### Electrical Specifications

#### Ranges and Resolution

<table>
<thead>
<tr>
<th>Bold: Standard ranges, price adder for all others</th>
<th>abs: Absolute reference (atmospheric pressure to zero at full vacuum)</th>
<th>vac: Vacuum gauge, minus sign not used unless specified</th>
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Resolution is fixed as indicated in the table below.

Contact factory for engineering units not listed.

#### Accuracy (linearity, hysteresis, repeatability)

- Standard: ±0.25% of full scale ±1 least significant digit
- Optional: ±0.4% FS ±1LSD (most ranges)
- ±0.1% FS ±1LSD

#### Display (update rate, type, size)

- 3 readings per second nominal display update rate
- 316 Stainless Steel Wetted Parts

#### Controls

- Front pushbutton turns gauge on or off
- Front-accessible calibration potentiometers
- Non-interactive zero and span, ±10% range

#### Power

- Any AC source 8 to 24 VAC 50/60 Hz or any DC source 9 to 32 VDC
- Approximately 5 mA
- Approximately 80 mA

#### Storage Temperature

- –40 to 203°F (–40 to 95°C)

#### Operating Temperature

- 32 to 158°F (0 to 70°C)

#### Pressure, Vacuum, Absolute or Compound

- ADBL includes Backlit Display

### Mechanical Specifications

- **Size**
  - 3.5" W x 3.0" H x 2.0" D housing
  - Add approximately 0.75" to height for pressure fitting
  - Add approximately 1" to depth for strain relief and wire clearance

- **Weight**
  - Gauge: 9 ounces
  - Shipping weight: 1 pound

- **Housing**
  - NEMA 4X
  - UV stabilized polycarbonate/ABS case, light gray color
  - Clear polycarbonate window to protect display
  - Gasketed rear cover, six captive stainless steel screws

- **Pressure/Vacuum Connection and Material**
  - 3/8" NPT male, 316 stainless steel

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

- **Overpressure**
  - 3000 psig range and metric equivalents: 7500 psig
  - 3000 psig range and metric equivalents: 5000 psig

- **Burst Pressure**
  - 4x rated pressure minimum or 10,000 psi, whichever is less

- **±0.25% Test Gauge Accuracy**

- **316 Stainless Steel Wetted Parts**

- **Powered by 8-24 VAC or 9-32 VDC**

- **Pressure, Vacuum, Absolute or Compound**

### Environmental Specifications

- **Storage Temperature**
  - –40 to 203°F (–40 to 95°C)

- **Operating Temperature**
  - –4 to 185°F (–20 to 85°C)

- **Compensated Temperature**
  - –4 to 185°F (–20 to 85°C)
Installation and Precautions
Install or remove gauge using wrench on gauge hex fitting only.
Do not attempt to tighten by turning housing or any other part of the gauge.
Use fittings appropriate for the pressure range of the gauge.
Do not apply vacuum to gauges not designed for vacuum operation.
Use only with liquids or gases compatible with 316 stainless steel.
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.
NEVER connect the gauge wires directly to 115 VAC or permanent damage not cov-
ered by warranty will result.

Installation
The F4AD and F4ADBL can be powered by:
AC source: 8 to 24 VAC 50/60 Hz or DC source: 9 to 32 VDC

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

Ranges up to 1999 – Remove the calibration potentiometer covers on the front of
the unit to access the zero and span controls.
Gauge reference units may be re-zeroed without affecting the span calibration.
The gauge port must be open to the ambient with no pressure or vacuum applied. Adjust
the Zero control until the gauge reads zero with the minus (–) sign occasionally flash-
ing.
Span calibration should only be attempted if the user has access to a pressure refer-
ence of known accuracy. The quality of the calibration is only as good as the accura-
cy of the calibration equipment and ideally should be at least four times the gauge
accuracy. Zero calibration must be done before span calibration. Record readings at
three to five points over the range of gauge and adjust span control to minimize error
and meet specifications.

3000 psi, and 5000 psi Ranges: The calibration adjustments are internal on these
models. The procedure is available from www.cecomp.com or by calling to request
the “F16” calibration instructions.

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

Gauges can be returned to Cecomp Electronics for factory certified recalibration,
repairs and refurbishment. NIST traceability is available. Gauges can also be recal-
brated by any metrology lab with pressure calibration equipment at least four times
more accurate than the gauge.

Dimensions

Operation – Ranges up to 1999
When a supply voltage is applied, the gauge will be ready to use. If the gauge display
is off, press the center button to turn the gauge on. If the gauge is in the power-on
state and the power is disconnected, the gauge will turn on when power is reapplied.
The gauge can be left on continuously or turned off when not in use. ADBL model
backlighting will be on whenever the gauge is on. The display backlighting will not
be apparent under bright lighting conditions.

Operation – 3000 psi, 5000 psi Ranges and -400 Option
When the supply voltage is applied, the gauge will go through a power-up sequence.
The full-scale range is indicated, display segments are tested, and then the reading
and units are displayed. ADBL model backlighting will be on whenever the gauge is
on. The display backlighting will not be apparent under bright lighting conditions.

One-Touch Zero Button (Gauge reference models only)
1. This feature corrects slight drift from zero due to temperature changes.
   Absolutely certain no pressure is applied to the gauge. The gauge port should be
   exposed to normal atmospheric pressure.
2. Press and hold the pushbutton.
3. The full-scale range is indicated and the display segments are tested.
4. Continue to press the pushbutton until a a a a a is displayed and then release
   the button. This indicates that the gauge has been zeroed and a corrected zero read-
   ing is displayed until pressure/vacuum is applied.
5. If the button is released before a a a a a is displayed, the stored zero correction
   is erased and the actual reading is displayed.

Attempting to zero the gauge with pressure greater than approximately 3% of full-

scale applied will result in an error condition, and the display will alternately indicate
E or 0 and the actual measured pressure. Repeat the One-Touch Zero procedure to

correct the error condition.

Absolute reference gauges do not use the zero feature since they read atmospheric
pressure under normal conditions.

Normal Operation
Following the start-up initialization, the display indicates the pressure reading updat-
ed approximately 3 times per second.

If excessive vacuum is applied to a pressure-only gauge, the display will indicate – E
rrrr until the vacuum is released. Applying vacuum to a gauge designed for pressure
may damage the pressure sensor. If excessive pressure is applied (112.5% over
range), an out-of-range indication of F – – – or F–––– will be displayed depend-
ing on model.