### Digi MAX® Battery-Powered Min/Max Pressure Gauges

#### F16B
- Battery Powered

#### F16NB
- NEMA 4X, Battery Powered

#### F16BBL
- Battery Powered, Backlit Display

#### F16NBBL
- NEMA 4X, Battery Powered, Backlit Display

### 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>Ranges and Resolution</th>
<th>0 to 60.00 psig</th>
<th>0 to 1500 psig</th>
<th>0 to 3000 psig</th>
<th>0 to 5000 psig</th>
</tr>
</thead>
<tbody>
<tr>
<td>±0.25% FS</td>
<td>±0.1% FS</td>
<td>±0.1% FS</td>
<td>±0.1% FS</td>
<td>±0.1% FS</td>
</tr>
<tr>
<td>±10% range NEMA 4X</td>
<td>±10% range NEMA 4X</td>
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<td>±10% range NEMA 4X</td>
<td>±10% range NEMA 4X</td>
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### Mechanical Specifications

- **Size:** 3.88” W x 2.88” H x 1.65” D housing
- **F16N:** 3.5” W x 3.0” H x 2.0” D housing
- **Add:** approximately 0.75” to height for pressure fitting

### 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)

### Controls & Functions

- **Front pushbutton turns gauge on or off and cycles through functions**
- **BBL press button:** to activate 1 minute backlighting when gauge is on.

### Calibration

- Internal calibration pushbuttons, non-interactive zero, span, & linearity, ±10% range

### Auto Shutoff

- 5 minutes standard (-5), factory settable to on/off (-ON) or specified custom time

### Batteries, Battery Life, Low Battery Indication

- **B:** 2 AA alkaline, approx. 2000 hours
- **BBL:** 2 AA alkaline, approx. 150 to 1500 hrs depending on backlight usage
- **Low battery symbol on display when batteries must be replaced**

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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.

Power-Up
1. Press and hold the pushbutton for approximately 1 second.
2. The full-scale range is indicated and the display segments are tested.
3. The actual pressure and units are displayed.

Power-Up With One-Touch Zero (Gauge reference models only)
1. Be sure the gauge port is exposed to normal atmospheric pressure and no pressure is applied. The zeroing function is only activated at each power-up and the stored zero correction is erased when the gauge is shut off.
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 is displayed and then release the button. This indicates that the gauge has been zeroed.
5. The actual pressure is displayed.

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 RP (Applied Pressure) 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  (about 3 seconds total) and then release the pushbutton. Both HI and LO values are cleared and the gauge returns to the normal mode and displays the current pressure.

Display Backlighting (BBL models only)
Display backlighting can be turned on by momentarily pressing the button whenever the gauge is on. The backlighting will turn on for one minute and then automatically shut off. This also restarts the auto shutoff timer. The display backlighting will not be apparent under bright lighting conditions.

Shut-Down
To shut off the gauge manually at any time, press and hold the pushbutton until the display indicates OFF (about 5 seconds) and then release.

For gauges with auto shutoff, the display indicates OFF five seconds prior to auto shutoff. The pushbutton can be pressed to keep the gauge on. The auto shutoff and backlight (if equipped) timers are reset whenever the pushbutton is pressed and released.

If the gauge was ordered without auto shutoff (-ON option) it will stay on until manually shut off or until the batteries are depleted. Turn gauge off when not in use to conserve battery life.

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.

Battery Replacement
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.

1. Remove the 6 Phillips head screws on the back of the unit.
2. Remove batteries by lifting up the positive end of the battery (opposite the spring) taking care not to bend the battery holder spring.
3. Discard old batteries properly. DO NOT discard into fire, sources of extreme heat, or in any other hazardous manner.
4. Always replace both batteries at the same time with high quality alkaline batteries.
5. Install batteries with correct orientation. The negative (flat) end of each battery should be inserted first facing the battery holder spring.
6. Replace the back cover, including the rubber sealing gasket.

Part Numbers

<table>
<thead>
<tr>
<th>Model range units reference - shutoff</th>
<th>Unit Abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>F16B, F16BBL</td>
<td>oz/in² = ZIN</td>
</tr>
<tr>
<td>F16NB, F16NBBL</td>
<td>inH₂O = INH₂O</td>
</tr>
<tr>
<td>Reference (see table for availability)</td>
<td>mmH₂O = MMH₂O</td>
</tr>
<tr>
<td>G = Gauge, A = Absolute, VAC = Vacuum</td>
<td>kg/cm² = KGCM</td>
</tr>
<tr>
<td>Auto shut off time</td>
<td>cmH₂O = CMH₂O</td>
</tr>
<tr>
<td>-5 5 minutes (standard) or specify time in minutes</td>
<td></td>
</tr>
<tr>
<td>-xH Specify time in Hours</td>
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<tr>
<td>-ON On/Off via pushbutton, no auto shutoff</td>
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</tr>
</tbody>
</table>

Example: F16B100PSIG-10
F16, Battery powered, 100.0 psig, 10 minute shutoff

Dimensions

Calibration

Pressure
www.mod-tronic.com