NTC THERMISTORS

NTC sensors are a type of thermistor used for the control and accurate temperature monitoring of critical points in machinery and other equipment including, heat pumps, air conditioning, etc. NTC sensors have a negative coefficient. The sensor’s small dimensions render it as ideal for installation in various types of equipment and systems.

- Temperature monitoring of bearing housings and machine components
- Temperature monitoring of windings in electric motors, generators and transformers
- Resistance values 0.1 ... 1000kOhm, suitable for most applications

Typical applications
Temperature monitoring of bearing housings, machine components, heat pumps, air conditioning installations, windings in electric motors, generators, transformers, etc.

Properties
- Temperature monitoring at a low cost within a wide temperature spectrum -40° - +300°C (temperature resistance for wiring, insulation, etc. selected according to the specific application)
- Resistance values 0.1 ... 1000kOhm, suitable for most applications
- Low weight
- Short thermal time constant

Description/Function
- NTC sensors have a non-linear, negative temperature coefficient of resistance over the entire temperature range.
- Resistance values at 25°C on request for different versions (See technical data)

Packaging
- For variants request MOQ

Variants
- NTC sensors are usually ordered according to unique project-specific data and manufactured based on the amount variants available (see technical data).

The following details are only examples of the variants available. Wire lengths, mounting methods, etc., are manufactured according to customer specification.

Product information for which Carbex bears no responsibility is provided by the manufacturer.
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Technical data

(direct extract from the manufacturer’s data sheet in English)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance values at 25°C (R_{25})</td>
<td>0.1 ... 1000 (E24-Line), Decadic Stepped:</td>
<td>KΩ</td>
</tr>
<tr>
<td></td>
<td>1.0/ 1.1/ 1.2/ 1.3/ 1.5/ 1.6/ 2.0/ 2.2/ 2.4/ 2.7/ 3.0/ 3.3/ 3.6/ 3.9/ 4.3/4.7/ 5.1/ 5.6/ 6.2/ 6.8/ 7.5/ 8.2/ 9.1</td>
<td></td>
</tr>
<tr>
<td>deviation of R_{25}-value</td>
<td>1,2,3,5,10</td>
<td>%</td>
</tr>
<tr>
<td>deviation of B-value (material constant)</td>
<td>0.75 ... 5</td>
<td>%</td>
</tr>
<tr>
<td>max. power loss</td>
<td>500</td>
<td>mW</td>
</tr>
<tr>
<td>reaction time dependent on housing:</td>
<td>&lt; 1 ... 20</td>
<td>s</td>
</tr>
<tr>
<td>temperature range</td>
<td>-40 ... +300</td>
<td>°C</td>
</tr>
</tbody>
</table>

- Electrical data:

- Mechanical data:
  Type: NTC-sensor for surface mounting
  Alu-housing screw-in sensor SW 10/M4
  ring shaped cable eye for self-tapping
  sheet metal screw

  NTC-sensor for windings monitoring
  e.g.: electric motors, transformers:
  in stabilized shrink tube design

  Lead-in
  AWG 24, Cu-strand silvered, Teflon insulation,
  Standard colour: green/brown,
  Standard length: 500mm ± 1%

  Insulation Class: H
  Remarks: Special designs for liquid or gases media, in V2 A or other materials are
  manufactured on request for customers specific applications and specification.
  Resistance-temperature curves or table on request.

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