Digital Borehole Survey Tool

- **Single-Shot, Multishot, or Wireline Operation – It’s your choice**
  Every M15 tool can operate in single-shot, multishot, or wireline mode. In multishot mode, as many as 7200 data stations can be recorded without any electrical connection to the instrument (uses easily available AA batteries). In wireline mode, a two conductor cable connects the M15 to a computer that displays survey results in real-time. In any mode, you can choose where and how often you want to stop and take readings.

- **Simple to operate**
  M15 tools are very simple to operate. No special training is required and drill crews can operate the units.

- **Instant Results**
  M15 tools are completely digital, meaning that survey results are available immediately upon recovery. Digital data also mean no more data entry errors. Menu-driven software provided with the M15 produces data files suitable for loading into spreadsheets and popular data-visualization software.

- **Any Direction**
  M15 tools can operate in any orientation: pump then, run them on an overshot, add your own customized sub – it’s your choice.

- **No more Chemicals – No more films!**
  M15 tools store your data in non-volatile memory. Even if the batteries run down or you put the unit away for the season, your data is safe.

- **An Industry First: Through-the bit AQ Surveys**
  With a diameter of only 25.4mm, the M15 is the first tool to offer omni-directional, digital through-the-bit borehole surveys in AQ® drill rod. The M15 can also be used in narrow blasting or geotech holes.

- **Magnetic Diagnostics**
  Unlike photographic or mechanical instruments, M15 tools give you diagnostic information on the strength and direction of the local magnetic field. These parameters can be used to determine whether the azimuth is trust-worthy - with the old tools, all you could do was trust the number.

- **Ten years proven**
  Reliable and accurate. The M15 borehole inclinometer uses data from a miniature triaxial magnetometer and a triaxial accelerometer to determine the instrument orientation in space.

- **Rugged and Reliable**
  Worried about delicate computers at your drill site? The M15 tool is operated using the supplied Palm® PDA (e.g., the Meazura™ Palm® which is waterproof to IP67 standards). Ruggedized laptops may also be used.
SPECIFICATIONS

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Type</th>
<th>Range</th>
<th>Accuracy</th>
<th>Shock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclination</td>
<td>Triaxial</td>
<td>360° (any orientation)</td>
<td>±0.1°</td>
<td>6000g</td>
</tr>
<tr>
<td>Magnetometer</td>
<td>Triaxial</td>
<td>100 000 Nt</td>
<td>±0.5°</td>
<td>N/A</td>
</tr>
<tr>
<td>Temperature</td>
<td>Solid State</td>
<td>-30°C to +85°C</td>
<td>±1°C</td>
<td>N/A</td>
</tr>
</tbody>
</table>

DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>Diameter:</th>
<th>Length:</th>
<th>Weight:</th>
<th>Pressure rating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare Instrument</td>
<td>25.4 mm (1.00&quot;)</td>
<td>1.16 m (45.6&quot;)</td>
<td>1.9 kg (4.2 lbs)</td>
<td>300 m (H₂O)</td>
</tr>
<tr>
<td>In pressure barrel</td>
<td>33.4 mm (1.315&quot;)</td>
<td>1.88 m (73.8&quot;)</td>
<td>8.6 kg (19 lbs)</td>
<td>3500 m (H₂O)</td>
</tr>
</tbody>
</table>

Run time: 7200 data points (memory limited) or 16 hours at shortest sampling interval
Show interval: 5 seconds minimum
Power: 6 x AA field-replaceable alkaline batteries
Upgrades: Firmware field-upgradeable; no-charge software updates
Temperature range: -30°C to +85°C
Interface: Serial and/or IrDa®

** Specifications are subject to change without prior notice. **

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