supply is contaminated with chemicals, synthetic materials, corrosive gas, etc., it may lead to break down or malfunction.

Operating Environment

WARNING

- 1. Do not use in environments where the product is directly exposed to corrosive gases, chemicals, salt water, water or steam.**
- 2. Do not expose the product to direct sunlight for an extended period of time.**
- 3. Do not use in a place subject to heavy vibrations and/or shocks.**
- 4. Do not mount the product in locations where it is exposed to radiant heat.**

Maintenance

WARNING

1. Maintenance procedures are outlined in the operation manual.

Not following proper procedures could cause the product to malfunction and could lead to damage to the equipment or machine.

2. Maintenance work

If handled improperly, compressed air can be dangerous. Assembly, handling and repair of pneumatic systems should be performed by qualified personnel only.

3. Drain flushing

Remove drainage from air filters regularly. (Refer to the specifications.)

4. Shut-down before maintenance

Before attempting any kind of maintenance make sure the supply pressure is shut off and all residual air pressure is released from the system to be worked on.

5. Start-up after maintenance and inspection

Apply operating pressure and power to the equipment and check for proper operation and possible air leaks. If operation is abnormal, please verify product set-up parameters.

6. Do not make any modifications to the product.

Do not take the product apart.

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