

Probe Style Thermal Switches

CPO/CPC Series



Bi-Metal Thermal Switches

Selco Probe CPO/CPC series thermostats are thermally sensitive bi-metallic switches which, when reaching a set point, will either open or close to make or break an electrical circuit.

Our probe designs are a one piece construction made from brass, nickel plated brass or 300 series stainless steel that can be immersed safely in liquids or air. Selco offers a wide range of thermostats that can either be snap-action bi-metal discs or creep-action bi-metals, with many available set points.

Certified as an ISO 9001:2008 manufacturer, all of our probes are UL approved, including c-UL and RoHS compliance.

Selco probe thermostats are carefully designed using specific thermally conductive epoxies and electrical potting compounds to accommodate a customer's application. We inventory over 50 standard housings and a range of wire insulations that are rated from 90-400°C. If required, the assembly can be designed for low current, low voltage, high temperature or high pressure environments.

CPO/CPC Series Key Features

- > **Precalibrated 32-500°F (0-260°C)**
- > **Snap Action or Creep Action Switching**
- > **Over 50 Standard Probe Housings**
- > **Single Piece Construction**
- > **ISO 9001:2008 Certified Manufacturer**
- > **UL, C-UL, ROHS Certifications**



Everyday Applications

Common applications include sensing oil temperatures and water levels, but also a wide variety of other applications including:

- | | | | | |
|----------------------------|-------------------------|----------------------------------|----------------------------------|------------------------------------|
| Generators | Parts Washers | Refrigeration Compressors | Commercial Food Equipment | Internal Combustion Engines |
| Plastics Processing | Pressure Washers | Air/Gas Compressors | Hydraulic Systems | Pool/Spa |

Example Thermal Switch Assemblies:



Off-Road Vehicles



AC/DC Power Converters



Irrigation



Automotive

Probe Style Thermal Switch

CPO/CPC Series Technical Specifications

Snap Action[†]

Average Temperature Differential

Temperature Ratings

Range	Tolerance-Open	Tolerance-Closed	Differential
32-122°F (0-50°C)	±7.2°F (4°C)	±9°F (5°C)	Specify
123-212°F (51-100°C)	±7.2°F (4°C)	±10.8°F (6°C)	Specify
213-302°F (101-150°C)	±9°F (5°C)	±12.6°F (7°C)	Specify
303-500°F (150C-260°C)	±14°F (8°C)	±18°F (10°C)	Specify

Electrical Ratings

125VAC	15A	Resistive	100,000
250VAC	8A	Resistive	100,000
120VAC	5.8FLA	34.8LRA	6,000
240VAC	2.9FLA	17.4LRA	6,000

Insulation Resistance

≥100mΩ (with a 500VDC Megger)

Contact Resistance

≤50mΩ (initial value)

Dielectric Strength

1,500VAC/1-min or 1,800VAC/1-sec

Certifications

UL (E145478,XAPX2), c-UL E145478(XAPX8)

Snap Action^{**}

Larger Temperature Differential

Temperature Ratings

Range	Tolerance	Differential
86-356°F (30-180°C)	9°F (5°C)	Specify

Electrical Ratings

16VDC	20A	10,000
125VAC	20A	10,000
250VAC	8A	10,000
24VDC	10A	10,000

Insulation Resistance

≥100mΩ (with a 500VDC Megger)

Contact Resistance

≤50mΩ

Dielectric Strength

1,500VAC/1-min or 1,800VAC/1-sec

Certifications

UL (E145478,XAPX2), c-UL E145478(XAPX8)

Creep Action^{***}

No Temperature Differential; **Slow** Make & Break

Temperature Ratings

Range	Tolerance	Differential
41F-392°F (5-200°C)	5°F (3°C)	—

Electrical Ratings

120 VAC	6A	Resistive	100,000
240 VAC	4A	Resistive	100,000
12 VDC	8A	Resistive	5,000
24 VDC	4A	Resistive	5,000

Insulation Resistance

≥5mΩ

Contact Resistance

≤50mΩ

Dielectric Strength

1,500VAC/1-min

Certifications

UL (E145478,XAPX2), c-UL E145478(XAPX8)

*Used best with 1/2" NPT

† Temperature rate of change at 1°F (.5°C) per minute. Tighter tolerance available upon request.

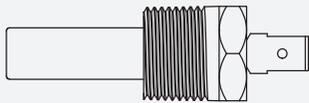
**Used best with 3/8" & 1/2" NPT

***Used best with 1/4" NPT

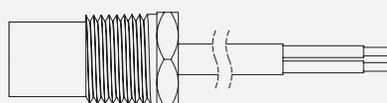
CPO/CPC Series Technical Drawings

The drawings below are three example part configurations. For additional configurations, please see our **"Probe Part Number Map"**.

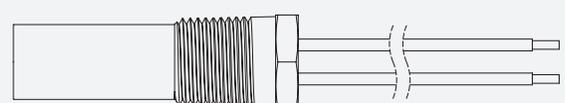
Quick Connect



SJO Cable



2 Leads



NOTE: It is the customer's sole responsibility to specify and determine the suitability of a particular control or component based on their unique individual applications and requirements, with respect to temperature settings, cycle life, electrical load and environmental conditions.

