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› Square D 9012 GCW-23 Pressure Switch User Manual

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Square D 9012 GCW-23 Pressure Switch User Manual

Model: 9012 GCW-23

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Square D 9012 GCW-23 Pressure Switch. Please read this manual thoroughly before attempting to install or operate the device. Retain this manual for future reference.

2. SAFETY INFORMATION

WARNING: This device operates with electrical power and under pressure. Improper installation or operation can result in serious injury or death. Only qualified personnel should install, adjust, or service this equipment.

- Always disconnect power before working on the switch or connected equipment.
- Ensure proper grounding to prevent electrical shock.
- Verify pressure lines are depressurized before connecting or disconnecting the switch.
- Adhere to all local and national electrical codes and safety regulations.
- The enclosure type (Type 4, 4X, 13) provides protection against dust, water, and corrosion. Ensure the enclosure integrity is maintained.

3. PRODUCT OVERVIEW

The Square D 9012 GCW-23 is a robust pressure switch designed for industrial applications. It features an adjustable differential and is suitable for use in various environments, including those requiring Type 4, 4X, and 13 enclosure ratings. This model is specifically designed for decreasing pressure applications.



Figure 3.1: The Square D 9012 GCW-23 Pressure Switch shown alongside its original packaging box. This view highlights the overall appearance of the unit and its industrial design.

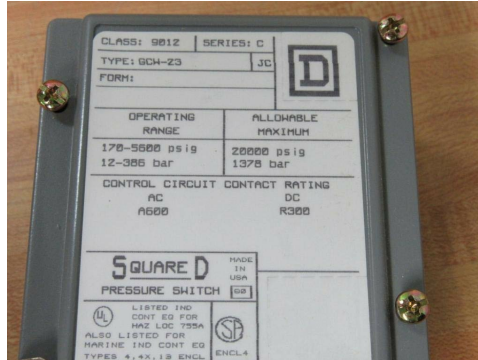


Figure 3.2: A detailed view of the product label on the Square D 9012 GCW-23 Pressure Switch. This label provides critical specifications such as operating range (170-5600 PSIG, 12-386 BAR), allowable maximum pressure (20000 PSIG, 1378 BAR), control circuit contact ratings (AC: A600, DC: R300), and enclosure type (Type 4, 4X, 13).

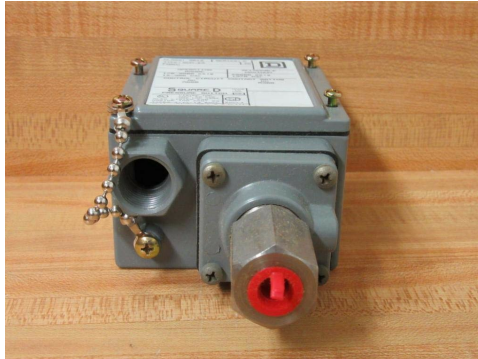


Figure 3.3: Side view of the pressure switch, illustrating the threaded port for electrical conduit connection. A small chain is visible, typically used to secure the cover screws during maintenance.

4. SETUP AND INSTALLATION

4.1 Mounting

Mount the pressure switch in a location that is free from excessive vibration and within the specified environmental conditions. Ensure adequate space for wiring and pressure line connections. The unit can be mounted using the four mounting holes located on the base.

4.2 Pressure Connection

Connect the pressure line to the 1/4" NPT threaded port on the switch. Use appropriate thread sealant to ensure a leak-free connection. Do not overtighten. Ensure the system pressure does not exceed the allowable maximum of 20000 PSIG (1378 BAR).

4.3 Electrical Wiring

Wire the pressure switch according to the electrical schematic provided with your equipment and local electrical codes. The switch is rated for 125V Max AC or DC. Ensure all connections are secure and properly insulated. The enclosure is designed for Type 4, 4X, 13 applications, providing protection against dust, water, and corrosion.



Figure 4.1: Top view of the pressure switch, showing the four mounting holes for secure installation. This perspective also provides a clear view of the overall compact design of the unit.

5. OPERATION

5.1 Setting Operating Points

The 9012 GCW-23 pressure switch is designed with an adjustable differential. The factory set operating point for decreasing pressure is 2900.0 PSIG. Adjustments to the operating point and differential are typically made via internal screws or mechanisms. Refer to the specific wiring diagram or product sheet for detailed adjustment procedures.

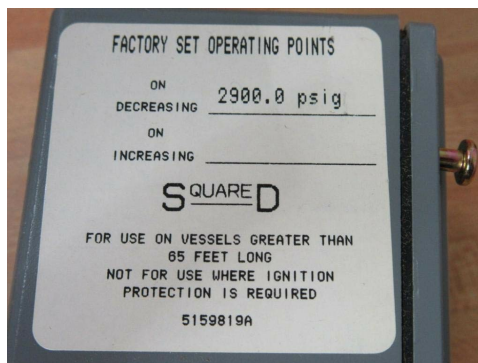


Figure 5.1: Close-up of the label indicating the factory set operating point for decreasing pressure, which is 2900.0 PSIG. This label also notes that the device is for use on vessels greater than 65 feet long and not for use where ignition protection is required.

5.2 Functional Check

After installation and initial setup, perform a functional check to ensure the switch operates correctly within the desired pressure range. Gradually increase and decrease pressure to observe the switch's actuation and de-actuation points. Verify that the connected equipment responds as expected.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of the pressure switch.

- **Inspection:** Periodically inspect the switch for any signs of physical damage, corrosion, or loose connections.
- **Cleaning:** Keep the exterior of the switch clean. For Type 4, 4X, 13 enclosures, ensure seals are intact and free from debris.

- **Functional Test:** Conduct periodic functional tests to confirm the switch is operating within its specified pressure range and differential.
- **Pressure Line Integrity:** Check pressure lines for leaks or blockages.
- **Electrical Connections:** Verify all electrical connections are tight and free from corrosion.

NOTE: All maintenance procedures should be performed with power disconnected and pressure relieved from the system.

7. TROUBLESHOOTING

This section provides guidance for common issues. For problems not listed, contact qualified service personnel.

Problem	Possible Cause	Solution
Switch does not actuate at set point.	Incorrect pressure setting; Clogged pressure line; Faulty wiring; Internal switch failure.	Verify pressure setting; Check and clear pressure line; Inspect and correct wiring; Replace switch if internal failure is confirmed.
Erratic operation.	Vibration; Pressure fluctuations; Loose connections.	Mount switch securely to minimize vibration; Stabilize pressure source; Tighten all electrical and pressure connections.
No electrical output.	No power supply; Open circuit; Damaged contacts.	Check power supply; Verify continuity of wiring; Inspect switch contacts (if accessible and safe to do so); Replace switch.

8. SPECIFICATIONS

Parameter	Value
Model	9012 GCW-23
Operating Range	170-5600 PSIG (12-386 BAR)
Allowable Maximum Pressure	20000 PSIG (1378 BAR)
Control Circuit Contact Rating (AC)	A600
Control Circuit Contact Rating (DC)	R300
Maximum Voltage	125V AC or DC
Enclosure Type	Type 4, 4X, 13 (NEMA)
Thread Size	1/4" NPT
Operating Principle	Decreasing Pressure
Manufacturer	Square D

9. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or service, please contact Square D customer service or

visit their official website. Ensure you have the product model number (9012 GCW-23) and any relevant serial numbers available when seeking support.

Official Website: www.se.com/us/en/brands/square-d/

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question