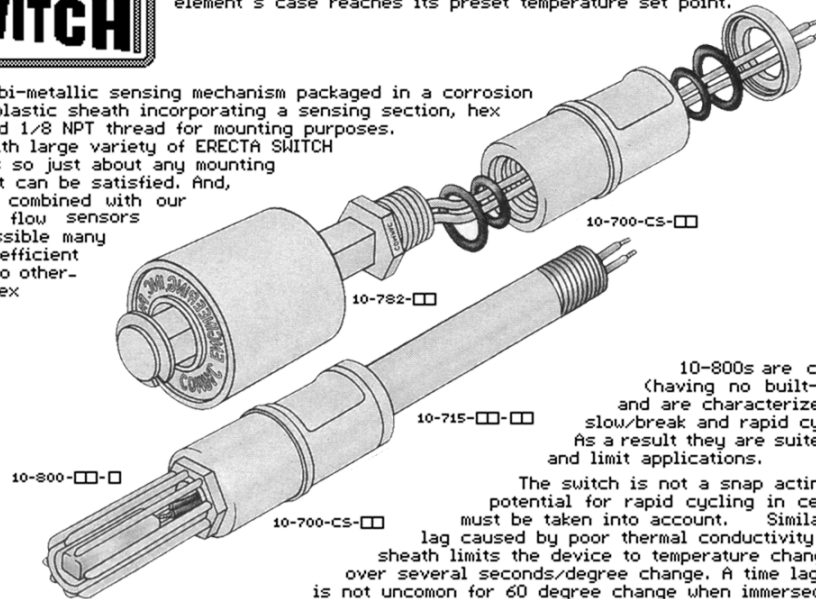


ERECTA SWITCH

Series 10-800 temperature switches are low cost, slow response sensor switches useful for OEM applications where the detection of cold or high temperature limits is required. The product can sense temperature from freezing to 90C, in six narrow differential, preset trip points. SPST contacts actuate when the element's case reaches its preset temperature set point.

This is a bi-metallic sensing mechanism packaged in a corrosion resistant plastic sheath incorporating a sensing section, hex section and 1/8 NPT thread for mounting purposes.

It mates with large variety of ERECTA SWITCH components so just about any mounting requirement can be satisfied. And, it can be combined with our level and flow sensors making possible many low cost, efficient solutions to otherwise complex control problems.



10-800 Temperature Switch

10-800s are creep mechanisms (having no built-in differential) and are characterized by slow make/slow/break and rapid cycling capability. As a result they are suited for both control and limit applications.

The switch is not a snap acting device. So the potential for rapid cycling in certain situations must be taken into account. Similarly, the thermal lag caused by poor thermal conductivity of the plastic sheath limits the device to temperature changes which occur over several seconds/degree change. A time lag of 120 seconds is not uncommon for 60 degree change when immersed in water. As is the case with all Compac products, final design criteria should be based on your testing of our products, in your application, at your facility.

The sketches shown here depict 10-800 temperature and 10-782 level switches assembled to ERECTA SWITCH extension components. Here's a combination that can solve water level control requirements where hot or cold extremes are of concern.

G800-1A

MODES OF OPERATION

Normally open and normally closed versions are available. Normally open is designated as type "CR" and closes its contacts on rising temperature.

Normally closed is designated as type "C" and opens its contacts on rising temperature. *Contact form designation and fixed temperature set point code letter, is embossed on the hex of the assembly.*

(Pepi Type C) Contacts open on rise		(Pepi Type CR) Contacts close on rise	
Temperature Set Point °C	Identity Code Letter	Temperature Set Point °C	Identity Code Letter
0-5	A	0-5	I
40	B	40	J
50	C	50	K
60	D	60	L
70	E	70	M
80	F	80	N
90	G	90	O
100	H	100	P

ELECTRICAL RATING

Contact rating	6 AMP, 120V, 60 Hz, Resistive
*UL file E37151	Pepi (R) Models C and CR Portage Electric Products, Inc. North Canton, OH 44720
Reactive Load	5 AMP 120V, 60 Hz Inductive
DC	2 AMP MAX @ 240 UDC Resistive

MATERIALS OF CONSTRUCTION

10-800-PP-□	(Gray) Polypropylene
10-800-AC-□	(Red) Acetal
10-800-KR-□	(Natural) Kynar PUDF

APPLICATION ENVIRONMENT

Pressure	50 PSI MAX @ 20°C	Derate, Zero @ 90°C
Temperature	120°C MAX	---

THE BAD NEWS

Bi-metallic thermal sensing switches are not the best choice when fast response sensing is required. At best, even when optimum heat transfer conditions exist, the miniature, bi-metal switch sensor element, requires substantial time to respond to temperature changes. Response rate is further aggravated by the plastic sheath enclosure and thermal barriers which exist between the inside of the sheath and the metal case of the bi-metal switch element. Clearly, 10-800s are best suited for applications in which temperature change occurs slowly, I.E.; detecting the approach of freeze conditions. Or, detecting the approach of excessive temperature in large mass mediums.

Response rate will be affected by the nature and mass of the medium surrounding the fluted area of the device. Liquid mediums will generally result in faster heat conduction. Keep in mind, before the bi-metal switch will operate, the sheath mass must attain the temperature of the surrounding medium. Then, transfer the temperature through internal thermal barriers and finally, to the metal case of the switch element. Since this may take several seconds per degree temperature change, temperature overshoot can be expected and should, therefore, be included when considering this product.

THE GOOD NEWS

Here's an affordable thermostat, packaged for use in either gas or liquid. Its small, handles pilot loads at line voltage and can be mounted in a variety of ways. Moreover, it can be combined with other ERECTA SWITCH components so just about any mounting requirement is possible. And, it can be used in conjunction with our level switches, wiring receptacles, relay housings and beepers in compact, cost effective assemblies.

Within the limitations discussed above, 10-800s are unmatched. No other switch offers as much for less. And, each switch is 100% tested to assure quality and performance.

* UL component recognition applies to the Pepi switch thermostat. Observe applicable electrical codes when using this product.

G800-2