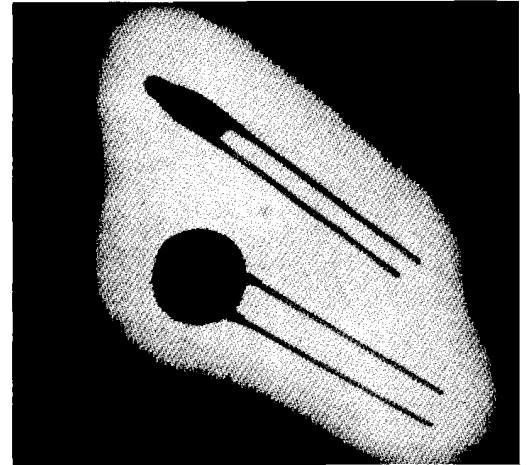


Product Data

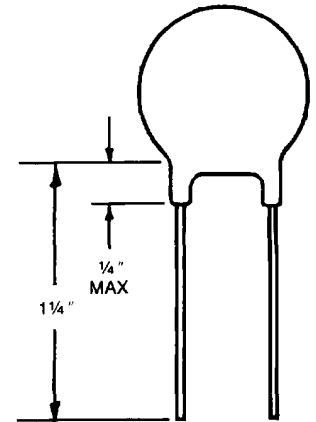
Components For The Control Of Energy

MIDWEST COMPONENTS, INC. new line of PTC thermistors exhibits a very low initial resistance at 25°C. This low resistance is maintained until the part reaches its switching temperature, at which point its resistance rises dramatically to a very high value. This switching temperature can be achieved by the ambient temperature or by applying current and causing the part to self heat.



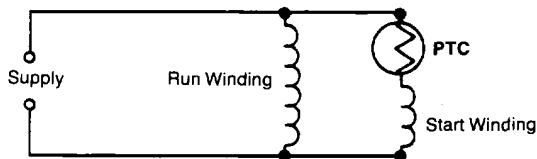
Typical Characteristics

Part Number	I _{min} cont. at 25°C	R at 25°C ±40%	Switch Point ±5°C.	Max Dia	Coated	Lead AWG
165D05009	300mA	5 Ω	65°C	.60	Yes	20
175D04009	250mA	4 Ω	75°C	.45	Yes	20
180D02002	600mA	2 Ω	80°C	1.0	No	18
190D05001	350mA	5 Ω	90°C	.65	No	20
200D04005	300mA	4 Ω	100°C	.55	Yes	20
200D07007	300mA	7 Ω	100°C	.65	Yes	20
210D01001	750mA	0.5 Ω	110°C	.70	No	18
215D01006	650mA	1 Ω	115°C	.65	No	20
220D01007	750mA	0.5 Ω	120°C	.70	Yes	18
225D06001	400mA	6 Ω	125°C	.65	Yes	20
227D05013	500mA	5 Ω	127°C	.80	Yes	18
228D01003	750mA	1.5 Ω	128°C	.75	Yes	18
228D01004	750mA	1 Ω	128°C	.70	Yes	18
228D01005	650mA	1.5 Ω	128°C	.65	No	20
228D01006	750mA	0.5 Ω	128°C	.65	No	18
228D04002	500mA	4 Ω	128°C	.85	Yes	18

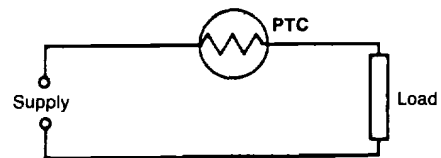


OUTLINE DRAWING

MOTOR START



CURRENT LIMITING



TODISC09



THERM-O-DISC, INCORPORATED
SUBSIDIARY OF EMERSON ELECTRIC
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(616) 777-4100 FAX (616) 773-4214

THERMODISC[®]
MIDWEST COMPONENTS PRODUCT GROUP

Printed in U.S.A.

TERMINOLOGY

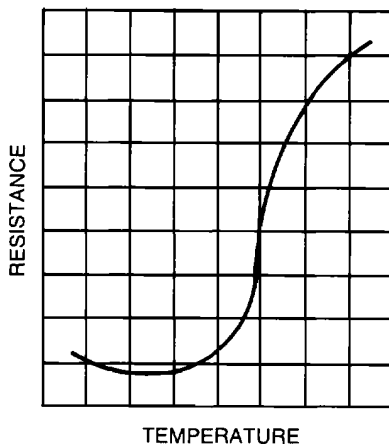
Switch Point — Temperature expressed in °C at which we reach five times the base resistance. This is alternatively referred to as Curie Temperature or Anomaly Point.

Base Resistance — Resistance value expressed in ohms of the normal or cold temperature resistance of the PTC. For switching temperatures at or below 35° this is specified at -35°C. For temperatures above 35°C it is specified at 25°C. This method eliminates error caused by testing low switch temperature parts under varying room temperature conditions.

Slope — Defines the nature of the increase in resistance with temperature changes above the switching temperature. Slopes may be specified as percentage changes per degree Centigrade in terms of minima or maxima. For single temperature activation applications, a resistance value at a specified temperature may suffice to define the slope.

Switching Current — Defines the switching point in milliamps instead of external rising temperature and is rated at 2 times the I_{min} current. In current limiter applications internal heat generated by current flow will cause the PTC to switch. This switching current should be derated if ambient temperatures are greater than 25°C. Amount of derating will depend upon application parameters.

TYPICAL PTC RESISTANCE
VS. TEMPERATURE CURVE



TYPICAL VOLTAGE CURVE
VS. CURRENT

