

PTC-Temperature-Sensors  
PTC Thermistors  
Motor-PTC

Single- and Triplet- Version

**YAM**  
**YEE**



**MICROTHERM**



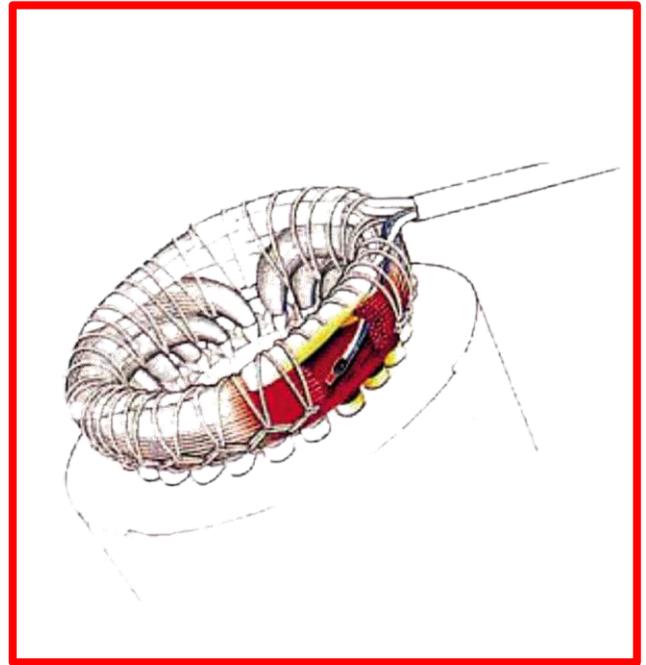
Microtherm International Cooperation

## Description

PTC-temperature sensors are used for thermal protection of electric machinery and control cabinets, especially electric motors. The structure ensures a fast response time and a simple installation. The function is obtained by a strong nonlinear PTC effect of the resistor. The usable range is  $\pm 5$  K around the nominal temperature. The evaluation is carried out by means of an electronics which detects the sudden increase in resistance and initiates a corresponding action (throttling, shutdown, etc.).

The thermistors are designated according to their nominal switch-off temperature  $T_{NAT}$ . Whereas the range below  $T_{NAT}-20$  is not defined.

Standards for single / triplet PTC thermistors are DIN 40081/40082.

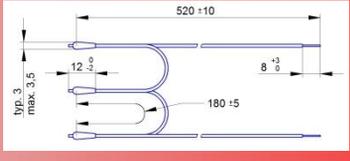
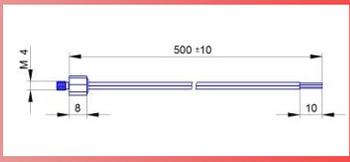


## Technical data

Description	Dimensions	Single thermistor: YAM1, EF1	Triplet thermistor: YAM3
Nominal response temperature		80 °C ... 180 °C ( add. 145 °C and 155 °C )	
Maximum allowable operating temp.		200 °C	
Maximum allowable operating voltage		25 V ( +25°C )	
Maximum allowable power dissipation		690 mW ( +25 °C )	
Resistance $R_{25}$		$\leq 100 \Omega$	$\leq 300 \Omega$
Resistance at $T_{NAT} -5$ K		$\leq 550 \Omega$	$\leq 1,650 \Omega$
Resistance at $T_{NAT} +5$ K		$\geq 1,330 \Omega$	$\geq 3,990 \Omega$
Resistance at $T_{NAT} +15$ K		$\geq 4,000 \Omega$	$\geq 12,000 \Omega$
Tolerance of $T_{NAT}$		$\pm 5$ K	$\pm 5$ K
Dielectric strength		2.5 KV AC	
Connection line		PTFE-insulated leads AWG26	
Length of connecting leads		520 mm $\pm$ 10mm	520-180-180-520 mm $\pm$ 10mm

YAM: PTC-pill with shrink tube and epoxy resin

EF1: PTC-pill with screw housing with M4- or M6-thread

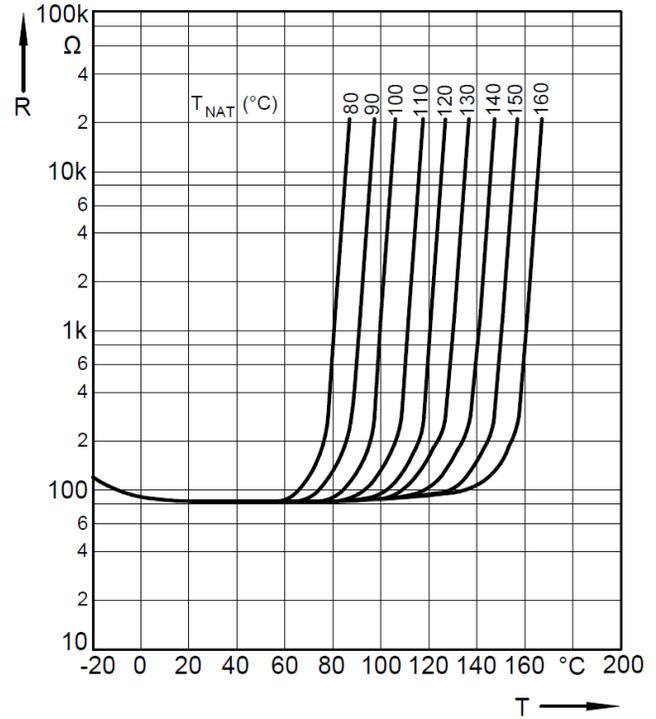
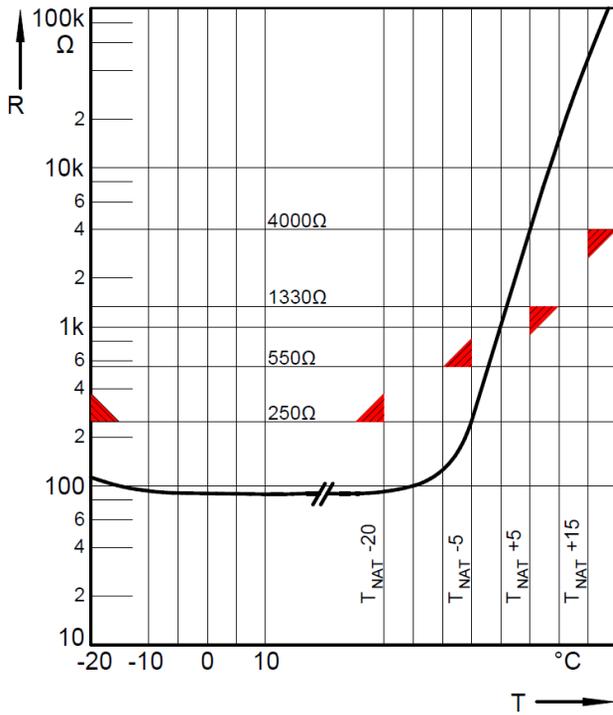
type	illustration	drawing [mm]	technical specification
YAM1			shrink tube and epoxy resin
YAM3			shrink tube and epoxy resin
EF1			screw housing with M4- oder M6-thread

Version

type	T <sub>NAT</sub> °C	YAM1, EF1: single-PTC standard ID-color	YAM3: triple-PTC standard ID-color
YAM EF1	80	white-white	white-yellow-yellow-white
	90	green-green	green-yellow-yellow-grün
	100	red-red	red-yellow-yellow-red
	110	brown-brown	brown-yellow-yellow-brown
	120	gray-gray	gray-yellow-yellow-gray
	130	blue-blue	blue-yellow-yellow-blue
	140	white-blue	white-yellow-yellow-blue
	145	white-black	white-yellow-yellow-black
	150	black-black	black-yellow-yellow-black
	155	blue-black	blue-yellow-yellow-black
	160	blue-red	blue-yellow-yellow-red
	170	white-green	white-yellow-yellow-green
	180	red-white	red-yellow-yellow-white

Identification color (leads)

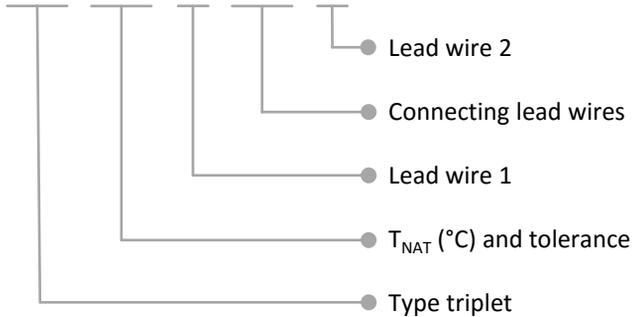
# Temperature-resistance curve



# Ordering

## Ordering example

**YAM3 120 05 520 180 180 520**



Also versions in twins are possible.  
Deviations from the standard generally on request.

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