tyco Electronics

PD Caps

Raychem

Semirigid, encapsulant-lined heat-shrinkable end caps

Heat-shrinkable, dual wall PD Caps inexpensively encapsulate crimped electrical connections, including those on motor coils. They remain tightly in place for the life of the motor. PD Caps are manufactured from radiation-crosslinked polyolefin.

With brief heating, the outer jacket of the PD Cap shrinks while the inner wall flows into voids in the crimp, creating an encapsulated and electrically insulated connection. PD Caps are not intended for use where immersion in fluids is required.

An operator can insulate connections at approximately twice the speed of conventional methods, which require tape-wrapping, or slip-on tubing. PD Caps can be installed in seconds using standard hot-air or infrared heating tools. No special operator training is required.

Temperature rating

Full recovery temperature:	135°C
Continuous operating temperature:	–55°C to 110°C

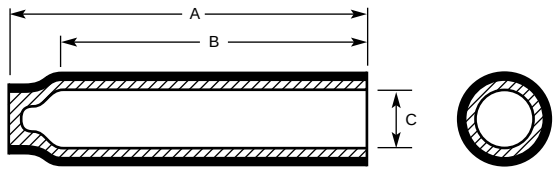
*Specifications**

Type	Raychem	UL	CSA
PD Caps	PD Caps SCD	E85381	LR31929

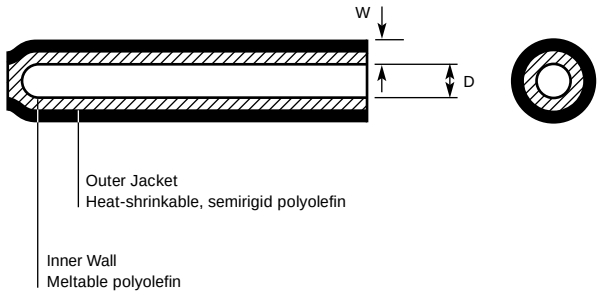
*When ordering, always specify latest issue.

*Dimensions (*millimeters/*inches)*

PD Cap as supplied



PD Cap after unrestricted recovery



Size	A nom.		B min.		C min.		D max.		W total**	
PD Cap 1/8	22.0	*0.87*	12.7	*0.50*	3.2	*0.125*	0.58	*0.023*	1.22 ± 0.15	*0.048 ± 0.006*
PD Cap 3/16	25.4	*1.00*	15.2	*0.60*	4.7	*0.187*	1.52	*0.060*	1.57 ± 0.20	*0.062 ± 0.008*
PD Cap 1/4	28.4	*1.12*	15.2	*0.60*	6.4	*0.250*	2.03	*0.080*	1.98 ± 0.20	*0.078 ± 0.008*
PD Cap 3/8	31.8	*1.25*	18.3	*0.72*	9.5	*0.375*	2.29	*0.090*	2.08 ± 0.25	*0.082 ± 0.010*
PD Cap 1/2	38.1	*1.50*	21.6	*0.85*	12.7	*0.500*	2.29	*0.090*	2.54 ± 0.25	*0.100 ± 0.010*

**Wall thickness will be less if recovery is restricted during shrinkage.

Ordering information

Color	Black
Size selection	Always order the largest size that will shrink snugly over the component being covered.
Standard packaging	In pieces
Ordering description	Specify product name, size, and color; for example, PD Cap 1/4-0 (0=Black).

Specification values

	Property	Unit	Requirement	Method of test
Physical	Dimensions	mm *(inches)*	See reverse	ASTM D 2671
	Longitudinal change	percent	+0, –10 maximum	ASTM D 2671
	Flow of inner wall		No openings upon reheating	AMS-DTL-23053/4
	Tensile strength	psi *(MPa)*	1500 *(10.3)* minimum	ASTM D 2671
	Ultimate elongation	percent	200 minimum	ASTM D 2671
	Low-temperature brittleness at –55°C/*–67°F*		No failure	ASTM D 746 Procedure B
	Heat shock (4 hours at 250°C/*482°F*)		No dripping, flowing, or cracking of the outer wall	AMS-DTL-23053
	Heat resistance (168 hours at 175°C/*347°F*)		No dripping, flowing, or cracking of the outer wall	AMS-DTL-23053
Electrical	Dielectric strength	volts/mil	500 minimum	ASTM D 2671
	Volume resistivity	ohm-cm	10^{15} minimum	ASTM D 257
Chemical	Corrosive effect (16 hours at 121°C/*250°F*)		Noncorrosive	ASTM D 2671 Procedure A
	Fungus resistance		Rating of 1 or less	ASTM G 21
	Water absorption (24 hours at 23°C/*73°F*)	percent	0.1 maximum	ASTM D 570
	Fluid resistance (24 hours at 23°C/*73°F*) in: JP-8 Fuel (MIL-T-5624) Skydrol* 500 Hydraulic fluid (MIL-H-5606) Aviation gasoline 100/130 Water			ASTM D 2671
	Followed by tests for:			
	Dielectric strength	volts/mil	400 minimum	ASTM D 2671
	Tensile strength	psi	1000 minimum	ASTM D 2671

Note: These requirements apply to PD Cap material only. These tests, except dimensions and longitudinal change, cannot be performed on material in PD Cap configuration.
*Trademark of the Monsanto Company.

Raychem is a trademark of Tyco Electronics Corporation.

Users should independently evaluate the suitability of the product for their application.

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