THERMOJOINER

New electrical component

Patent **Thermal Sensible Element (Patent. No. : 0283317)**

Registered Trade Mark **Thermojoiner(Reg.No. : 0453690)**

Operating Principle

When the temperature exceeds the thermal rating,
THERMOJOINER closes the circuit and operates the specific apparatus.

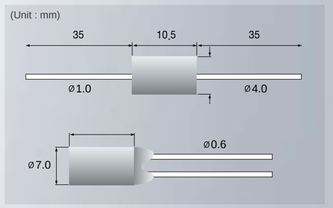
Application

Signal Transmitter, Guidance Lamp System, Emergency Lighting System,
Fire Alarm System, Thermal Sensing Devices etc.

Usage

PART NO.	FUNCTION TEMPERATURE	ELECTRICAL RATING
TJ50D	50	MAX. 250V MAX.2A
TJ57D	57	
TJ67D	67	
TJ73D	73	
TJ78D	78	
TJ85D	85	
TJ92D	92	
TJ99D	99	
TJ101D	101	
TJ105D	105	
TJ111D	111	
TJ116D	116	
TJ120D	120	
TJ129D	129	
TJ136D	136	
TJ142D	142	
TJ152D	152	
TJ171D	171	TOLERANCE Tf±2℃
TJ185D	185	
TJ193D	193	
TJ198D	198	
TJ206D	206	
TJ217D	217	
TJ229D	229	
TJ241D	241	

Dimensions



Example

TJ50D **Preliminary Signal**

When the ambient temperature becomes 50+-2℃ it sends the preliminary signal.

TJ78D **Emergency Signal**

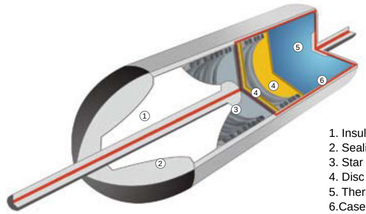
When the ambient temperature becomes 78+-2℃ it sends the emergency signal.

TJ99D **Operating Apparatus**

When the ambient temperature becomes 99+-2℃ it operates the fire extinguisher

RoHS ISO-9001

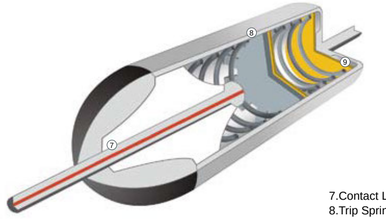
Before Fusing Off



1. Insulator
2. Sealing Compound
3. Star Contact
4. Disc
5. Thermal Pellet
6.Case Lead Assembly

Current Flow

After Fusing Off



7.Contact Lead
8.Trip Spring
9.Compression Spring

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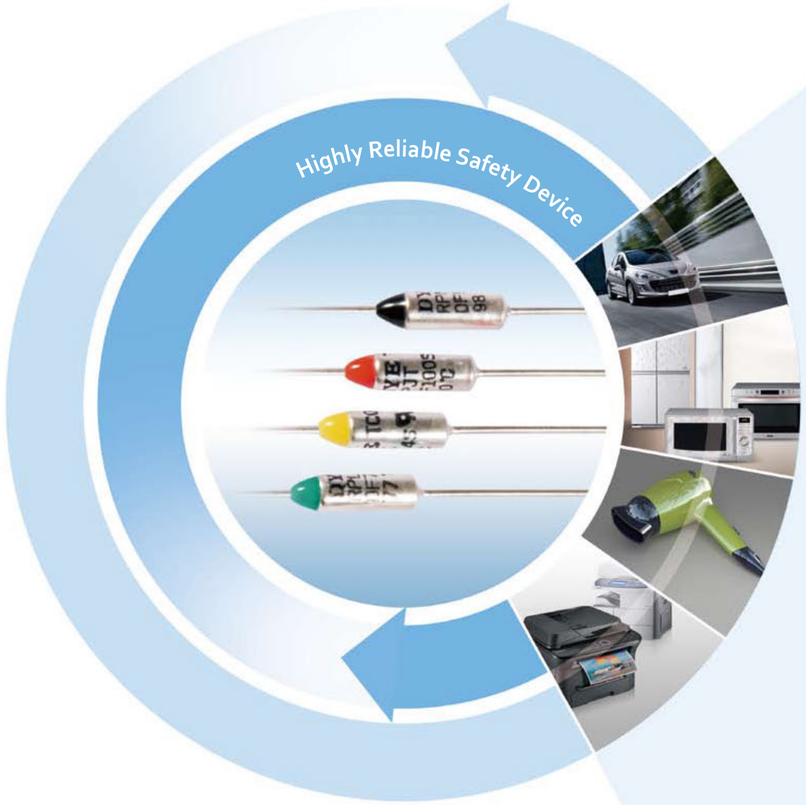


DYE THERMAL LINKS

THERMAL CUTOFFS

RoHS ISO-9001

Thermal links

The ultimate one-shot temperature safety device.

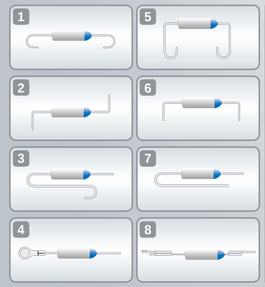
Thermal Link fuses are designed to provide upper limit temperature protection for all electric and electronic products, keeping the products function properly and safely, protecting lives and property as well as products from unexpected fires.

Usage

All kinds of home appliances, automobiles and etc.

- Toaster
- Baker`S Oven
- Battery For Cellular Phone
- Steaming Box
- Party Cooker
- Power Cord
- Thermo-Resistor
- Condenser
- Bean Curd Machine
- Waste Pulverizer
- Transformer For Audio System
- Timer Switch
- UPS
- SMPS
- Power Strip
- Sterilizer
- Copy Machine
- Gas Boiler
- Solenoid
- Adaptor
- Automobile
- Motor
- Transformer
- Electric Humidifier
- Gas Range
- Ice Cream Freezer, Etc.

Typical terminations



Thermal links temperature ratings & approval

PART NO.	KC	UL/cUL	VDE	CCC	PSE	TF(℃)	TH(℃)	TM:VDE(UL)
DF50S	-	-	-	-	O	50	30	130
DF57S	-	-	-	-	O	57	37	130
DF66S	O	O	O	O	O	66	42	110(130)
DF72S	O	O	O	O	O	72	50	115(110)
DF77S	O	O	O	O	O	77	55	120(110)
DF84S	O	O	O	O	O	84	60	125(114)
DF91S	O	O	O	O	O	91	67(79)	135(121)
DF98S	O	O	O	O	O	98	76	140(130)
DF100S	O	O	O	O	O	100	78	135(250)
DF104S	O	O	O	O	O	104	80	150
DF110S	O	O	O	O	O	110	88	140
DF115S	-	-	-	-	O	115	95	170
DF119S	O	O	O	O	O	119	95	170
DF121S	-	-	-	-	O	121	95	170
DF128S	O	O	O	O	O	128	106	155
★DF132S	-	-	-	-	O	132	110	155
DF139S	O	O	-	-	O	139	117	(170)
DF141S	O	O	O	O	O	141	117	171
DF144S	O	O	O	O	O	144	120	250
DF152S	O	O	O	O	O	152	128	250(175)
DF167S	O	O	O	O	O	167	142	250(210)
DF169S	O	-	-	-	O	169	145	300
DF170S	O	O	O	O	O	170	146	300(190)
DF179S	O	-	-	-	O	179	155	300
DF184S	O	O	O	O	O	184	160	300(214)
DF192S	O	O	O	O	O	192	162	290(222)
DF216S	O	O	O	O	O	216	191	241(300)
DF222S	O	-	-	-	O	222	195	300
DF228S	O	O	O	O	O	228	193	300
DF240S	O	O	O	O	O	240	200	290(260)
★DF260S	O	-	-	-	O	260	220	350
★DF280S	O	-	-	-	O	280	230	350

O:APPROVED - :ON APPLYING TOLERANCE (+0℃, -5℃, ★ : +0℃, -10℃)

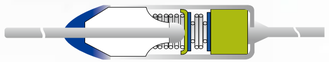
Determining the proper series

Please refer to the diagram on the right side for proper temperature setting.

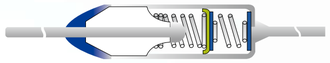
- T_P : The highest temperature of the product to which a cutoff is to be attached
- T_S : 24℃ (T_F-T_H)(Apply 35℃ for T_S value when T_P is higher then 170℃)
- T_D : The heating temperature caused by electrical load
  (please refer to temperature / current correlation curve)
- T_H : The safe temperature range for use of the cutoff.
- T_M : Maximum temperature limit which does not cause reclosing of thermal links.
- α : 1. Self heating of lead wire
  2. Structure of ventilation or airtightness
  3. Location of connecting terminal
  4. Thickness of insulated covering material
  5. Best condition value considering electric voltage changes

$T_P+T_S+T_D+\alpha$ = applicable temperature

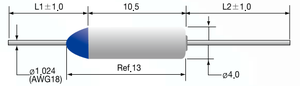
Before fusing off



After fusing off



Dimensions (mm)



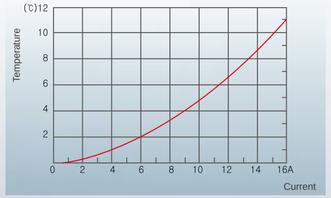
Type	L1	L2
S	25.4	35.0
S-L	35.0	35.0
Option	Custom made	Custom made

Rated voltage and current max	
KC	250V/15A
UL/cUL	125V/15A
	250V/10A
	250V/16A
VDE	250V/15A
PSE	125V/15A
	250V/15A
CCC	250V/15A

File no. KC(Korea) : HH05009-2004B~2019B, 5020B, 5021B
UL/cUL : E117626
VDE : 40017388
PSE : JET2926-32001-1001~1011
CCC : 2003010205079617

DYE TCOs comply with RoHS directive,
The European Regulation On Hazardous Substances

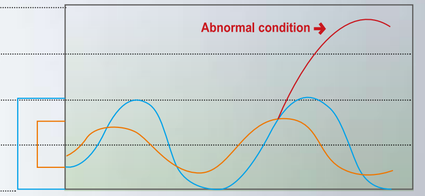
Temperature/Current correlation curve



Safe temperature range

After operation, the temperature increased by the remaining heat in a fuse should remain below T_M.
Under ordinary conditions, the temperature of the area where a fuse will be attached should not reach over T_H.

T_M (Maximum Temperature)
T_F (Functioning Temperature)
T_H (Holding Temperature)
Thermostat's control range
Actual temperature range



Cautions

- Keep the space more than 3mm from the body of a fuse when bending a lead wire.
- Do not heat more than T_F-24℃ when soldering or welding.
- Be aware that electric current flows on the surface of a fuse.
- Do not use in liquid or poisonous gases such as sulfurous acid, nitric oxide and etc..
- Do not connect heater directly with a fuse.(See below.)