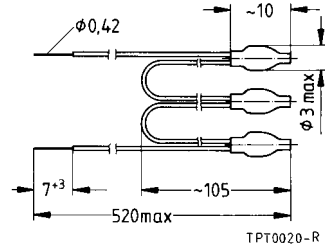


**Applications**

- Thermal protection of winding in electric motors
- Limit temperature monitoring

**Features**

- Thermistor pellets with insulating encapsulation in series connection (triple sensor)
- Low-resistance type
- Silver-plated and Teflon-insulated AWG 26 litz wires
- Characteristics for nominal threshold temperatures of 90 up to 160 °C conform with DIN 44082
- Color coding of litz wires to DIN 44082, connecting wires in yellow



Dimensions in mm

**Delivery mode**

- Bulk

**General technical data**

Max. operating voltage	$(T_A = 0 \dots 40 \text{ }^\circ\text{C})$	$V_{max}$	30	VDC
Max. measuring voltage	$(T_A - 25 \text{ K} \dots T_{NTT} + 23 \text{ K})$	$V_{meas,max}$	7,5	VDC
Rated resistance	$(V_{PTC} \leq 2,5 \text{ V})$	$R_N$	$\leq 300$	$\Omega$
Insulation test voltage		$V_{ins}$	2,5	kV AC
Thermal threshold time		$t_a$	$< 3$	s
Operating temperature range	$(V \leq V_{meas,max})$ $(V = V_{max})$	$T_{op}$	$-25/ T_{NTT} + 23$ $0/+ 40$	$^\circ\text{C}$ $^\circ\text{C}$

**Electrical specifications and ordering codes**

$T_{NTT} \pm \Delta T$ $^\circ\text{C}$	$R(T_{NTT} - \Delta T)$ $(V_{PTC} \leq 2,5 \text{ V})$ $\Omega$	$R(T_{NTT} + \Delta T)$ $(V_{PTC} \leq 2,5 \text{ V})$ $\Omega$	$R(T_{NTT} + 15 \text{ K})$ $(V_{PTC} \leq 7,5 \text{ V})$ $\Omega$	$R(T_{NTT} + 23 \text{ K})$ $(V_{PTC} \leq 2,5 \text{ V})$ $\Omega$	Ordering code
$60 \pm 5$	$\leq 1710$	$\geq 1710$	—	$\geq 30 \text{ k}$	B59300M1060A070
$70 \pm 5$	$\leq 1710$	$\geq 1710$	—	$\geq 30 \text{ k}$	B59300M1070A070
$80 \pm 5$	$\leq 1710$	$\geq 1710$	—	$\geq 30 \text{ k}$	B59300M1080A070
$90 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1090A070
$100 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1100A070
$110 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1110A070
$120 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1120A070
$130 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1130A070
$140 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1140A070
$145 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1145A070
$150 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1150A070
$155 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1155A070
$160 \pm 5$	$\leq 1650$	$\geq 3990$	$\geq 12 \text{ k}$	—	B59300M1160A070

**Electrical specifications and ordering codes**

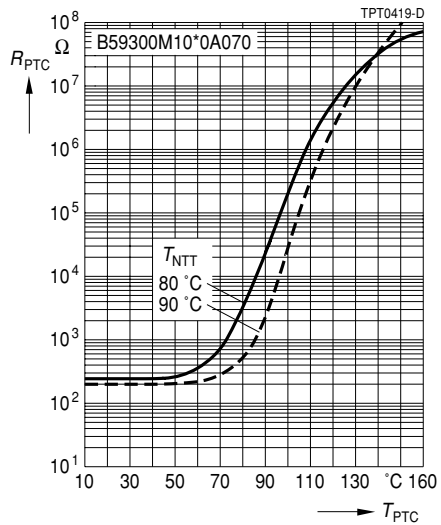
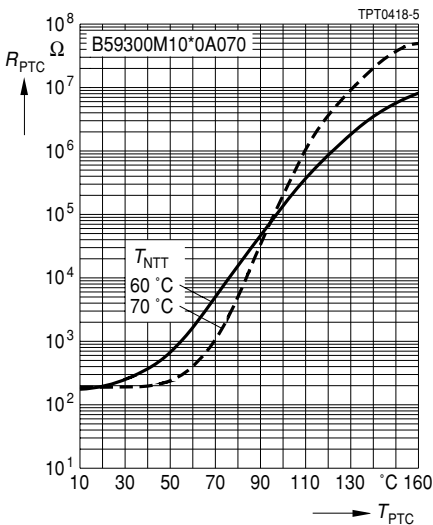
$T_{NTT} \pm \Delta T$ °C	$R(T_{NTT} - \Delta T)$ ( $V_{PTC} \leq 2,5 V$ ) Ω	$R(T_{NTT} + \Delta T)$ ( $V_{PTC} \leq 2,5 V$ ) Ω	$R(T_{NTT} + 15 K)$ ( $V_{PTC} \leq 7,5 V$ ) Ω	$R(T_{NTT} + 23 K)$ ( $V_{PTC} \leq 2,5 V$ ) Ω	Ordering code
170 ± 7	≤ 1710	≥ 1710	—	≥ 30 k	B59300M1170A070
180 ± 7	≤ 1710	≥ 1710	—	≥ 30 k	B59300M1180A070
190 ± 7	≤ 1710	≥ 1710	—	≥ 30 k	B59300M1190A070

**Color coding of litz wires (to DIN 44082)**

$T_{NTT}$	°C	Color	$T_{NTT}$	°C	Color	$T_{NTT}$	°C	Color
	60	white/grey		120	grey/grey		160	blue/red
	70	white/brown		130	blue/blue		170	white/green
	80	white/white		140	white/blue		180	white/red
	90	green/green		145	white/black		190	black/grey
	100	red/red		150	black/black			
	110	brown/brown		155	blue/black			

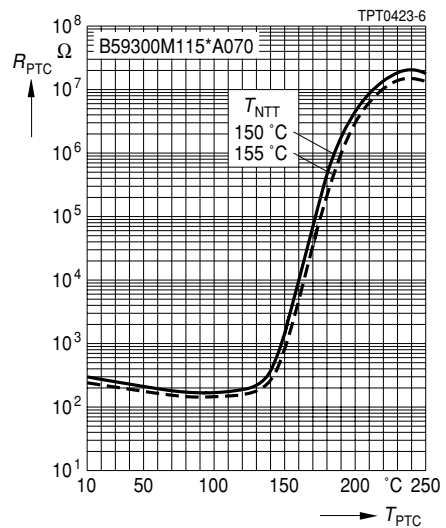
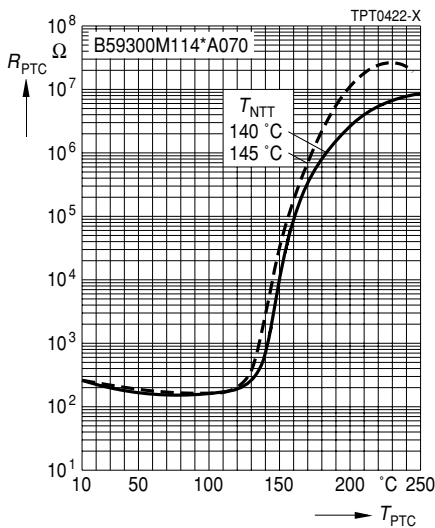
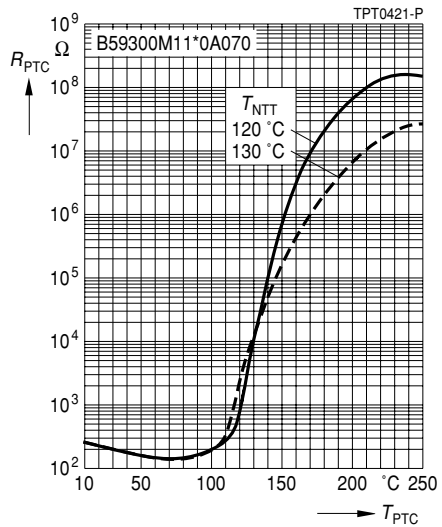
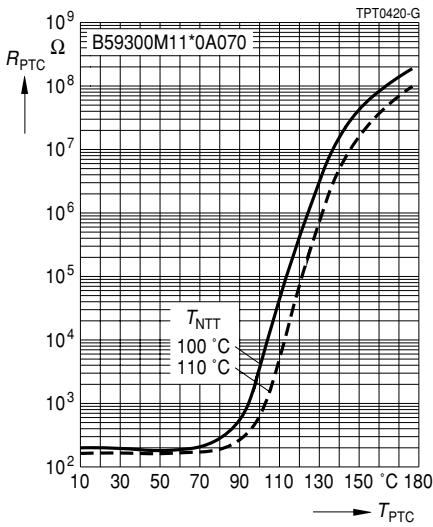
**Characteristics (typical)**

PTC resistance  $R_{PTC}$  versus PTC temperature  $T_{PTC}$   
(measured at low signal voltage)



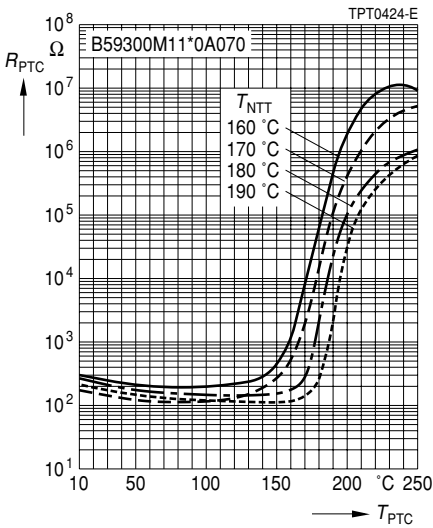
**Characteristics (typical)**

PTC resistance  $R_{PTC}$  versus PTC temperature  $T_{PTC}$   
(measured at low signal voltage)



**Characteristics (typical)**

PTC resistance  $R_{PTC}$  versus PTC temperature  $T_{PTC}$   
 (measured at low signal voltage)



**Herausgegeben von EPCOS AG**

**Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND**

**☎ ++49 89 636 09, FAX (0 89) 636-2 26 89**

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