

PITCH TECHNOLOGIES

Our temperature detectors are grouped into 5 categories: Thermal Protectors, Motor Protectors, Regulators, High Temperature Regulators and Thermal Switches with current sensitivity and/or self-holding function. Different resistances are adapted to the prevailing current strength. This way, a current sensitivity adapted to the customer's application is achieved. The thermal switches of the Q and Y series have self holding functions and by using thick-film technology can switch off much faster than conventional normally closed and normally open contacts. This way the electric motor does not overheat, but is switched off as soon as the current increases. After cooling down at reset temperature, the contact system returns to its original position.

Typical applications include:

- ▶ protection of primary windings in transformers
- ▶ general temperature protection of small electric equipment
- ▶ winding protection in small electric motors
- ▶ switch-on of cooling fans

1. Thermal protectors

Name	O Series	P Series	Q Series	Y Series	TB 02 /05 /11Series
					
Functioning	normally open	normally closed	self holding functions	current limiter with self holding function	normally open / closed
Performance	1A	2.5 A	up to 6.5A	up to 6.5A	up to 17A
Cycles	up to 10.000	up to 10.000	up to 10.000	up to 10.000	up to 10.000
Temperature Range	50 - 130° C	40 - 150° C	40 - 150° C	40 - 150° C	30 - 160° C
Tolerance	5K	5K	5K	5K	5K
Housing	plastic	plastic	plastic	plastic	plastic
application examples	cooling fans	PCBA, vibration pumps, coffee machines	PCBA, motor drives, heater	hand blender, coffee machines	PCBA, vibration pumps, coffee machines

2. Motor protectors

Name	ST Series	TB 02 /05 /11Series	BM1 Series
			
Functioning	normally open / closed	normally open / closed	normally open / closed
Performance	up to 10A	up to 17A	up to 20A
Cycles	up to 10.000	up to 10.000	up to 10.000
Temperature Range	60 - 180° C	50 - 160° C	45 - 170° C
Tolerance	5K	5K	5K
Housing	metal	metal	metal
application examples	Motor windings	Motor windings	Motor windings



3. Regulators

Name	KSD Series	TK24 Series	TK32 Series
			
Functioning	normally open / closed	normally open / closed	normally open / closed - manual reset
Performance	up to 35A	up to 16A	up to 16A
Cycles	up to 100.000	up to 100.000	up to 100.000
Temperature Range	KSD 301 0 - 220° C KSD 309 60 - 280° C	45 - 425° C (425° C only with HT (High temperature) version)	30 - 250° C
Tolerance	5K	3K	3K
Housing	ceramic or plastic	ceramic or plastic	ceramic or plastic
application examples	Oven, dish washers	Oven, dish washers	Oven, dish washers

4. High Temperature Regulators

Name	TB97 Series	TK24 HT Series
		
Functioning	normally open / closed	normally open / closed
Performance	up to 13A	up to 16A
Cycles	up to 10.000	up to 100.000
Temperature Range	200 - 450° C	250 - 425° C
Tolerance	5%	6K
Housing	ceramic	ceramic
application examples	Oven, laboratory ovens	Oven, dish washers

5. Thermal Switches

The thermal switches of the Q and Y series have self-holding functions and can switch off much faster than conventional normally closed and normally open contacts. This way the electric motor does not overheat, but is switched off as soon as the current increases.

Only after the electric circuit is being interrupted, e.g. a hand blender unplugged from power supply, the switches start cooling down and after reaching reset temperature, the contact system returns to its original position.

Name	Q Series	Y Series
		
Functioning	self holding functions	current limiter with self holding function
Performance	6.5A	6.5A
Cycles	up to 10.000	up to 10.000
Temperature Range	40 - 150° C	40 - 150° C
Tolerance	5/10K	5/10K
Housing	plastic	plastic
application examples	PCBA, motor drives, heater	hand blender, coffee machines