



Pressure Switches/Flow Switches Precautions 1

Be sure to read this before handling products.

Refer to the Operation Manual on the SMC website for further precautions.

Warning

1. Check the product specifications before use.

If the product is used outside of the specifications, it may cause malfunction, failure, or damage to the product, leading to an electric shock, explosion, or fire.

2. Do not modify the product.

Do not disassemble, modify (including changing the printed circuit board), or repair the product. An injury or failure can result.

3. The product should be mounted correctly.

If the product is not mounted correctly, malfunction, failure, or damage may occur.

For the handling of fittings (including One-touch fittings), refer to the Precautions for Fittings and Tubing.

Refer to the operation manual for details on the 3 points below.

- Use the appropriate tool.
- Tighten with the required torque.
- If the mounting direction is specified, mount the product in accordance with the specified direction.

4. Perform regular maintenance and confirm normal operation.

If maintenance is not performed, malfunction or failure may occur.

Turn off the power supply and stop the fluid supply before performing maintenance.

Otherwise, injury may occur.

After maintenance is complete, perform appropriate functional inspections and leak tests.

Safety cannot be assured in the case of unexpected malfunction.

Cut off the power supply and stop supplying fluid if the equipment does not function properly or there is a leakage of fluid.

5. Do not apply vibration, impact, or loads.

If vibration, impact, or loads are applied, malfunction, failure, or damage may occur.

In particular, never mount a product in a location that will be used as a foothold.

6. Do not expose the product to direct sunlight.

If the product is exposed to direct sunlight, malfunction, failure, or damage may occur.

If the product is exposed to direct sunlight, provide a suitable protective cover.

7. Do not use the product in an environment where the product may be corroded.

If the product is used in a corrosive environment, malfunction, failure, or damage may occur.

Check the product materials before use.

8. Do not use products other than ATEX compliant products in an environment where the product is exposed to explosive or flammable gas or dust.

ATEX (explosion proof) compliant products should be used in an environment which is correspondent to ATEX compliance.

If products other than ATEX compliant products are used in an explosive or flammable environment, an explosion or fire may occur.

9. Ensure that the product is used within the enclosure specifications.

If the product is used outside of the specifications, malfunction or failure may occur.

Use the product in accordance with the protection level with reference to the IEC60529 Standard.

10. Use the product within the operating temperature, humidity, and fluid temperature range.

Do not use the product outside of these specifications.

Even when the product is used within the specifications, do not use in a location where there are rapid temperature changes, in a location where there are heating/cooling cycles, or in a location where there is freezing or condensation.

Doing so may result in malfunction or failure.

If the product is to be used in environments with low temperatures, protection against freezing is necessary.

11. Do not use fluids other than the applicable fluids.

If fluids other than the applicable fluids are used, malfunction, failure, or breakage may occur.

12. Do not use for flammable or poisonous fluids.

If flammable or poisonous fluids are used, an explosion or fire may occur.

13. Do not let foreign matter or condensate get inside the piping of the product.

If foreign matter or condensate enters the product, malfunction, failure, or damage may occur.

Mount an appropriate filter on the fluid inlet side (IN side).

14. Use the product within the specified operating pressure range.

If the product is used outside of the rated pressure range, malfunction may occur.

15. Do not apply pressure which exceeds the proof pressure.

If pressure exceeding the proof pressure is applied, malfunction, failure, or damage may occur.

16. Ensure that the product is used within the power supply specifications.

If the product is used outside of the specifications, malfunction or failure may occur, leading to an electric shock or fire.

17. Ensure that the FG terminal is connected to ground when using a commercially available switch-mode power supply.

When a switch-mode power supply is connected to the product, switching noise will be superimposed and the product will no longer meet specifications.

This can be prevented by inserting a noise filter, such as a line noise filter or ferrite core, between the switch-mode power supply and the product, or by using a series power supply instead of a switch-mode power supply.

18. Do not use a load exceeding the maximum load voltage or current.

If the product is used outside of the specifications, it may cause malfunction or damage, leading to a reduction in the life of the product.

19. Wire the product correctly.

Incorrect wiring could cause malfunction or failure, leading to an electric shock or fire.



Pressure Switches/Flow Switches

Precautions 2

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Warning

20. Avoid repeatedly bending, stretching, or applying load to the cable.

Applying repeated bending, tensile stress, or load to the cable can damage the wire.

The recommended bend radius of the cable is 6 times the outside diameter of the sheath, or 33 times the outside diameter of the insulation material, whichever is larger.

21. Do not perform wiring while the power is ON.

Touching the terminal or connector while the power is ON may cause an electric shock.

Performing wiring while the power is ON may result in malfunction or failure.

22. Use appropriate countermeasures against surges when using a load which generates a surge voltage.

If surge voltages are repeatedly applied, this may cause malfunction or failure.

23. Do not use in an area where surges are generated.

If the product is used in an environment where surges are generated (solenoid lifter, high frequency induction furnace, motor, etc.), malfunction or failure may occur.

Take appropriate measures before using the product.

24. Route the wires of the product separately from power or high-voltage cables.

If the wires of the product are routed with power or high-voltage cables, malfunction or failure may occur due to noise.

25. Confirm proper insulation of the wiring.

If there is insulation failure (short circuits, faulty ground connection, improper insulation between terminals, etc.), malfunction or failure may occur.

26. Do not use the product in a place where static electricity is a problem.

It may result in system failure or malfunction.

27. If the product to be returned is contaminated or is possibly contaminated with substances that are harmful to humans, for safety reasons, please contact SMC beforehand and then employ a specialist cleaning company to decontaminate the product. After the decontamination prescribed above has been carried out, submit a Product Return Request Sheet or the Detoxification/Decontamination Certificate to SMC and await SMC's approval and further instructions before attempting to return the item.

Please refer to the International Chemical Safety Cards (ICSC) for a list of harmful substances.

If you have any further questions, please don't hesitate to contact your SMC sales representative.

Caution

1. Slight scratches or dirt on the display or the product body will not cause any problems. Please continue to use the product.

2. Ensure sufficient space for installation and maintenance.

3. Install the product while taking into consideration the internal voltage drop. (Electrical type only)

Confirm that the equation below is satisfied after checking the operating voltage of the load.

Power supply voltage - Product internal voltage drop > Minimum operating voltage
Even if the product operates normally, if the operating voltage is not satisfied, the load may not operate.

4. Pay attention to the write limit of the input data. (Electrical type only)

The input data (the set value, etc.) is written into the memory, so if the power supply is cut, the data will not be lost. However, there is a limit to the number of write operations. Refer to the operation manual for the write limit.

5. Do not use solvents, such as benzene, thinner, etc., to clean the product.

They could damage the surface of the body and erase the markings on the body.

Use a soft cloth to remove stains. For heavy stains, use a cloth lightly dampened with diluted neutral detergent, then wipe up any residue with a dry cloth.