

Resettable PTCS - 6V Series

Features

- ❖ Radial leaded devices.
- ❖ Faster tripping, typical application in micro-motors for automobiles
- ❖ Protecting against over-current and over-temperature faults
- ❖ Available in lead-free version.

PACKAGEDIMENSIONS

Product model	A	B	C	D	E	H	Lead Size
	Max	Max	Max	Min	Max	Typical	
6V-075	8.0	8.3	3.0	7.6	5.8	1.0	d:0.5
6V-090	7.4	11.6	3.0	7.6	5.8	1.0	d:0.5
6V-110	7.4	12.7	3.0	7.6	5.8	1.7	d:0.5
6V-120	7.4	11.7	3.0	7.6	5.8	1.0	d:0.5
6V-135	7.4	12.7	3.0	7.6	5.8	1.0	d:0.5
6V-155	7.4	12.7	3.0	7.6	5.8	1.0	d:0.5
6V-160	7.6	13.5	3.0	7.6	5.8	1.2	d:0.5
6V-185	7.9	13.7	3.0	7.6	5.8	1.2	d:0.5
6V-250	9.4	14.5	3.0	7.6	5.8	1.5	d:0.5

Electrical Characteristics

Products model	I _H	I _T	I _{MAX}	V _{MAX}	T _{rip}		P _{dtyp}	R _{min}	R _{max}	R _{1max}
	(A)	(A)	(A)	(V)	(A)	(S)	(W)	(Ω)	(Ω)	(Ω)
6V-075	075	1.30	40	6.0	8.0	0.4	0.30	0.110	0.175	0.23
6V-090	0.90	1.80	40	16.0	8.0	1.2	0.60	0.070	0.120	0.18
6V-110	1.10	2.20	40	6.0	8.0	2.3	0.70	0.050	0.095	0.14
6V-120	1.20	2.00	40	6.0	8.0	0.5	0.60	0.070	0.097	0.14
6V-135	1.35	2.70	40	16.0	8.0	0.4	0.81	0.040	0.074	0.11
6V-155	1.55	2.65	40	6.0	7.55	2.2	0.90	0.040	0.070	0.10
6V-160	1.60	3.20	40	16.0	8.0	9.0	0.90	0.030	0.061	0.11
6V-185	1.85	3.70	40	16.0	8.0	10.0	1.00	0.030	0.051	0.09
6V-250	2.50	5.00	40	16.0	8.0	40.0	1.21	0.020	0.036	0.06

- ❖ I_h =Hold current: maximum current at which the device will not trip at 25 still air .
- ❖ I_t =Trip current minimum current at which the device will always trip at 25°C still air .
- ❖ V_{max} =Maximum voltage device can withstand without damage at rated current.
- ❖ I_{max} =Maximum fault current device can withstand without damage at rated voltage.
- ❖ T_{trip} =Maximum time to trip at 5 times hold current
- ❖ R_{max} =Maximum device resistance at 25 prior to tripping.
- ❖ R_{min} =Minimum device resistance at 25 prior to tripping.
- ❖ $P_{d_{typ}}$ =Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

Thermal Deration Chart-Ihold

Part number	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
6.0V-075	1.05	0.95	0.85	0.75	0.65	0.60	0.55	0.50	0.43
6.0V-090	1.40	1.25	1.10	0.90	0.75	0.69	0.65	0.60	0.50
6.0V-110	1.75	1.52	1.33	1.10	0.99	0.90	0.80	0.73	0.63
6.0V-120	1.69	1.52	1.36	1.20	1.04	0.96	0.88	0.80	0.68
6.0V-135	2.15	1.94	1.70	1.35	1.20	1.14	1.00	0.90	0.81
6.0V-160	2.49	2.21	1.94	1.60	1.42	1.31	1.19	1.03	0.88
6.0V-185	2.87	2.59	2.28	1.85	1.63	1.52	1.33	1.21	1.05
6.0V-250	3.82	3.44	3.03	2.50	2.17	2.00	1.81	1.59	1.39

Test Procedures and Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{1max}$
Time to Trip	V_{max} , 25°C, In still air @ 25°C	$T \leq \text{max. time to trip(seconds)}$
Hold Current	30 min. at I_h , In still air @ 25°C	No trip
Trip Cycle Life	V_{max} , I_{max} , 100 cycles, In still air @ 25°C	No arcing or burning
Trip Endurance	V_{max} , 1 hours, In still air @ 25°C	No arcing or burning

Typical time-to-trip charts @25°C

