iGaging Absolute Digital Readout DRO (6-inch)

iGaging 6" Absolute Digital Readout DRO Instruction Manual

Model: Absolute Digital Readout DRO (6-inch)

Introduction

The iGaging Absolute Origin DRO utilizes high accuracy absolute memory technology. This advanced system retains its origin position once it has been set. Upon powering on the DRO, the large, easy-to-read LCD immediately displays the actual sensor position, allowing for immediate measurement without the need to reset the zero point. This device offers unlimited measuring speed and features a high-quality surface finish for exceptionally smooth slider movement. The rule is constructed from hardened stainless steel, ensuring high accuracy and repeatability in all measurements.



Figure 1: The iGaging 6-inch Absolute Digital Readout DRO, showing the main display unit, remote cable, and stainless steel scale.

Setup and Installation

Proper setup is crucial for accurate and reliable operation of your iGaging Absolute DRO. Follow these steps for initial installation:

1. **Battery Installation:** The DRO unit requires two Lithium Metal batteries, which are included. Locate the battery compartment on the back of the display unit, open it, and insert the batteries according to the polarity indicators. Close the compartment securely.
2. **Mounting the Scale:** The hardened stainless steel rule should be securely mounted to your machine or fixture. Ensure it is parallel to the axis of measurement. The package includes two different types of mounting brackets for flexible installation.
3. **Attaching the Display Unit:** The display unit is equipped with magnets for easy attachment to steel surfaces. Additionally, an articulating arm is included, which allows for stacking multiple displays for multi-axis applications. Use the provided mounting hardware to secure the display unit in a position that offers clear visibility and easy access to controls.
4. **Connecting the Remote Cable:** Connect the remote cable from the stainless steel scale to the display unit. The remote cable length is approximately 76 inches, providing ample reach for various setups.



Figure 2: Included mounting hardware, showing various brackets and the articulating arm for flexible installation options.



Figure 3: Example of multiple iGaging Absolute DRO units stacked using the articulating arm for multi-axis measurement setups.

Operating Instructions

Once installed, operating your iGaging Absolute DRO is straightforward:

- **Power On/Off:** Press the **ON/OFF** button to turn the unit on or off. The super large LCD will display the current measurement.
- **Setting Origin (Zero):** Move the sensor to your desired starting point. Press the **ORIGIN** button to set this position as zero. Due to the Absolute Measuring Technology, this origin will be memorized even after the unit is powered off and on again.
- **Unit Conversion:** Press the **mm/in/F** button to cycle through measurement units: millimeters (mm), inches (in), and fractions (F).
- **Incremental Measurement (INC):** Press the **INC** button to switch between absolute and incremental measurement modes. In incremental mode, you can set a temporary zero point for relative measurements.
- **Preset Function:** The **Preset** button allows you to input a specific value to be displayed, useful for setting a known starting point or offset.
- **Hold Function:** Press the **Hold** button to freeze the current display reading. Press again to release.

- **Measurement:** Move the sensor along the stainless steel rule. The display will update in real-time with super speed measurement, showing the precise position relative to your set origin.



Figure 4: Close-up view of the iGaging Absolute DRO display, highlighting the various function buttons for unit conversion, origin setting, incremental mode, preset, and hold.

Maintenance

To ensure the longevity and accuracy of your iGaging Absolute DRO, follow these maintenance guidelines:

- **Cleaning:** Regularly wipe the stainless steel rule and the display unit with a soft, dry, lint-free cloth. For stubborn dirt, a slightly damp cloth can be used, but ensure no moisture enters the electronic components. Avoid using harsh chemicals or abrasive cleaners.
- **Battery Replacement:** When the display becomes dim or erratic, it's time to replace the batteries. Always replace both batteries at the same time with new Lithium Metal batteries of the correct type.
- **Storage:** Store the DRO in a clean, dry environment, away from extreme temperatures, direct sunlight, and strong magnetic fields.

- **Demagnetization:** If you notice the readings becoming erratic or "jump around," the stainless steel rule may have become magnetized. A demagnetizer can be used to resolve this issue and restore accurate readings.

Troubleshooting

If you encounter issues with your iGaging Absolute DRO, consider the following common problems and solutions:

- **Display is blank or dim:**
  - Check battery orientation.
  - Replace batteries with new ones.
  - Ensure the remote cable is securely connected to the display unit.
- **Readings are erratic or "jump around":**
  - The stainless steel rule may have become magnetized. Use a demagnetizer to clear the magnetization.
  - Ensure the scale and sensor are clean and free of debris.
  - Verify that the scale is securely mounted and not flexing.
- **Display updates slowly, especially in cold environments:**
  - This can be a characteristic in colder temperatures. Allow the unit to warm up to room temperature if possible.
  - Ensure batteries are fresh and providing adequate power.
- **Unit does not hold origin after power cycle:**
  - Ensure the **ORIGIN** button was pressed and the origin was successfully set.
  - Check battery level, as low power can sometimes affect memory retention.

Specifications

Measurement Range	0-6 inches / 0-150 mm
Accuracy	±0.001 inches
Resolution	0.0005 inches / 0.01 mm
Display Units	Inches, Millimeters, Fractions
Display Type	Super Large LCD
Rule Material	Hardened Stainless Steel
Total Beam Length	10.5 inches
Remote Cable Length	76 inches
Power Source	2 Lithium Metal batteries (included)
Features	Absolute Measuring Technology, Memorize Origin Zero, Super Speed Measurement, Stackable Readout Panels, Preset Function
Package Dimensions	14.33 x 2.72 x 1.73 inches
Weight	1.54 Pounds

Warranty and Support

For warranty information or technical support regarding your iGaging Absolute Digital Readout DRO, please contact iGaging directly. You can often find support contact details on the manufacturer's official website or through the retailer where the product was purchased.

For more information about iGaging products, you may visit the official iGaging store on Amazon:iGaging Amazon Store.

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