Falcon ARM Absolute Reference Manometers

ARM760B ARM760AD ARM760BBL ARM760ADBL

- ***±0.25% Test Gauge Accuracy***
- ***316 Stainless Steel Wetted Parts***
- ***760 to 0 Torr Absolute***
- ***Monitor Vacuum Systems and Pumps***
- ***Eliminate Mercury Manometers!***
- ***BBL Includes Backlit Display***



ARM760AD



ARM760B

Models

Model	Version	Power
ARM760AD	DC powered	115VAC/12VDC adapter
ARM760ADBL	DC powered, backlit display	115VAC/12VDC adapter
ARM760B	Battery-powered	2 AA batteries
ARM760BBL	Battery, backlit display	2 AA batteries

Range and Resolution
760 to 0 torr absolute, 1 torr resolution

Optional Units and Ranges
Visit *www.cecomp.com* or consult factory or for a complete list of models and ranges

Electrical Specifications

Display (type, size, update rate)
3½ digit LCD (3 digits are used for this range), ½" digit height
3 readings per second nominal display update rate

Controls and Location
Front On/Off pushbutton
Display zero/span, non-interactive, ±10% range
Front-accessible multiturn potentiometers

Accuracy (linearity, hysteresis, repeatability)
Standard: ±0.25% of full scale ±1 least significant digit
Optional:
-HA ±0.1% FS ±1LSD (most ranges)
-4A ±0.4% FS ±1LSD
CD Factory calibration data
NC NIST traceable test report and calibration data

Power ARM760AD and ARM760ADBL
Includes 115VAC/12VDC wall mount power supply
Gauge will operate on any DC source of 9 to 32 VDC or any AC source of 8 to 24 VAC 50/60 Hz
ARM760AD power consumption approximately 5 mA
ARM760ADBL power consumption approximately 75 mA

Electrical Connection ARM760AD and ARM760ADBL
6 foot long, 2-conductor cable with female 3.5 mm socket
Power supply; 6 foot long, 2-conductor cable with male 3.5 mm plug

Power ARM760B and ARM760BBL
Includes 2 AA alkaline batteries
ARM760B battery life is approximately 2500 hours
ARM760BBL battery life is approximately 180 hours
30 minute auto shutoff

Environmental Specifications

Storage Temperature	–40 to 203°F (–40 to 95°C)
Operating Temperature	–4 to 185°F (–20 to 85°C)
Compensated Temperature	32 to 158°F (0 to 70°C)

Mechanical Specifications

Size
3.38" W x 2.88" H x 1.65" D housing
Add approximately 0.75" to height for pressure fitting
Add approximately 1" to depth for strain relief and wire clearance.

Weight (approximate)
Gauge: 9 ounces
Shipping weight: 1 pound

Material and Color
Extruded aluminum case, epoxy powder coated, light gray
Polycarbonate cover, blue, Polycarbonate front label
Front and rear gaskets

Pressure/Vacuum Connection and Material
¼" NPT male, 316 stainless steel

Media Compatibility
All wetted parts are 316 SS, Compatible with most liquids and gases

Overpressure
2x rated pressure minimum

Burst Pressure
4x rated pressure minimum

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ARM760B, ARM760BBL ARM760AD, ARM760ADBL

Falcon ARM Absolute Reference Manometers

Description

The **Falcon ARM760AD** and **ARM760ADBL** models are designed for applications where a continuous display of vacuum is required. This makes it ideal for monitoring vacuum systems and pumps.

The **Falcon ARM760B** and **ARM760BBL** models are designed for portable applications such as monitoring portable vacuum pumps or for vacuum packaging applications.

Installation and Precautions

Install or remove gauge using a wrench on the hex fitting only. Do not attempt to tighten by turning housing or any other part 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.

NEVER insert objects into the gauge port or blow out with compressed air. Permanent damage not covered by warranty will result to the sensor.

Electrical Connection ARM760AD and ARM760ADBL

The **Falcon 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.*

The **Falcon 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. These models can be used with inexpensive unregulated low voltage AC or DC power sources. 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, consult factory for wiring recommendations.

Operation ARM760AD and 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.

Operation ARM760B and ARM760BBL

When the center button is pressed, the gauge will power up and be ready to use. The gauge will stay on for 30 minutes or until the button is pushed again.

To conserve battery life, turn gauge off when not needed. This is is especially important with the **ARM760BBL** model with display backlighting. The display backlighting will not be apparent under bright lighting conditions.

Battery Replacement ARM760B and ARM760BBL

A low battery indication will be shown in the upper left-hand corner of the display when the battery voltage falls sufficiently. The battery should be replaced soon after the indicator comes on or unreliable readings may result.

Remove the 6 Phillips head screws on the back of the unit.

Carefully remove batteries from the holders by lifting up the positive end of the battery (opposite the spring). Take care not to bend or distort the battery retention springs.

DO NOT discard the old battery into fire, any other sources of extreme heat, or in any other hazardous manner. Please consult local authorities if there is any question about proper disposal.

Always replace both batteries at the same time with high quality alkaline batteries. Observe the polarity of the batteries when replacing them. The negative (flat) end of each battery should be inserted first, and should face the spring in the battery holder.

Replace the back cover, including the rubber sealing gasket.

Calibration

All Falcon gauges are factory calibrated on NIST traceable calibration equipment. No calibration is required before placing the gauge into service.

An absolute reference gauge will display atmospheric pressure if the gauge port is open to the ambient. It is normal for the reading to constantly change in response to atmospheric pressure changes.

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. 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.

Calibration intervals depend on the severity of the application, the user's quality guidelines, and calibration history of the product as established by the user. For many applications a six month or an annual calibration interval may be found to be adequate.

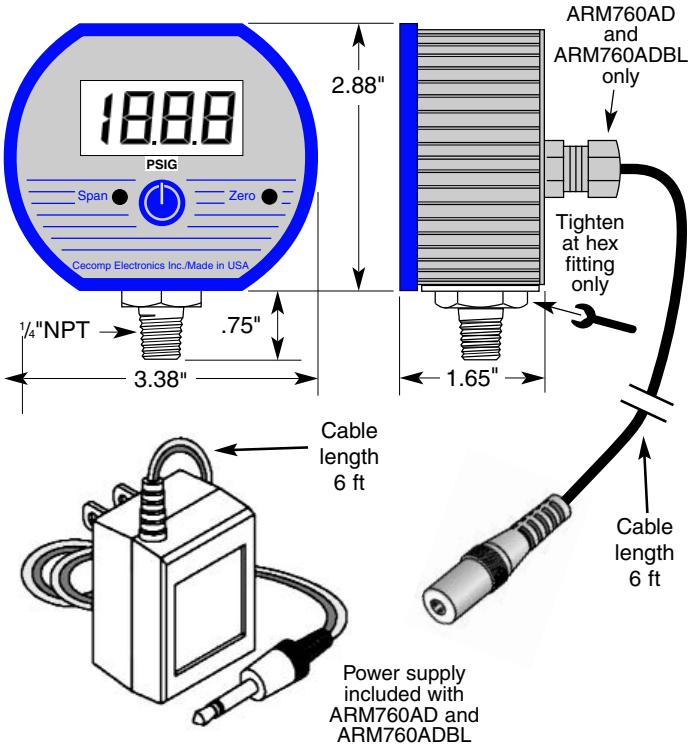
If recalibration is be required, remove the calibration plugs from the front of the gauge to access the individual zero and span controls. Allow the gauge to adjust to ambient temperature if needed.

The gauge may be re-zeroed without affecting the span calibration. The gauge must be connected to a vacuum pump with the ability to maintain 0.1 torr absolute vacuum or less. Adjust the Zero control until the gauge reads zero with the minus (–) sign occasionally flashing.

Span calibration should only be attempted if the user has access to an absolute pressure reference of known accuracy. Zero calibration must be done before span calibration. Record readings at three or more points over the range of the gauge and adjust span control to minimize error over the range of the gauge.

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

Dimensions



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Cecomp maintains a constant effort to upgrade and improve its products. Specifications are subject to change without notice. Consult factory for your specific requirements.