DiGi MAX® Low Voltage-Powered
Min/Max Pressure Gauges

- ±0.25% Test Gauge Accuracy
- 316 Stainless Steel Wetted Parts
- Capture Minimum and Maximum Readings
- One-Touch Zero™

F16AD 0 to 60.00 psig range
F16NAD 0 to 60.00 psig range NEMA 4X

F16AD60PSIG
F16AD60PSIG

F16ADBL F16NADBL

Electrical Specifications

Ranges and Resolution
Bold: standard ranges, price adder for all others
abs: Absolute reference (atmospheric pressure to zero at full vacuum)
vac: Vacuum gauge, minus sign not used unless specified
Resolution is fixed as indicated in table below
Contact factory for engineering units not listed

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Units</th>
<th>Accuracy</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>-30.0 inHg</td>
<td>199.9 psi</td>
<td>±0.25% test</td>
<td>-</td>
</tr>
<tr>
<td>-30.0 inHg</td>
<td>100.0 psi</td>
<td>±0.4% test</td>
<td>-</td>
</tr>
<tr>
<td>-30.0 inHg</td>
<td>50.0 psi</td>
<td>±1% test</td>
<td>-</td>
</tr>
<tr>
<td>0.0 psig</td>
<td>30.0 psi</td>
<td>±1.5% test</td>
<td>-</td>
</tr>
<tr>
<td>0.0 psig</td>
<td>15.0 psi</td>
<td>±2.0% test</td>
<td>-</td>
</tr>
<tr>
<td>0.0 psig</td>
<td>5.00 psi</td>
<td>±3.0% test</td>
<td>-</td>
</tr>
</tbody>
</table>

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

Display (update rate, type, size)
3 readings per second nominal display update rate
4½ digit LCD, 0.5" digit height, lower display for engineering units
ADBL models: Red LED backlight whenever power to gauge is on

Controls and Functions
Front pushbutton turns gauge on or off and cycles through functions
Zero: Press/hold
Hi: Press/hold
Lo: Press/hold
Exit Hi/Lo: Press/hold
Clear Hi/Lo: Press/hold
Full Scale Reading

Calibration
Internal calibration pushbuttons
Non-interactive zero, span, linearity, ±10% range

Power
Any AC source of 8 to 24 VAC 50/60 Hz or any DC source of 9 to 32 VDC
AD: approx 5 mA
ADBL: approx 80 mA
Order optional WMPSK 12 VDC wall mount power supply kit for 115 VAC operation

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)

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Installation and Precautions

Install or remove gauge using wrench on 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. 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

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

Do not use a common 24 VAC transformer. These transformers can supply over 32 VAC unless they are loaded to 80% of rated capacity. Since the gauge current is only in the milliamp range, the overvoltage may result in damage not covered by warranty. The F16AD, F16NAD, F16ADBL, and F16NADBL can be powered by AC source: 8 to 24 VAC 50/60 Hz or DC source: 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 recalibration is needed, and no jumpers need to be moved to use either AC or DC power within the specified range. No polarity needs to be observed when connecting a DC supply. The gauges can be used with inexpensive unregulated low voltage AC or DC power sources in applications requiring a continuous pressure display.

After the gauge is installed, route the wires away from heat sources and moving equipment and connect the low voltage power supply to the gauge cable. Lastly connect the low voltage power supply to an appropriate power source. Make sure 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 multiple gauges from the same power supply, consult the factory for wiring recommendations.

Operation

When a supply voltage is applied, the gauge will display the gauge range, test all LCD segments, then display the actual pressure reading updated approximately 3 times per second along with the units. If excessive vacuum is applied to a pressure-only gauge, the display will indicate – E r – 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 I – – – – or I – – – – – – will be displayed depending on model.

Display backlighting on ADBL models is on whenever the gauge has power. The display backlighting will not be apparent under bright lighting conditions.

One-Touch Zero – This applies only to gauge reference models. Absolute reference gauges do not use the zero feature since they read atmospheric pressure under normal conditions.

1. Be sure the gauge port is exposed to normal atmospheric pressure and no pressure is applied. The zeroing function is only activated by following this sequence and the stored zero correction is erased when the gauge power is removed.
2. Press and hold the pushbutton until 0 0 0 0 is displayed and then release the button.
3. This indicates that the gauge has been zeroed and the actual pressure is then displayed with a small correction factor for the zero offset.

Reset – To clear the stored zero correction and the min and max readings press and hold the pushbutton until the display indicates E r for about 5 seconds total and then release. The gauge returns to the normal mode and displays the current reading.

Minimum and Maximum Readings

Minimum and maximum readings are continuously stored and updated whenever gauge is on. The stored readings can be manually cleared if desired. The HI and LO memory is also cleared whenever the gauge is off.

Press and hold the pushbutton for about 1 second until HI is displayed. The display alternates between HI and the maximum stored value.

Press and hold the pushbutton again for about 1 second until LO is displayed. The display alternates between LO and the minimum stored value.

Press and hold the pushbutton again for about 1 second until $P$ is displayed. The HI and LO memory is not erased and the gauge returns to normal operation with the display indicating the current pressure.

While in the HI or LO mode, the min/max memory can be reset. Press and continue to hold the pushbutton until the display indicates E r (about 3 seconds total) and then release the pushbutton. Both HI and LO values are cleared and the gauge returns to normal mode and displays the current pressure.

Calibration

F16-series gauges use internal controls for calibration. The procedure is available online or by calling to request the F16 calibration instructions. Gauges can be recalibrated by any metrology lab with pressure calibration equipment at least 4 times more accurate than the gauge. Gauges may also be returned for factory recalibration and refurbishment. NIST traceability is available.

Dimensions

![Diagram of F16AD, F16NAD, F16ADBL, F16NADBL dimensions]

Part Numbers

<table>
<thead>
<tr>
<th>Model range units reference</th>
<th>F16AD, F16ADBL, F16NAD, F16NADBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range (see table)</td>
<td></td>
</tr>
<tr>
<td>Units (see table)</td>
<td></td>
</tr>
<tr>
<td>Reference (see table for availability)</td>
<td>G = Gauge, A = Absolute, VAC = Vacuum</td>
</tr>
</tbody>
</table>

Example: F16AD100PSIG
F16AD, Low Voltage-Powered, 100.0 psig

Unit Abbreviations

oz/in² = ZIN
inH₂O = INH₂O
ftH₂O = FTH₂O
mmH₂O = MMH₂O
kg/cm² = KGCM
g/cm² = GMC
cmH₂O = CMH₂O

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