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# Fluid Moisture Sensor – iCountMS Range

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Part # **MS2202410**



The iCountMS Range is an online moisture sensor that allows for continuous monitoring of relative humidity (moisture content) in hydraulic and lubricating fluid circuits. Three models available with maximum allowable working pressures up to 420 bar.

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## Technical Specifications

<p><b>Brand:</b> Parker</p> <p><b>Fluid Type:</b> Petroleum, Synthetic Oils</p> <p><b>Options:</b> Programmable</p> <p><b>Division:</b> Hydraulic &amp; Industrial Process Filtration Division EMEA</p> <p><b>Port Size:</b> 1/4"</p> <p><b>Industry:</b> Agriculture, Construction, Oil and Gas, Power Generation, Marine, Mining, Forestry, Industrial Plant, Offshore</p> <p><b>Port Type:</b> NPT Taper</p> <p><b>Application:</b> Ground Support Vehicles, Pulp and Paper Plants, Marine Hydraulics, Power Transmission and Distribution Equipment, Theme Parks, Excavators, Cranes, Industrial Hydraulics</p> <p><b>Signal Output:</b> 0-5 Vdc</p> <p><b>Technology:</b> Hydraulics, Filtration</p> <p><b>Product Type:</b> Condition Monitor</p> <p><b>Product Series:</b> iCountMS</p> <p><b>Product Style:</b> Moisture Sensor</p> <p><b>Operating Pressure:</b> 6000 psi, 420 bar</p> <p><b>Operating Temperature:</b> -40 to 185 °F, -40 to 85 °C</p> <p><b>Maximum Fluid Temperature:</b> 85 °C</p>	<p><b>Minimum Temperature:</b> -40 °C</p> <p><b>Sensing Method:</b> Relative Humidity RH cell %</p> <p><b>Accuracy:</b> +/- 5 %</p> <p><b>Electrical Requirements:</b> 8 to 30 VDC</p> <p><b>Specifications Met:</b> CE Certification</p> <p><b>Ingress Protection Rating:</b> IP68, IP67</p> <p><b>Materials of Construction:</b> Stainless Steel 303</p> <p><b>Seal Material:</b> Fluorocarbon, Perfluoroelastomer</p> <p><b>Body Material:</b> Stainless Steel 303</p> <p><b>For Fluid Type:</b> Petroleum, Synthetic Oils, Water/Oil emulsions</p> <p><b>Weight:</b> 300 g</p> <p><b>Height:</b> 50 mm</p> <p><b>Length:</b> 106 mm</p> <p><b>Width:</b> 50 mm</p> <p><b>Diameter:</b> 50 mm</p> <p><b>Connection Size:</b> M12X1 - 8 way</p>
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## Item Information



Levels of moisture in hydraulic, gear, and lubricating oils is crucial to the performance and reliability of equipment and machinery. It can often be observed with the naked eye, unsaturated fluids with high moisture levels often present a significant risk to operators, as they are undetectable without the use of a sensor. In such cases, dissolved water can react with oil additives, creating corrosive by-products that cause damage to critical system components, such as pumps, servos, and valves.

[Home](#)  
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The iCountMS Range is an inline moisture sensor from Parker designed to help operators protect their equipment and machinery by offering fast, reliable, and continuous monitoring of relative humidity levels in hydrocarbon fluids. The MS transducer type technology was specially designed for preventative maintenance in mind and offers end-users significant advantages over alternative forms of water content reporting (i.e. PPM). By providing the capability to determine moisture level in fluids in real-time, the iCountMS Range allows owners to implement preventative maintenance measures that help ensure performance and reliability of their equipment and machinery, thereby extending operational life and reducing costs.

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Three iCountMS Range moisture sensor models are available to meet the unique requirements of different market segments. These include:

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• [iCount MS150 – Low pressure model designed for suction and/or return line applications. Maximum allowable operating pressure: 10 bar \(145 psi\).](#)

• iCount MS200 – Programmable sensor monitoring and reporting relative humidity / moisture content. Maximum allowable operating pressure: 420 bar (6000 psi).

• iCount MS300 - Programmable sensor monitoring and reporting relative humidity / moisture content. ATEX certified (intrinsically safe) for use in potentially explosive atmospheres (Zone 0) requiring the use of 1G equipment, including offshore and mining applications. Maximum allowable operating pressure: 420 bar (6000 psi).

Additional documentation for the iCountMS Range can be found under "Related Documentation".

**Benefits:**

- Provides field service personnel with the capability to quickly and easily measure moisture levels in hydraulic fluid or lubricating oil. Fluids with high water content can then be replaced and/or cleansed, leading to improved system performance and efficiency
- Moisture sensor does not obstruct flow and can be utilized while machinery is in operation, ensuring system uptime
- Sensing cell technology uses a laser-trimmed thermoset polymer for capacitive sensing that is capable of absorbing water molecules due to its micro-porous structure
- Uses a thermistor for temperature compensation correction. Offering total confidence in reporting the % relative humidity (RH) over the sensors temperature range
- A purpose designed tee adaptor allows for easy installation into any existing fluid system

**Features:**

- Compatible with mineral oils and petroleum-based fluids (contact Parker for more information on compatibility with corrosive fluids)
- Easy-to-read temperature output on all models
- Purpose designed tee adaptor
- Flow-through sensor cell
- MS200 can be specified with a bench top wand offering the end-user greater flexibility (wand not available with MS150 or MS300)
- Maximum allowable working pressure: 420bar (6000 psi) for MS200 and MS300, 10 bar (145 psi) for MS150



**CAD Drawings + Files**



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