## Technical Information

**Model TES.03.01**

**AUTOMOTIVE Sector**

Temperature sensor for exhaust gas

### Description

Temperature sensor thermocouple type "K" for exhaust gas. Inconel 600 sheath diameter 6 mm tapered to 3,17 mm, mineral oxide insulation, kapton conductor insulation, kapton insulation sheath and outer armor in AISI 316, complete with two contacts AMP connector.

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Thermocouple “K” type hot joint insulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Number</td>
<td>1</td>
</tr>
<tr>
<td>Precision</td>
<td>Class 1 (special) according to EN60584</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-40 / +990 °C</td>
</tr>
<tr>
<td>Short Time Temperature</td>
<td>+1010 °C</td>
</tr>
</tbody>
</table>

**Sensor Sheath**

Material: INCONEL 600  
Diameter: 6,0 mm tapered to 3,17 mm  
Lenght: 75 mm  
Internal insulation: mineral oxide

* on request other length

**Process Connection**

M10x1 female fixed threaded fitting  
Material: AISI 304 flange

* on request other fitting

**Cable**

Diameter: 4,0 mm  
Lenght: 0,67 mt

* on request other length

**CONDUCTORS**

number: 2  
section: 0,50 mm2  
type: strand  
material: thermocouple “K” type insulation: kapton

Insulation sheath: kapton  
Internal sheath: none  
External amor: AISI 304

**COLOURING**

standard: ANSI  
conductors: red (+); yellow (-)  
sheath: yellow

* on request other colouring
<table>
<thead>
<tr>
<th><strong>Electrical Connection</strong></th>
<th>AMP connector</th>
</tr>
</thead>
</table>
| **Laser Marking**        | Thermo Engineering Logo  
Thermo Engineering P/N  
Customer P/N  
dd/mm/yy production |
|                          | * on request other marking |
| **Tests**                | Visual  
Dimensional  
Room temperature insulation resistance  
Electrical Continuity |
|                          | * on request other test |
| **IP Grade**             | IP65 according to UNI EN 60529 |
| **Room Temperature Insulation Resistance** | According to IEC 1515 resistance > 1Ω @ 25 °C; between the terminals and the sheath with a test voltage of 500 VDC. |
| **Respons Time**         | t<sub>50</sub>: 4 sec  
t<sub>90</sub>: 10 sec |
| **Certifications**       | Conformity Certificate  
Conformity Certificate RoHS 2002/95/CE |