The MP4 Multipoint RTD & Thermocouple Probe is an effective lower cost solution for milder process conditions. Multiple RTD and thermocouple sensors are combined together into an overall sensor sheath. The individual sensors inside are constructed from either Teflon or fiberglass insulated wires. They will provide the same accuracy as MI built sensors, however the limiting temperature rating factor will be the wire insulation. Excess space in the sensor assembly will be take up with aluminum oxide powder.

### Common Sheath Materials

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>316/L stainless steel</td>
<td>Inconel 600</td>
</tr>
<tr>
<td>Hastelloy C</td>
<td>Consult factory for other</td>
</tr>
</tbody>
</table>

### Temperature Sensor Type

- 100Ω Pt. 385 class A (3-wire & 4-wire)
- Type K thermocouple
- Type J thermocouple
- Type T thermocouple
- Type N thermocouple

### Sensor Construction

- Low temperature (-50 to 260°C)
- High temperature (485°C)

### Sheath OD, Maximum Points & Transition Size

<table>
<thead>
<tr>
<th>Sheath OD</th>
<th>Max. Points</th>
<th>Transition OD x L</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.250&quot;</td>
<td>3</td>
<td>0.313&quot; OD x 2&quot;</td>
</tr>
<tr>
<td>0.375&quot;</td>
<td>10</td>
<td>0.500&quot; OD x 4&quot;</td>
</tr>
<tr>
<td>0.500&quot;</td>
<td>20</td>
<td>0.625&quot; OD x 4&quot;</td>
</tr>
</tbody>
</table>

### Lead Wire

- Teflon (260°C)
- Teflon /w SS braid
- Flex armour over Teflon
- Fiberglass (482°C)
- Fiberglass /w SS braid
- Flex armour over Fiberglass

### Bellows

Points are measured from transition bottom. Minimum distance between points is 1.0”.
Point location tolerance is +/- 1.0” or 0.3% of length (which ever is greater).

### Aluminum Oxide Insulation

Cross section example of a 0.375” OD sheath with 4 sensor points.

### NOTES:

1. Drawing for approval provided after receipt of order
2. Transition filled with epoxy resin 175°C maximum temperature
3. Pressure rated to sensor sheath (tubing) specifications
4. Minimum bend radius is 10x sheath OD
5. Sensors longer than 6 feet will be shipped in a coil roughly 24” - 36” OD