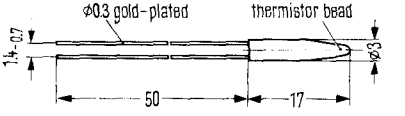
Negative temperature coefficient thermistor, measuring-type

Thermistors K 17 are temperature probes and are suitable for the solution of measuring and control problems. The thermistor bead sealed into a glass-case displays low thermal inertia. The leads are gold-plated. Special production and aging processes ensure high reliability. The type designation code and the resistance value R_{20} are stamped on the case. Thermistors K 17/4 kΩ, K 17/10 kΩ and K 17/100 kΩ can be supplied as pairs, if desired.

Type	Order number
K 17/10%/2.5 K	Q63017-K252-K
K 17/10%/4 K	Q63017-K402-K
K 17/10%/4 K-P1	Q63017-K402-K1
K 17/10%/4 K-P2	Q63017-K402-K2
K 17/10%/10 K	Q63017-K103-K
K 17/10%/10 K-P1	Q63017-K103-K1
K 17/10%/10 K-P2	Q63017-K103-K2
K 17/10%/100 K-P1	Q63017-K104-K1
K 17/10%/100 K-P2	Q63017-K104-K2
K 17/10%/100 K	Q63017-K104-K
K 17/20%/2.5 K	Q63017-K252-M
K 17/20%/4 K	Q63017-K402-M
K 17/20%/4 K-P1	Q63017-K402-M1
K 17/20%/4 K-P2	Q63017-K402-M2

Type	Order number
K 17/20%/10 K	Q63017-K103-M
K 17/20%/10 K-P1	Q63017-K103-M1
K 17/20%/10 K-P2	Q63017-K103-M2
K 17/20%/100 K	Q63017-K104-M
K 17/20%/100 K-P1	Q63017-K104-M1
K 17/20%/100 K-P2	Q63017-K104-M2



Weight approx. 0.25 g Dimensions in mm

Maximum ratings

		K 17	
Maximum continuous operating temperature	T	+250	°C
Maximum continuous load (T_{amb} = 20 °C)	P_{tot}	160	mW

Characteristics (T_{amb} = 20 °C)

Thermal conductivity	$G_{th\,amb}$	0.8	mW/K
Thermal cooling time constant	τ_{th}	3	s
Tolerance of cold-state resistance [2])	R_{20}-Tol.	±20 (b)	%
		±10 (c)	%
Tolerance of B-value	B-Tol.	±5	%

Delivery program

Nominal values of cold-state resistance R_{20}, R_{25}, B-value and (negative) temperature coefficient TC at 20 °C.

	K 17				
R_{20}	2.5 k	4 k	10 k	100 k	Ω
R_{25}	2 k	3.3 k	8.2 k	80 k	Ω
B [1])	3420	3420	3420	3950	JK/J
TC	4.0	4.0	4.0	4.6	%/K

Types with different electrical values and tolerances of R_{20} on request.

[1]) Determined by measuring at 20 °C and 100 °C
[2]) Thermistors labelled with "b" = ±20%, "c" = ±10% and "h" = ±30%

Pairing conditions for type K 17 – Pairs:

Pairing 1

$\frac{\Delta R}{R_M} \leqq \pm 2.5\%$; $\frac{\Delta B}{B_M} \leqq \pm 2\%$

Designation for ordering:
K 17/20%/4k-P1,
Q63017-K402-M1

Pairing 2

$\frac{\Delta R}{R_M} \leqq \pm 1.5\%$; $\frac{\Delta B}{B_M} \leqq \pm 1\%$

Designation for ordering:
K 17/20%/4k-P2,
Q63017-K402-M2

R_M = Average cold resistance value
B_M = Average B-value
ΔR = R_{20}-difference of the pair
ΔB = B-value difference of the pair

Thermistor resistance as a function of the thermistor temperature $R_{Th} = f(T_{Th})$
referred to the nominal values at 20 °C indicated in the table