



# CANTHERM

Supplying high-quality bimetal and thermal sensor products.

## Thermal Cut-Offs SDJ1/SDJ2

### GENERAL

Our Thermal Cut-Offs (Organic Thermal Element Type) are used to prevent fires caused by abnormal heat generation from circuits and other heat producing electrical products. They are a non-resettable thermal fuse which open electrical contacts when temperatures exceed the specified level.

### OPERATING PRINCIPLE

When the ambient temperature rises to the functioning temperature, the thermal element melts and the springs move the contact away and open the circuit permanently.

### APPLICATIONS

- Electric home appliances and heating devices
- Coil-winding products and power supplies
- Office equipment and telecommunication devices
- Automobiles & other electronic components

### CAUTIONS

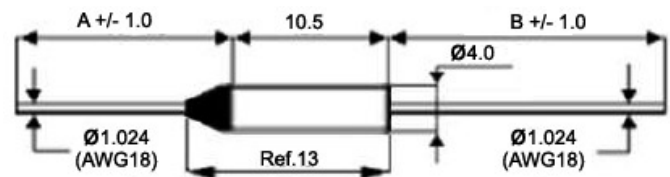
- Bends in leads should be at least 3mm from the body of the TCO.
- Extreme caution must be used while soldering, use a heatsink and avoid heating above  $T_f - 24^{\circ}\text{C}$ .
- The metal portion of the TCO is electrically live and may require insulation.
- Do not use in liquids or poisonous gasses such as sulfuric acid or nitrous oxide.
- Do not connect heater directly to the cutoff.



### APPROVALS

UL & cUL: E117626  
 VDE: 115369, 116219  
 PSE: JET2926-32001-1001-1009  
 CCC: 2003010205079617  
 EK: HH05009-2004A-2019A

### DIMENSIONS (mm)



Type	A (L1)	B (L2)
Standard	25.4	35.0
Long	35.0	35.0
Option	Custom made	Custom Made



Part No.	UL/cUL	VDE	CCC	PSE	T <sub>F</sub> (°C)	T <sub>H</sub> (°C)
DF50S	-	-	-	O	50	30
DF57S	-	-	-	O	57	37
DF66S	O	O	O	O	66	42
DF72S	O	O	O	O	72	50
DF77S	O	O	O	O	77	55
DF84S	O	O	O	O	84	60
DF91S	O	O	O	O	91	67
DF98S	O	O	O	O	96	76
DF100S	O	O	O	O	100	78
DF104S	O	O	O	O	104	80
DF110S	O	O	O	O	110	86
DF115S	-	-	-	O	115	95
DF119S	O	O	O	O	119	95
DF121S	-	-	-	O	121	95
DF128S	O	O	O	O	128	106
DF133S	-	-	-	O	133	117
DF139S	O	-	-	O	139	117
DF141S	O	O	O	O	141	117
DF144S	O	O	O	O	144	120
DF152S	O	O	O	O	152	128
DF167S	O	O	O	O	167	142
DF169S	-	-	-	O	169	145
DF170S	O	O	O	O	170	146
DF179S	-	-	-	O	179	155
DF184S	O	O	O	O	184	160
DF192S	O	O	O	O	192	162
DF198S	-	-	-	O	198	162
DF205S	-	-	-	O	205	181
DF216S	-	O	O	O	216	191
DF222S	-	-	-	O	222	195
DF228S	O	O	O	O	228	193
DF240S	O	O	O	O	240	200
DF260S	-	-	-	-	260	220
DF280S	-	-	-	-	280	230

Rated Voltage & Current Max.	
EK	250V/15A
UL/cUL	125V/15A
	250V/10A
	250V/16A
VDE	250V/15A
PSE	125V/15A
	250V/15A
CCC	250V/15A

Before fusing off



After fusing off

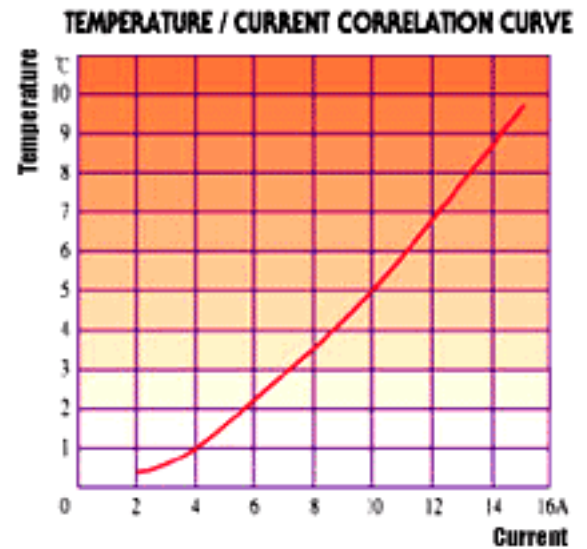


O	APPROVED
-	ON APPLYING
TOLERANCE: +0°C, -5°C	

T<sub>F</sub> = Functioning Temperature    T<sub>H</sub> = Holding Temperature

## ➤ DETERMINE THE PROPER SERIES

- **T<sub>p</sub>** : The highest temperature of the product to which a cutoff is to be attached.
- **T<sub>h</sub>** : The safe temperature range for use of the cutoff.
- **T<sub>s</sub>** : 24°C (T<sub>p</sub>-T<sub>h</sub>) (Apply 35°C for T<sub>s</sub> value when T<sub>p</sub> is higher than 170°C.)
- **T<sub>o</sub>** : The heating temperature caused by electrical load (Please refer temperature / current correlation curve)
- **+a** :
  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



**$T_p + T_s + T_o + a = \text{Applicable Temperature}$**

## ➤ SAFE TEMPERATURE RANGE

- The increasing temperature by remaining heat in the cutoff after melting is required to remain below T<sub>m</sub>.
- The temperature of the area where a cutoff will be attached should not reach over T<sub>h</sub> under normal usage conditions.

