6.OPERATING INSTRUCTION

The electric motor of different insulation rank selects the different Tk temperature thermistor, its parameter is shown at following table (only reference).

Electric motor insulation rank	Limited Working Temperature	Thermistor (TK)
Y	90	80~85℃
A	105	95~100℃
E	120	110~115℃
B	130	120~125℃
F	155	145~150℃
H	180	170~175℃
C	above 180	above 180

Notes for Mounting

1. Insert wire in the winding wire slot of the motor, make it tidy, and then mount the PTC thermistor in the coil of the motor (as shown in figure). 2. While mounting, do not hard beat or press the sensing area of the thermistor for fear that the internal precise structure of the product might be damaged. 3. While mounting, do not extremely hard pull the outgoing line of the product for fear that the outgoing line might be pulled apart. 4. Before connecting, read the technical information about PTC temperature control module (the former GRB motor overheat protector) for fear that the thermistor might be damaged. 5. Securely connect the outgoing line in the specified connection position.

Mz6 Type PTC–Thermistors For Electric Motor Protection

Patent number: ZL 01 2 48476.8 CE File No:TCCE01085



Mz6 type

1.SUMMARIZATION

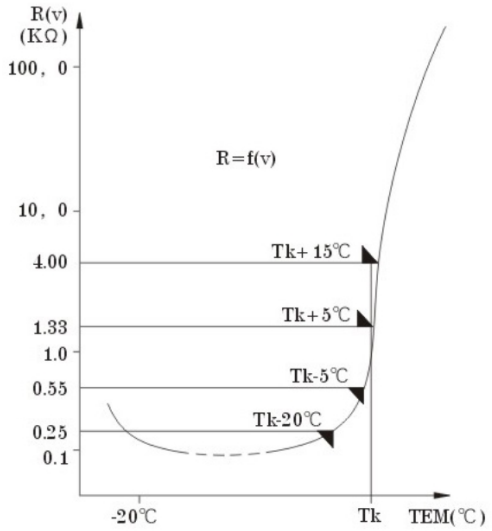
Mz6 Type PTC-Thermistors is for electric motor protection, The key technology was introduced from the United States of America in 1990s. Already has had more than 10 years' production experience. It is available for different products and also available for the over temperature protection on the main parts inside the electric motor. For example, the PTC thermistors are embedded into the three-phase electric motor stator winding. When the temperature of stator winding of electric motor up to the insulation grade temperature of insulated material the resistance of PTC Thermistors will rise at the same time .And the signal is transmitted to the protector to switch off the current of electric motor and finally prevent the electric motor form being burned out .This way is widely used in the world.

2.CHARACTERISTIC

Mz6 Type PTC-Thermistors For Electric Motor Protection accords with the international standard of DIN44081/DIN44S082.The dimension of the chip is small (size: 1.8×0.6mm),response is quick, the kind of products is complete. The performance of PTC Thermistors is stable, and reliable for a long time use. Especially when lacks of phases it can rapidly respond to protect the electric motor as well.

3.TECHNICAL PARAMETER

Technical parameter		Single PTC	Triple PTC	Units
Max.working voltage	Umax	30	30	V
Normal using voltage	V	≤2.5	≤2.5	V
Rated action temperature	Tk	60~180	60~180	℃
Tk tolerance		±5	±5	℃
Tk repeatability	△T	±0.5	±0.5	℃
Resistance in normal temperature T=25℃ ±1℃ (V≤2 . 5 V)	R25	≤100	≤300	Ω
PTC resistance at some temperature(V≤2.5 V)	Tk-5℃	≤550	≤1650	Ω
PTC resistance at some temperature(V≤2.5 V)	Tk+5℃	≥1330	≥3990	Ω
PTC resistance at some temperature(V≤2.5 V)	Tk+15℃	≥4	≥12	KΩ
-20℃ ~Tk-20℃		≤250	≤750	Ω
Tk reaction time	Td	<5	<5	S
Insulation strength	V	2.5	2.5	KV
Maximum storage temperature	Tlmax	125	125	℃
Minimum storage temperature	Tlmin	-25	-25	℃
Lead wire color	See the colorful coding below			
Weight	Wt	2	3.5	g



Single core MZ6 thermistor curve

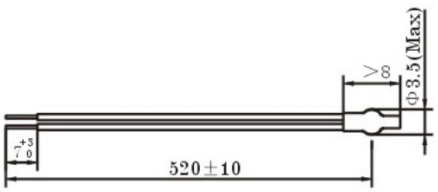
At -20℃ to Tk-20℃, R≤250 Ω;

at Tk-5℃, R≤550 Ω; at Tk+5 ℃, R≥1330 Ω;

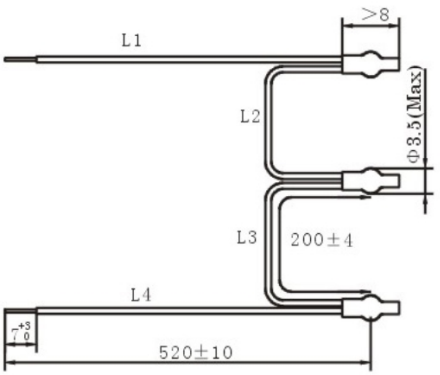
at Tk+5℃, R≥4000 Ω;

All of above is measured under the voltage of U≤2.5V DC.

Single core MZ6 thermistor
resistance- temperature curve



Single core MZ6 thermistor (standard size)



Three cores MZ6 thermistor (standard size)

4. COLOR CODING (For different temperature ratings)

Reaction Temp (Tk)	30	40	50	60	70	80	90	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	180
1st wire color	Brown	brown	brown	white	white	white	green	red	blue	brown	blue	gray	red	blue	red	white	white	black	blue	blue	blue	white	white
Last wire color	Black	red	gray	gray	brown	white	green	red	gray	brown	green	gray	green	blue	black	blue	black	black	black	red	brown	green	red

Yellow wires are used between adjoining thermistors.

5.SPECIFICATIONS AND MODEL

MZ6 120 D K □ □ □ □ □

1 2 3 4

M-Sensitive component
Z-Positive temperature model
6-Control temperature model

Temperature at the controlled temperature point(TK)

E-single PTC Z-Dual PTC
D-Triple PTC V-Quadruple PTC
S-Sextuple PTC

S-Standard lead wire length
K-special lead wire length requested by user

T-ceramic package B-metal clad
S-silicone resin plate package no making-PTFE tubing

If user has special requirement(K)
1～4 corresponding toL1～L4
respectively, unit cm, or omitted.