With over 35 years of experience in oil and gas production level instrumentation, ABB has solutions to the most challenging level applications. Both contact and non-contact technologies are employed in oil and gas production for on and offshore level measurement. These include guided wave radar transmitters, magnetic level gauges, magnetostrictive level transmitters, laser transmitters and a variety of point level technologies. Accurate level measurement is critical in the Oil & Gas production field. ABB has the knowledge and products to keep production on line and safe for personnel and the environment.
Offshore Oil Production Diagram

Legend

P
C
NCC

Non-Contact Continuous Level Measurement
## Point Level Measurement

<table>
<thead>
<tr>
<th>Product</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RS85 Vibrating Level Switch</strong></td>
<td>- Detects at variety of liquid levels</td>
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<tr>
<td></td>
<td>- Special alloy sensors</td>
</tr>
<tr>
<td></td>
<td>- Field selectable parameters with external magnet or internal push buttons (fail safe, density)</td>
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<td></td>
<td>- Extended probe lengths to 120” (3048 mm)</td>
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<tr>
<td><strong>MS50 Multi-Point Level Switch</strong></td>
<td>- Up to six SPDT switches per unit (NO and NC contacts)</td>
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<tr>
<td></td>
<td>- Interface level capability</td>
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<td></td>
<td>- Trip points adjustable without removing vessel from service</td>
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<tr>
<td></td>
<td>- Vibration resistant (Multi-float option only)</td>
</tr>
<tr>
<td></td>
<td>- Suitable for high temperature applications</td>
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<tr>
<td></td>
<td>- 316L stainless steel wetted parts standard</td>
</tr>
<tr>
<td><strong>TX Thermal Dispersion Switch</strong></td>
<td>- One switch can be configured for either gas or liquid flow, liquid level, interface level or temperature</td>
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<tr>
<td></td>
<td>- Explosion proof, no moving parts</td>
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<tr>
<td></td>
<td>- Temperature range of -320°F to 900°F (-195°C to 482°C)</td>
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<tr>
<td></td>
<td>- Pressure to 10,000 psig (689 bar)</td>
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<tr>
<td></td>
<td>- 316L stainless steel all welded construction standard</td>
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<tr>
<td><strong>LS Series Mechanical Level Switch</strong></td>
<td>- One step switch point adjustment</td>
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<td></td>
<td>- Precision fabricated floats and displacers</td>
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<td></td>
<td>- Compact switching mechanism eliminates bulky housing and traditional bias springs</td>
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<tr>
<td></td>
<td>- Easily retrofitted to most competitor models</td>
</tr>
<tr>
<td><strong>MS41 Switch</strong></td>
<td>- Use with KM26 Magnetic Level Gauge or LS Cage Level Switch</td>
</tr>
<tr>
<td></td>
<td>- Hazardous area rating: FM approved; CSA and ATEX Certified</td>
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<td></td>
<td>- Enclosure: stainless steel, dual compartment, hermetically sealed, explosion-proof; NEMA 4x/IP66; ½” FNPT</td>
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<tr>
<td></td>
<td>- Switching mechanism: cam driven, snap-action; AC: 10 amp DC; 2.6 amp; min process temp -320°F (-195°C) with option and max process temp 300°F (149°C), 1000°F (538°C) with IP option; 15/16”, DPDT</td>
</tr>
<tr>
<td></td>
<td>- For high-temperature, vibration and high-corrosive applications</td>
</tr>
<tr>
<td>Product</td>
<td>Features</td>
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</tbody>
</table>
| MT5000/MTS100 Guided Wave Radar Transmitters | - Radar signals travel along the waveguide - eliminates false echoes  
- High signal strength with low power consumption  
- The MT5000 provides reliable level measurement over varied process conditions.  
- Distance 2 to 217 ft. (609 mm to 66.1 m)  
- True level measurement regardless of temperature and pressure changes  
- SIL 2/3 Certified to IEC 61508 |
| AT100 Magnetostrictive Level Transmitters | - High accuracy: .01% of full scale  
- Loop powered to 75 ft. (22.86 m) probe length  
- Total and/or interface level measurement  
- Pressure to 2400 psig (165.47 barg), Std. 1800 psig (124.1 bar)  
- Temperature range: -320 to 800°F (-196 to 427°C)  
- SIL 2/3 Certified to IEC 61508 |
| KM26 Magnetic Level Gauge with AT200 Magnetostrictive Level Transmitter | - Highly visible level indication with no process fluid in contact with the glass  
- All construction in-house by code certified welders  
- Float designed and weighted for maximum accuracy  
- Transmitter and switch options, which can be installed, adjusted and maintained with no process interruption  
- Safe for corrosive, flammable, toxic, high temperature and high pressure applications  
- SIL 2/3 Certified to IEC 61508 |
| MagWave Dual Chamber Level System | - Redundant level measurement: Guided Wave Radar Transmitters and Magnetostrictive Transmitters with magnetic level gauge  
- Low cost of ownership  
- 5 year warranty  
- Highly visible indication  
- Variety of chamber materials  
- Multiple chamber styles to your custom requirements  
- Pressure to 5000 psi (344 bar) |
## Continuous Level Measurement

<table>
<thead>
<tr>
<th>Product</th>
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</table>
| AT500 Magnetostrictive Level Transmitter | - Can be used in mud pits and other utility applications  
- High resolution 4-20 mA output - no signal conditioner required  
- Zero and span setpoints adjust digitally  
- Pressures to 1800 psig (124.1 barg)  
- Calibrates without opening enclosure  
- Economical measurement solution |
| AT200 as a Valve Positioner  | - High accuracy .01 % of full scale with patented magnetostrictive sensing technology  
- Microprocessor-based  
- Never requires recalibration  
- Field replaceable module |

## Non-Contact Continuous Level Measurement

<table>
<thead>
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</table>
| LM80/LM200 Laser Level Transmitters | - The LM80/LM200 lasers are robust laser transmitters that can accurately measure level, distance and position over long ranges in extreme environments.  
- LM80’s long range is to 200 ft./60 m  
- LM200’s long range is to 500 ft. / 150 m  
- No beam divergence = no false echoes  
- Measure surface at any angle with narrow beam |
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