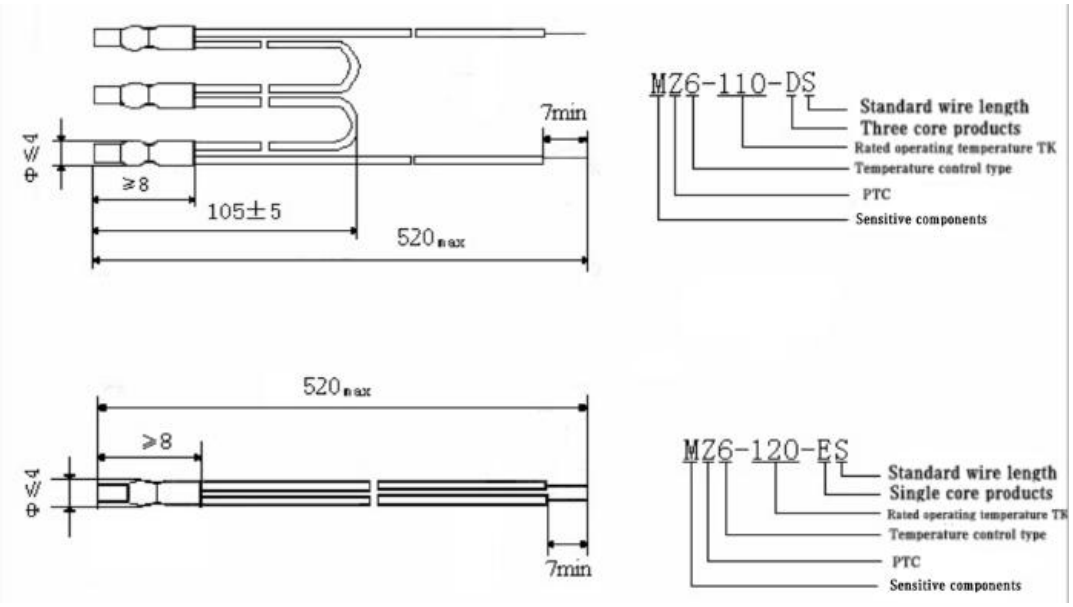
PTC thermistor sensor MZ6 60(℃)-180(℃) 520mm motor thermal protector single-core PTC thermistor sensor, three-core PTC thermistor

1. Scope of application:

The MZ6 type PTC thermistor of Dongguan Linkun Electronic Technology Co., Ltd. is one of our company's main PTC products. It has been used in many motor customers in conjunction with our company's PT100 platinum resistance temperature sensor, mainly used in three-phase motors, Temperature protection and temperature measurement and control of servo motors.

2.Overall dimensions and structure (unit: mm)



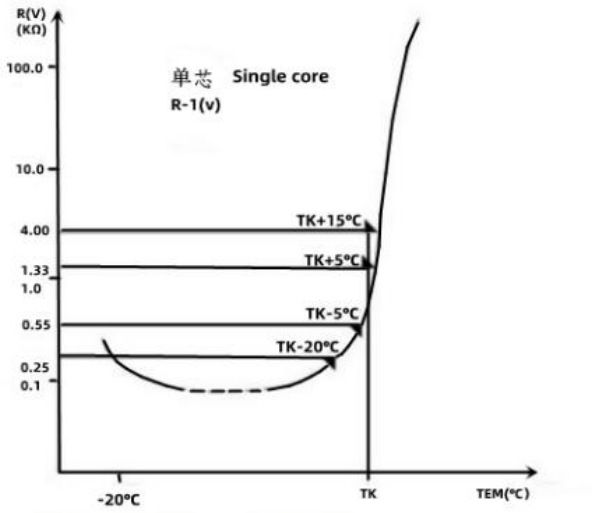
Number	Name	Material
1	Shrink sleeve	Polyvinylidene fluoride
2	PTC thermistor	BaTi03 ceramics
3	Wire	Fluorine plastic high temperature wire

3.Wire color marking core (the middle connecting wire for three cores is yellow)

Tk Temperature (℃)	60	70	80	90	100	105	110	115	120	125
Thread color	White	White	White	Green	Red	Blue	Brown	Blue	Ash	Red
Thread color	Ash	Brown	White	Green	Red	Ash	Brown	Green	Ash	Green

Tk temperature (℃)	130	135	140	145	150	155	160	165	170	180
Thread color	Blue	Red	White	White	Black	Blue	Blue	Blue	White	White
Thread color	Blue	Black	Blue	Black	Black	Black	Red	Brown	Green	Red

4.Resistor temperature characteristic curve representative diagram



在-20℃～TK-20℃时，R≤0.25kΩ；
在 TK-5℃时，R≤0.55kΩ；
在 TK+5℃时，R≥1.33kΩ；
在 TK+15℃时，R≥4kΩ。

5.Electrical and other properties

Project	Specification		Experiment method
	Single core	Three cores	
Maximum working voltage	Umax=25V	Umax=25V	
Rated operating temperature	TK=60℃-180℃	TK=60℃-180℃	
TK tolerance	±5℃	±5℃	
Repeatability of TK	△T=±0.5℃	△T=±0.5℃	
Room temperature resistance value	R25≤100Ω	R25≤300Ω	Measure with a digital multimeter at room temperature of 25℃±1℃. Measuring voltage ≤ DC2.5V.
TK-5℃ resistance value	R TK-5≤100Ω	R TK-5≤1650Ω	In a high temperature oil tank, use a digital multimeter to measure. Measuring voltage ≤ DC2.5V.
TK+5℃ resistance value	R TK+5≥1330Ω	R TK+5≥3990Ω	In a high temperature oil tank, use a digital multimeter to measure. Measuring voltage ≤ DC2.5V.
TK+15℃ resistance value	R TK+15≥4KΩ	R TK+15≥12KΩ	In a high temperature oil tank, use a digital multimeter to measure. Measuring voltage ≤ DC2.5V.

TK action time	TD＜5S	TD＜5S	Use a timer to measure.
Dielectric strength	2.5KV	2.5KV	Measure with high voltage tester
maximum allowable storage temperature	160℃	160℃	
Minimum allowable storage temperature	(-25℃)	(-25℃)	
Wire color markings	See this specification		
Weight	＜3g	＜3g	
Exterior	The wires have no scratches or cracks, and the shrink sleeve has no burrs.		Visual inspection.

6.Packaging

(1) Use plastic packaging. 100 pieces (bag)

(2) Put the plastic bag into the packaging box. 5000 pieces/50 bags/box

7.Quality acceptance criteria

Inspection sampling shall be carried out in accordance with GB/T2828.1 "Counting Sampling Inspection Procedure, Part 1: Batch-by-batch Inspection Sampling Plan Retrieved by Acceptance Quality AQL", a normal inspection sampling plan.

Number	Test items	Index number	Check level	AQL value	Remark
1	Exterior	3.2	Ⅱ	0.65	
2	Dimensions	3.1	Ⅱ	0.65	
3	Room temperature resistance value	3.2	Ⅱ	0.65	
4	Rated operating temperature	3.2	S-3	2.5	
5	TK-5℃ resistance value	3.2	S-3	2.5	
6	TK+5℃ resistance value	3.2	S-3	2.5	
7	TK+15℃ resistance value	3.2	S-3	2.5	
8	TK action time	3.2	S-3	2.5	
9	Dielectric strength	3.2	S-3	2.5	

8. Usage methods and precautions

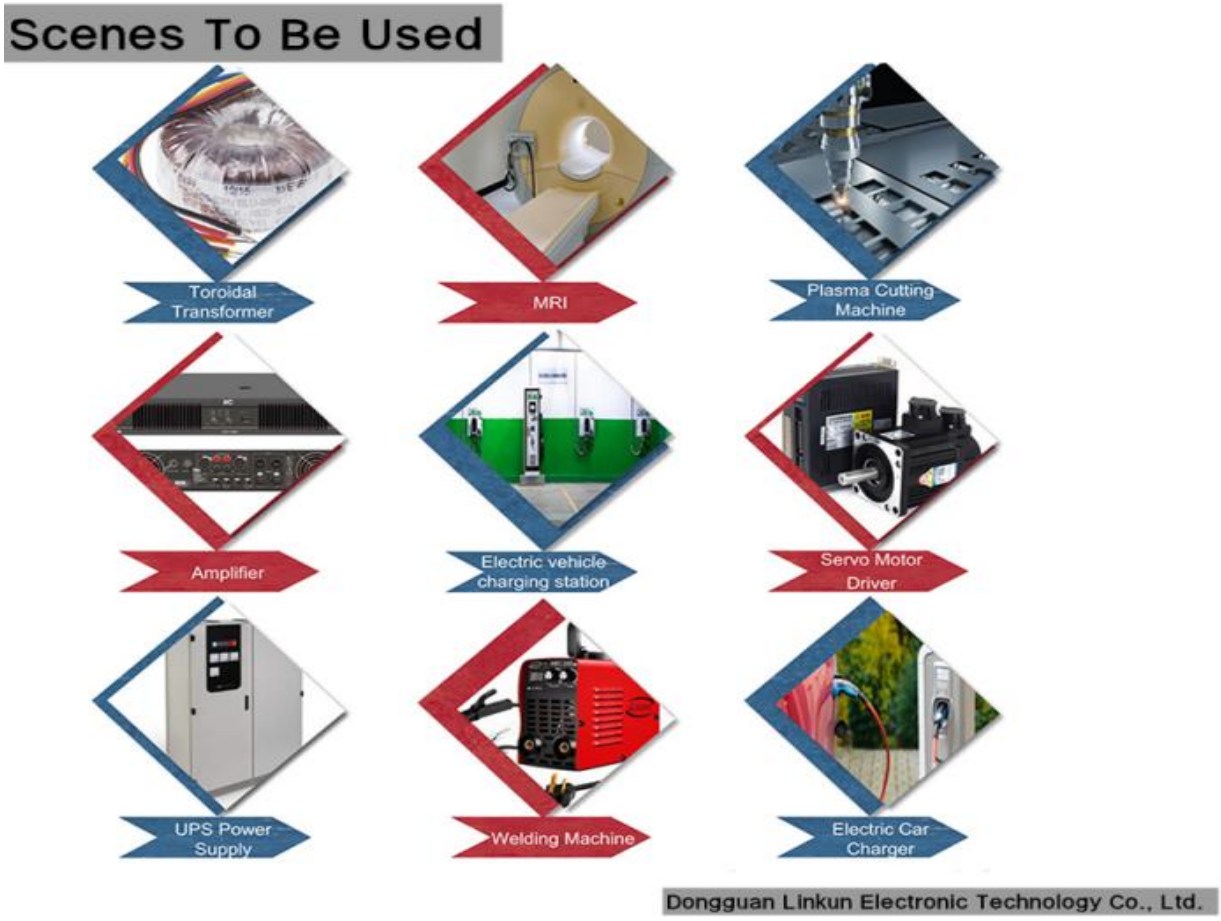
A: How to use:

Embed the thermistor inside the coil, press and tie it tightly and then dip it into paint together with the coil

(do not hit it hard to avoid damage)		
B: Notes:		
(1) Do not forcefully squeeze during installation to avoid damage;		
(2) The wire should not bear large pulling force;		
(3) Do not exceed the maximum operating voltage.		

9.PTC motor protection product specification comparison table

Sensor	TK value	Resistance (TK-5)	Resistance (TK+5)	Resistance (TK+15)
MZ6-100-DS	100	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-110-DS	110	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-120-DS	120	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-130-DS	130	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-140-DS	140	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-150-DS	150	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-155-DS	155	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-160-DS	160	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-170-DS	170	≤1650Ω	≥3990Ω	≥12KΩ
MZ6-180-DS	180	≤1650Ω	≥3990Ω	≥12KΩ



Product actual picture: