



SPECIFICATION

We hereby confirm

| | |
|--------------------|------------------------------|
| Manufactory | Schmid-M |
| Products: | <u>PTC thermistor</u> |
| Part No: | <u>SM THER MZ6-90-ES</u> |
| Customer: | <u>ATD Elektronik s.r.o.</u> |
| | <u>2021.07.23</u> |

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1. GENERAL INFORMATION

PTC thermistors acc. to DIN 44081(triple sensors acc. to DIN 44082) are used to protect electrical machines against thermal overload. Thermistors have an even steeper R/T characteristic as that defined in the DIN standard. The temperature range is from 60 to 180°C. PTC thermistor beads with different rated response temperatures can be connected in series. This permits an optimal and economic thermal protection of machines and windings with different limit temperatures.



2. TECHNICAL DATA PTC acc. To DIN 44081/082

| | PTC single | PTC triple | |
|--|------------|------------|----|
| Max. operating voltage | 30 | 30 | V |
| Rated response temperature T_k | 60-180 | 60-180 | °C |
| Tolerance of T_k | ± 5 | ± 5 | K |
| Reproducibility of T_k | ± 0,5 | ± 0,5 | K |
| Resistance R_{25} | < 100 | < 300 | Ω |
| Resistance at a temperature of $T_k - 5K$ | < 550 | < 1650 | Ω |
| Resistance at a temperature of $T_k + 5K$ | > 1330 | > 3990 | Ω |
| Resistance at a temperature of $T_k + 15K$ | > 4 | > 12 | kΩ |
| Thermal Response time T_d | < 5 | < 5 | s |
| Insulation test voltage V | AC 2.5 | AC 2.5 | kV |
| Max. operating temperature | 200 | 200 | °C |
| Max. storage temperature | 160 | 160 | °C |
| Min. storage temperature | -25 | -25 | °C |
| Weight | 2 | 3,5 | g |

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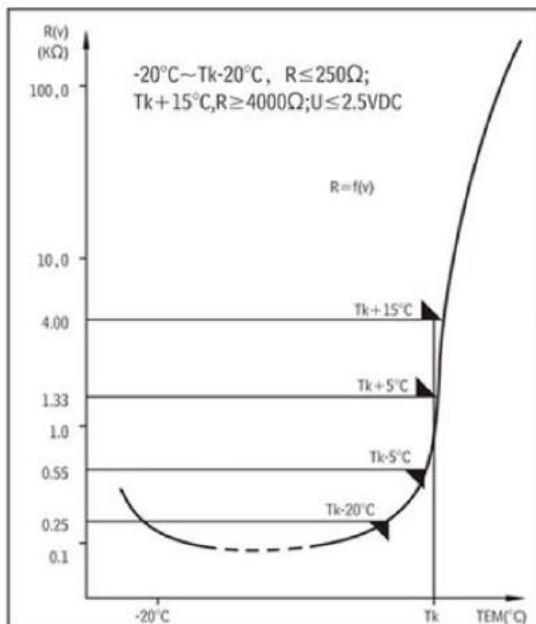
3. PTC IDENTIFICATION & PART NUMBERS



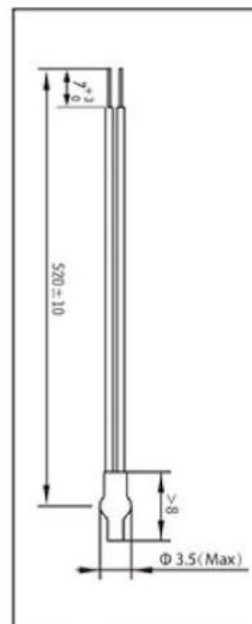
The Colour of the connection leads identifies the rated response temperature.

These are defined in DIN 44081/082

| TK(°C) | PTC DIN 44081 | PTC DIN 44082 |
|--------|-------------------|-------------------|
| 60 | SM THER MZ6-60-E | SM THER MZ6-60-D |
| 70 | SM THER MZ6-70-E | SM THER MZ6-70-D |
| 80 | SM THER MZ6-80-E | SM THER MZ6-80-D |
| 90 | SM THER MZ6-90-E | SM THER MZ6-90-D |
| 100 | SM THER MZ6-100-E | SM THER MZ6-100-D |
| 110 | SM THER MZ6-110-E | SM THER MZ6-110-D |
| 120 | SM THER MZ6-120-E | SM THER MZ6-120-D |
| 130 | SM THER MZ6-130-E | SM THER MZ6-130-D |
| 140 | SM THER MZ6-140-E | SM THER MZ6-140-D |
| 145 | SM THER MZ6-145-E | SM THER MZ6-145-D |
| 150 | SM THER MZ6-150-E | SM THER MZ6-150-D |
| 155 | SM THER MZ6-155-E | SM THER MZ6-155-D |
| 160 | SM THER MZ6-160-E | SM THER MZ6-160-D |
| 170 | SM THER MZ6-170-E | SM THER MZ6-170-D |
| 180 | SM THER MZ6-180-E | SM THER MZ6-180-D |

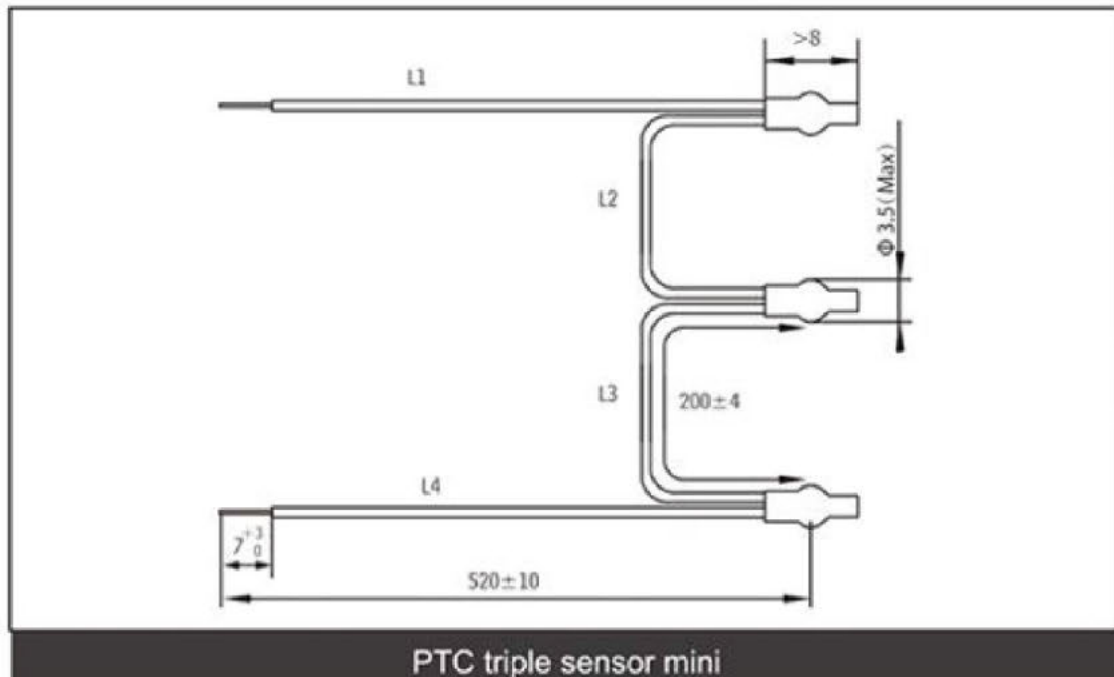


PTC characteristic curve acc. to DIN 44081/082



PTC single sensor mini

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Application

PTC thermistors are used to monitor temperature in machines and installations. The design ensures short response times and easy installation.