KPM KC7 Microwave Consistency Transmitter
KPM Products | Process Measurements

True-phase method measurement
The KC/7 has reliable and well tested True-phase measurement technology of microwave signal utilizing phase vector modulation with a microwave wide band sweep. Therefore KC/7 has the highest measurement accuracy on the market today.

The antennas have been designed to avoid microwave reflections in pipe and cause additional pressure in measurement point.

Accurate consistency measurement
The KC/7 is unaffected by variations in pulp species, fiber length, freeness and in process conditions, unlike optical and shear force technologies.

The KC/7 measures fibers and fillers for total consistency, making it ideal to measure mixed pulps. KC/7 has single point calibration.

Remote display unit
Remote electronics offers large display for easy operation and set-up. Intuitive, menu-driven interface features simple set-up, calibration and troubleshooting functions.

Two versions for wide range of installation options
Flow-through version is available in sizes 50-300mm (2”-12”). Insertion style KC/7 fits pipe size 250mm (10”) and larger.

No maintenance
The KC/7 does not need preventive maintenance; it has no wearing or moving parts at all. The Flow through models do not have measurement parts inside the pipe to be hit by foreign particles.
### Specifications

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>Microwave Consistency Transmitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output signal</td>
<td>2 x Analog outputs 4 - 20 mA + HART Foundation Fieldbus and Profbus PA with optional converter</td>
</tr>
<tr>
<td>Binary inputs</td>
<td>24 VDC, Process Stop, Grade Change (2) and Sampler Input</td>
</tr>
<tr>
<td>Binary output</td>
<td>12 – 48 VDC max 10mA, Dry Contact</td>
</tr>
<tr>
<td>Serial communication</td>
<td>USB PC-Interface, HART</td>
</tr>
<tr>
<td>Measurement range in</td>
<td>0 - 16 % Cs</td>
</tr>
<tr>
<td>Repeatability</td>
<td>0.01 %</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001 % for sizes 50 – 300 mm (3&quot; – 12&quot;) and insertion type (IT)</td>
</tr>
<tr>
<td>Installation</td>
<td>Wafer type between flanges or Sandvik NS65 mm Insertion type, Sandvik coupling</td>
</tr>
<tr>
<td>Length</td>
<td>100 mm (4&quot;) for all FT models</td>
</tr>
</tbody>
</table>

### Conductivity limits

<table>
<thead>
<tr>
<th>Insertion Type</th>
<th>50mm (2&quot;)</th>
<th>80mm (3&quot;)</th>
<th>100mm (4&quot;)</th>
<th>150mm (6&quot;)</th>
<th>200mm (8&quot;)</th>
<th>250mm (10&quot;)</th>
<th>300mm (12&quot;)</th>
<th>25mS/cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>25mS/cm</td>
<td>25mS/cm</td>
<td>20mS/cm</td>
<td>20mS/cm</td>
<td>15mS/cm</td>
<td>15mS/cm</td>
<td>15mS/cm</td>
<td>15mS/cm</td>
<td>25mS/cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process temperature</th>
<th>0 - 100 °C (32 - 212 °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process pressure</td>
<td>Pressure class PN25, Recommendation &gt;1,5 Bar (&gt;22 psi), no air</td>
</tr>
<tr>
<td>Process pH</td>
<td>2.5 – 11.5 pH</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>Sensor -20…60 °C (-4 …140 °F), Display unit -10…60 °C (-14 …140 °F),</td>
</tr>
<tr>
<td>Flow velocity</td>
<td>No effect, Insertion type max flow 5m/s (16.4 ft/s)</td>
</tr>
<tr>
<td>Materials</td>
<td>Sensor: SS 316L; Window: Ceramic, Display: Polycarbonate</td>
</tr>
<tr>
<td>Approvals</td>
<td>EMC, CE, PED (Directive 2014/68/EU, Article 13,1,(b) substances and mixtures</td>
</tr>
<tr>
<td>Enclosure class</td>
<td>Sensor IP66 (Nema 4x), Display Unit IP65 (Nema 4)</td>
</tr>
<tr>
<td>Power supply</td>
<td>86 to 264 VAC, 47 - 63Hz; 20VA</td>
</tr>
</tbody>
</table>

The information provided in this data sheet contains descriptions or characterizations of performance which may change as a result of further development of the products. Availability and technical specifications are subject to change without notice.

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