

Dwyer 1950-20-2F

DWYER 1950-20-2F Explosion Proof Differential Pressure Switch User Manual

Model: 1950-20-2F | Brand: Dwyer

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Dwyer 1950-20-2F Explosion Proof Differential Pressure Switch. This device is designed for industrial control equipment in hazardous locations, providing reliable pressure sensing and switching capabilities.

2. SAFETY INFORMATION

WARNING: To prevent ignition of hazardous atmosphere, disconnect from supply circuit before opening. Keep cover tightly closed when in operation.

This device is rated for hazardous locations. Adhere strictly to all local and national electrical codes and safety regulations during installation and operation. Failure to do so may result in serious injury or property damage.

- **Electrical Rating:** 15A 125 VAC, 250 VAC, 480 VAC.
- **Temperature Range:** -40°F to 140°F (-40°C to 60°C).
- **Hazardous Location Classifications:** CL I DIV 1 GR C, D; CL II GR E, F, G; CL III.
- **Rain Tight:** Enclosure 3.
- **Caution:** Not for use with flammable fluids or oxygen enriched mixtures.

3. PRODUCT OVERVIEW

The Dwyer 1950-20-2F is a robust differential pressure switch designed for demanding industrial environments. It features a durable housing and precise internal components for accurate pressure monitoring.



Figure 3.1: Front view of the Dwyer 1950-20-2F switch, showing the main product label with specifications and safety warnings. The label indicates the model number 1950-20-2F, electrical ratings, and hazardous location certifications.



Figure 3.2: Side view of the pressure switch, highlighting the two blue-capped pressure ports for differential pressure measurement. These ports are used to connect the switch to the system where pressure is being monitored.



Figure 3.3: Detailed view of the product label, clearly showing the manufacturer (Dwyer Instruments, Inc.), model number (1950-20-2F), electrical ratings (15A 125, 250, 480 VAC), and critical safety warnings regarding hazardous atmospheres.

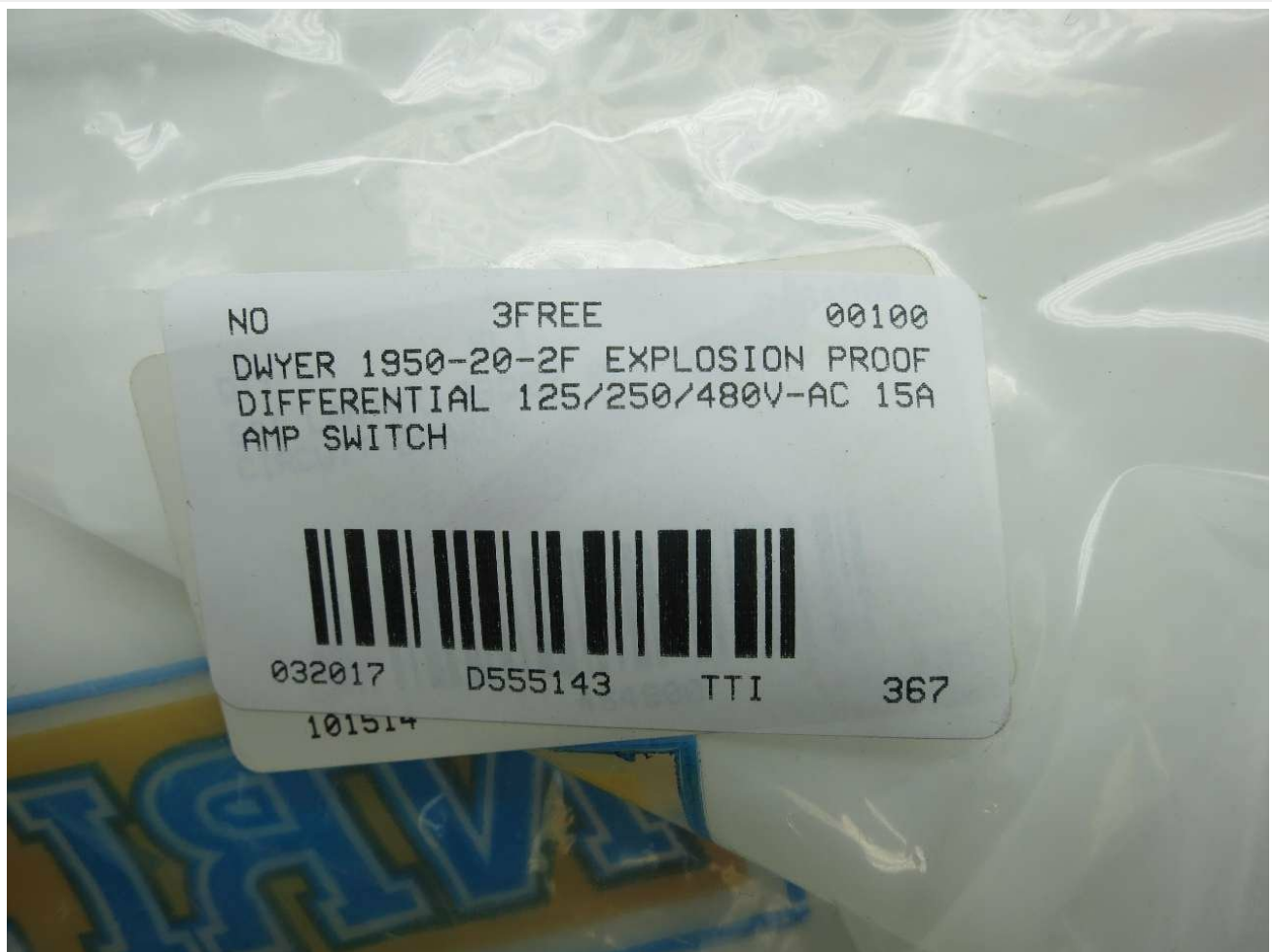


Figure 3.4: Packaging label for the Dwyer 1950-20-2F, confirming the model and indicating the internal part number D555143, along with electrical specifications.

4. SETUP AND INSTALLATION

Proper installation is crucial for the safe and accurate operation of the pressure switch. Ensure all power is disconnected before beginning installation.

4.1 Mounting

Mount the switch securely in a location that is free from excessive vibration and within the specified temperature range. The unit is designed for vertical diaphragm orientation. Ensure adequate space for wiring and pressure line connections.

4.2 Electrical Connections

The switch supports input voltages of 125 V-AC, 250 V-AC, and 480 V-AC, with an output current rating of 15 A AMP. Connect the power supply and control circuit wiring according to the wiring diagram provided with the unit or on the internal label. Ensure all connections are tight and properly insulated. The operating voltage is typically 250 Volts.

4.3 Pressure Connections

Connect the pressure lines to the designated ports on the switch. Ensure that the lines are clean and free of debris. The maximum pressure is 45 inches W.C. (11 kPa) and surge pressure is 10 PSI (68 kPa). Use appropriate fittings and sealants to prevent leaks.

5. OPERATING INSTRUCTIONS

Once installed and wired, the Dwyer 1950-20-2F operates by sensing a differential pressure across its ports. When the pressure difference reaches a pre-set threshold, the internal switch activates, changing the state of the electrical contacts.

- **Setting the Switch Point:** Refer to the internal adjustment mechanism for setting the desired pressure switch point. This typically involves a screw or dial that adjusts the spring tension.
- **Verification:** After setting, verify the switch's operation by applying known pressure differences and observing the electrical output.
- **Normal Operation:** During normal operation, ensure the cover remains tightly closed to maintain its explosion-proof integrity.

6. MAINTENANCE

The Dwyer 1950-20-2F is designed for minimal maintenance. However, periodic checks are recommended to ensure continued reliable operation.

- **Regular Inspection:** Periodically inspect the housing for any signs of damage, corrosion, or loose connections.
- **Pressure Lines:** Check pressure lines for blockages, kinks, or leaks.
- **Cleaning:** Keep the exterior of the unit clean. Do not use harsh chemicals that could damage the housing or seals.
- **Internal Access:** Only open the cover when the supply circuit is disconnected and the area is free of hazardous atmospheres.

7. TROUBLESHOOTING

If the pressure switch is not functioning as expected, consider the following common issues:

- **No Power:** Check the electrical supply and connections to ensure the unit is receiving power.
- **Incorrect Wiring:** Verify that the electrical connections are made according to the wiring diagram.
- **Pressure Issues:** Ensure that the pressure lines are not blocked, leaking, or improperly connected. Verify that the pressure being applied is within the switch's operating range.
- **Setpoint Adjustment:** Confirm that the switch setpoint is correctly adjusted for the desired activation pressure.
- **Environmental Factors:** Ensure the operating temperature is within the specified range.

For persistent issues, contact a qualified technician or Dwyer customer support.

8. SPECIFICATIONS

Specification	Value
Model Number	1950-20-2F
Manufacturer	DWYER
Product Dimensions	5 x 5 x 3.25 inches; 3 Pounds
Input Voltage (AC)	125 V-AC, 250 V-AC, 480 V-AC
Operating Voltage	250 Volts

Specification	Value
Output Current Rating	15 A AMP
Switch Type	Pressure Switch
Max. Pressure	45 in. W.C. (11 kPa)
Surge Pressure	10 PSI (68 kPa)
Connectivity Protocol	X-10
Unit Count	1 Count
Number of Items	1
ASIN	B06XTQ4ZVJ
Internal Part Number	D555143

9. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation included with your purchase or contact the seller directly. General product support and technical assistance can be obtained from the manufacturer, Dwyer Instruments, Inc. When contacting support, please reference the model number 1950-20-2F and the internal part number D555143.

You can find more information on Dwyer's official website:www.dwyer-inst.com

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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.

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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