



## Description

Absolute reference gauges read zero at full vacuum and atmospheric pressure with the gauge port open.

With the gauge port open, it is normal for the reading to constantly change in response to atmospheric pressure changes.

The ARM760B and ARM760BBL models are designed for portable applications such as checking vacuum systems and packaging machinery.

The ARM760AD and ARM760ADBL models are designed for applications where a continuous display of vacuum is required such as monitoring vacuum systems and pumps.

## Precautions

- ✓ Read these instructions before using the gauge. Contact the factory for assistance.
- ✓ These products do not contain user-serviceable parts. Contact us for repairs, service, or refurbishment.
- ✓ Gauges must be operated within specified ambient temperature ranges.
- ✓ Outdoor or wash down applications require a NEMA 4X gauge or installation in a NEMA 4X housing.
- ✓ Use a pressure or vacuum range appropriate for the application.
- ✓ Use fittings appropriate for the pressure range of the gauge.
- ✓ Due to the hardness of 316 stainless steel, it is recommended that a thread sealant be used to ensure leak-free operation.
- ✓ For contaminated media use an appropriate screen or filter to keep debris out of gauge port.
- ✓ Remove system pressures before removing or installing gauge.
- ✓ Install or remove gauge using a wrench on the hex fitting only. Do not attempt to turn gauge by forcing the housing.
- ✓ Good design practice dictates that positive displacement liquid pumps include protection devices to prevent sensor damage from pressure spikes, acceleration head, and vacuum extremes.
- ✗ Avoid permanent sensor damage! Do not apply vacuum to non-vacuum gauges or hydraulic vacuum to any gauges.
- ✗ Avoid permanent sensor damage! NEVER insert objects into gauge port or blow out with compressed air.
- ⚠ Gauges are not for oxygen service. Accidental rupture of sensor diaphragm may cause silicone oil inside sensor to react with oxygen.

Cecomp maintains a constant effort to upgrade and improve its products. Specifications are subject to change without notice. See [cecomp.com](http://cecomp.com) for latest product information. Consult factory for your specific requirements.



**WARNING:** This product can expose you to chemicals including lead, nickel and chromium, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## Installation Tip

For food vacuum packaging applications an accumulation of debris may eventually clog the gauge port. A filter screen fitting should be installed to keep debris out of the gauge port. The screen fitting can be removed and cleaned as needed.



## Installation: ARM760AD, ARM760ADBL

The ARM760AD and ARM760ADBL models include 6 feet of cable with a female connector and a 115VAC/12VDC adapter with 6 feet of cable with plug.

After the gauge is installed, route the wires away from heat sources and moving equipment and connect the AC adapter's plug to the gauge cable connector. Lastly, plug the AC adapter into a 115 VAC outlet.

NEVER connect the gauge wires directly to 115 VAC or permanent damage not covered by warranty will result.

If you are using your own power source the ARM760AD and ARM760ADBL models can operate on any AC source of 8 to 24 VAC 50/60 Hz, or any DC source of 9 to 32 VDC. The type and magnitude of the supply voltage have negligible effects on the gauge calibration as long as it is within the voltage ranges stated above. No polarity needs to be observed when connecting a DC supply.

The only important consideration is to ensure that the gauge supply voltage does not fall below 8 VAC RMS if AC power is used, or 9 VDC if DC power is used. Operation with less than these values may cause erratic or erroneous readings.

If your application requires operation of several gauges from the same power supply, observe power requirements in specifications.

## Operation: ARM760AD, ARM760ADBL

If the gauge display is off, press the center button to power up the gauge.

If the gauge was in the power-on state when the power was disconnected, the gauge will automatically turn on when power is reapplied.

If the gauge was turned off using the push button and then the power was turned off, the gauge will not power up until the power is reapplied and the center button is pressed again.

The gauge may be left on at all times or shut off when not in use. Display backlighting for BL models is on whenever the gauge is on. The backlighting will not be apparent under bright lighting conditions.

## Operation: ARM760B, ARM760BBL

Press the button on the front of the gauge to activate the display. The gauge can be shut off at any time by pressing the button again. The gauge will stay on for a period of time determined by the auto shutoff time.

If the gauge was ordered without auto shutoff (-ON) it will stay on until the button is pressed or until the batteries are depleted.

Display backlighting for BL models is on whenever the gauge is on. The backlighting will not be apparent under bright lighting conditions. Turn gauge off when not in use to conserve batteries.

## Battery Replacement: ARM760B, ARM760BBL

A LOBAT low battery indication will be shown in the upper left corner of the display when the battery voltage falls sufficiently. The battery should be replaced soon after the indicator comes to prevent unreliable readings.

**WARNING:** Batteries must be changed in a non-hazardous location only. Do not mix different batteries or fresh batteries with old. Replace both batteries with new ones at the same time.

1. Remove the 6 Phillips screws on the back of the gauge.
2. Remove battery retainer clip.
3. Remove batteries by lifting up the positive end of the battery (opposite the spring) taking care not to bend the spring.
4. Discard old batteries properly. See battery manufacturer's recommendations for disposal or recycling.
5. Install batteries with correct orientation. Insert the negative (flat) end of each battery first towards the battery holder spring.
6. Replace the clip and back cover, including the rubber gasket.

## Calibration Preparation

All gauges are factory calibrated using NIST traceable calibration equipment. Calibration is not required before using the gauge.

Absolute reference gauges require vacuum generation and atmospheric pressure measurement equipment for accurate calibration and thus are more difficult to calibrate in the field.

Calibration should only be attempted if the user has access to an absolute pressure reference of known accuracy that can generate and measure pressure/vacuum over the full range of the gauge.

A vacuum pump able to produce a vacuum of 100 microns (0.1 torr or 100 millitorr) or lower is required for zero calibration.

The quality of the calibration is only as good as the accuracy of the calibration equipment and ideally should be at least four times the gauge accuracy.

Do not use a weather barometer for an atmospheric reference as they are normally offset to sea level based on altitude and thus do not read absolute atmospheric pressure.

Calibration intervals vary depending on your quality standards, but annual recalibration is customary.

Install fresh batteries before calibrating battery-powered gauges.

Allow the gauge to equalize to normal room temperature for approximately 20 minutes before calibration.

Gauges may be returned to factory for certified recalibration. NIST traceability is available.

## Calibration

This procedure applies to all ARM760 models.

Remove the front covers to access the zero and span calibration potentiometers.

Apply a full vacuum to the gauge port.

Zero calibration must be done before span calibration.

Adjust the zero potentiometer until the gauge reads zero with the minus (-) sign occasionally flashing.

Adjusting zero does not affect the span calibration.

Set the pressure to obtain a calibrator reading of approximately 760 torr. Atmospheric pressure can be used, but constantly changes.

Adjust the span potentiometer to match the calibrator's reading.

Record readings at three to five points over the range of gauge and adjust span control to minimize error and meet specifications.