Dwyer DM-1108

Dwyer DigiMag Series DM-1108 Differential Digital Pressure Gauge User Manual

Model: DM-1108

1. Introduction

1.1 Product Overview

The Dwyer DigiMag Series DM-1108 is a digital differential pressure and flow gauge designed to accurately monitor the pressure of air and compatible gases. It serves as a modern successor to analog gauges, offering precise digital readings and simplified operation. This manual provides comprehensive instructions for the proper setup, operation, maintenance, and troubleshooting of your DM-1108 gauge.

1.2 Key Features

- Monitors air and non-combustible, compatible gases.
- Factory calibrated to specific ranges for immediate use.
- 4-digit LCD for clear display of readings in common English and metric units.
- Simplified four-button operation for easy setup and calibration.
- Digital push-button zero and span adjustment.
- Constructed with glass-filled plastic for durability.
- Features a removable terminal block for 16 to 26 AWG wiring.
- Includes a cable gland for 0.114 to 0.250" (2.9 to 6.4 mm) diameter cable.



Figure 1: Dwyer DigiMag Series DM-1108 Differential Digital Pressure Gauge (Angled View)

2. Setup

2.1 Unboxing and Initial Inspection

Carefully remove the DM-1108 gauge from its packaging. Inspect the unit for any signs of physical damage that may have occurred during shipping. Verify that all components listed in the packing slip are present. If any damage or missing parts are found, contact your supplier immediately.

2.2 Mounting

The DM-1108 is designed for panel mounting. Ensure the mounting location is free from excessive vibration, extreme temperatures, and direct sunlight. Cut a suitable opening in the panel according to the gauge's dimensions. Secure the gauge using the provided mounting hardware, ensuring a snug fit without overtightening.

2.3 Electrical Connection

The gauge requires a stable power supply. Connect the power wires to the removable terminal block. The terminal

block accommodates 16 to 26 AWG wiring. Ensure correct polarity as indicated on the device or in the wiring diagram (refer to specific wiring diagrams if provided with your unit). Use the cable gland to secure the power cable, preventing strain and ensuring environmental protection.

2.4 Pressure Connections

Connect the pressure tubing to the appropriate ports on the gauge. Ensure all connections are secure and leak-free. Use tubing compatible with the gases being measured and capable of withstanding the expected pressure range. For differential pressure measurements, connect the higher pressure source to the 'HI' port and the lower pressure source to the 'LO' port.

3. Operating Instructions

3.1 Basic Operation

Once powered on, the DM-1108 will display the current differential pressure reading on its 4-digit LCD. The unit of measurement will be indicated on the display. The gauge is designed for continuous monitoring.



Figure 2: Front View of the DM-1108 Gauge with Display and Buttons

3.2 Unit Selection and Display Modes

The DM-1108 features four control buttons: MENU, UP (▲), DOWN (▼), and ENTER (E). Use the MENU button to cycle through various settings and display options. The UP and DOWN buttons are used to navigate through options or adjust values, while the ENTER button confirms selections. Refer to the on-screen prompts for specific unit selection procedures (e.g., inWC, Pa, kPa, psi).

3.3 Digital Zero and Span Adjustment

The DM-1108 allows for digital zero and span adjustments to maintain accuracy. To perform a zero adjustment, ensure the gauge is at zero differential pressure (e.g., both ports open to atmosphere or connected to the same pressure source). Press and hold the appropriate button (often indicated as 'ZERO' or through a menu option) until the display reads zero. For span adjustment, apply a known full-scale pressure and follow the menu prompts to calibrate the span. Consult the on-screen menu for detailed steps.

4. Maintenance

4.1 Cleaning

Keep the exterior of the DM-1108 clean using a soft, damp cloth. Do not use abrasive cleaners or solvents, as these can damage the display or housing. Ensure no liquids enter the pressure ports or electrical connections.

4.2 Calibration

While the DM-1108 is factory calibrated, periodic re-calibration may be necessary to ensure continued accuracy, especially in critical applications or after prolonged use. Refer to Section 3.3 for digital zero and span adjustments. For full calibration, it is recommended to send the unit to an authorized service center or consult the factory for detailed procedures.

4.3 Storage

When not in use for extended periods, store the DM-1108 in a clean, dry environment within its specified operating temperature range. Protect the pressure ports from dust and debris by capping them if possible.

5. Troubleshooting

This section provides solutions to common issues encountered with the DM-1108 gauge. If the problem persists after attempting these solutions, contact technical support.

Problem	Possible Cause	Solution
Gauge does not power on	No power supply; Incorrect wiring; Blown fuse (if applicable)	Check power connections and source; Verify wiring polarity; Inspect and replace fuse if necessary.
Inaccurate readings	Gauge out of calibration; Pressure ports clogged; Leak in pressure lines	Perform digital zero/span adjustment; Clear any obstructions from ports; Check all tubing connections for leaks.
Display shows "OVER" or "UNDER"	Pressure exceeds or is below the gauge's range	Ensure the applied pressure is within the specified operating range of the gauge.

Problem	Possible Cause	Solution
Buttons unresponsive	Temporary software glitch; Physical damage to buttons	Power cycle the device; If problem persists, contact support.

6. Specifications

Specification	Value
Model Number	DM-1108
Manufacturer	Dwyer Instruments
Compatible Gases	Air and non-combustible, compatible gases
Display	4-digit LCD
Housing Material	Glass filled plastic
Terminal Block	Removable, for 16 to 26 AWG
Cable Gland Diameter	0.114 to 0.250" (2.9 to 6.4 mm)
Package Dimensions	7.5 x 6.8 x 3.7 inches
Weight	1.6 Pounds
Date First Available	May 25, 2012

7. Warranty and Support

7.1 Warranty Information

Dwyer Instruments products are warranted to be free from defects in material and workmanship for a period of one year from the date of shipment. This warranty does not cover damage due to improper installation, misuse, abuse, or normal wear and tear. For specific warranty terms and conditions, please refer to the official Dwyer Instruments warranty statement or contact the manufacturer directly.

7.2 Technical Support

For technical assistance, troubleshooting beyond the scope of this manual, or inquiries regarding parts and service, please contact Dwyer Instruments customer support. Have your product model number (DM-1108) and serial number (if applicable) ready when contacting support to expedite assistance.

Please note: Specifications are subject to change without notice. Always refer to the latest product documentation from the manufacturer.

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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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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.

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