The Integrated Sensing Solution for Liquid Level and Temperature Monitoring

At the intersection of liquid level and thermal process control lies the Series 10 Combination Float Level Switch / Bimetal Temperature Switch Sets. These sets combine the ultra-reliable 10-782 float switch from our Series 10 family with the rugged, proven 11-800 bimetal temperature sensor from Series 11. Together, they deliver precise, dependable, and modular sensing for OEM environments where both level and temperature must be monitored or controlled within compact, cost-sensitive applications.

Two Proven Technologies—One Modular System

Each combination set begins with the 10-782 float switch element—renowned for its hermetically sealed reed switch and precision-ground Alnico magnet—paired with a slow-make, slow-break Series 11-800 bimetal switch to monitor process temperature. The level and temperature components are field-replaceable and mate with ERECTA SWITCH modular accessories, allowing rapid customization, simplified servicing, and precision design control.

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Temperature switches can be configured for normally open (CR) or normally closed (C) operation and activate at preset trip points from near freezing to 90°C. These SPST switches feature a plastic-encased bimetal sensor compatible with Polypropylene, Acetal, and PVDF housings—matching the full chemical resistance spectrum offered by Series 10 float components.

(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

ELECTRCAL RATING		
Contact rating		6 AMP, 120V, 60 Hz, Resistive
*UL file E37151		Pepi ® 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 VDC Resistive

MATERIALS OF CONSTRUCTION	
11-800-PP-☐	(Gray) Polypropylene
11-800-AC-☐	(Red) Acetal
11-800-KR-☐	(Natural) Kynar PVDF

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

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.

THE BAD NEWS

Bi-metallic thermal sensing switches are **not the best choice when fast response sensing is required.**

Even when optimal heat transfer conditions exist, the miniature bi-metal switch sensor element requires **substantial time** to respond to temperature changes.

Response rate is further **slowed** by:

- Plastic sheath insulation
- Internal thermal barriers
- The lag between sheath and switch case

Therefore, 11-800s are best suited for **slow temperature change applications**, such as:

- Freeze protection
- Overheating detection in large-mass mediums

Response time is also influenced by:

- The medium's nature (liquid conducts faster)
- The sheath must heat before switch activation
- Several seconds per °C may pass before actuation
- **Overshoot should be expected and factored into design.**

THE GOOD NEWS

- Affordable thermostat for **gas or liquid use**
- Handles **pilot loads at line voltage**
- Can be mounted in a variety of ways
- Compatible with other **ERECTA SWITCH** components
- Supports relay housings, receptacles, level switches, and alarms
- Enables compact, cost-effective control assemblies

Bottom Line:

Despite the response limitations, **11-800s are unmatched** in value. No other switch offers as much functionality for less cost.

Each unit is **100% tested** for quality and performance. *UL component recognition applies to the Pepi switch thermostat. Observe applicable electrical codes when using this product.*

FLOAT BUOYANCY IN SPECIFIC GRAVITY 1.0							
	Inches			MM			
Float	PP	AC	KR	PP	AC	KR	Medium
Exposed	.4	.35	.2	10.16	8.89	5.08	air
Submerged	.6	.65	.8	15.24	16.51	20.32	Water
Height	1.0	1.0	1.0	25.4	25.4	25.4	---

ELECTRICAL RATING		
KOFU A **STANDEX** ELECTRONICS JAPAN BRAND		
Contact life	ORD229 Data Sheet: https://standexelectronics.com/technical-library/technical-papers/datasheet-reed-switch-ord229	
Contact rating UL file E70063	70 VA*, 50W* *Resistive Standex Electronics Japan Corporation 1088-7,Otsu-machi,Kofu-shi Yamanashi, 400-0055, Japan	
Max Switching Voltage	300AC, 350DC	
Max Switching Current	AC 0.5AMP*, DC 0.7AMP*	

APPLICATION ENVIRONMENT		
Pressure (Hollow float)	100 PSI MAX @ 20°C	Derate, Zero @ 90°C
Temperature	90°C MAX	---
Specific Gravity	.8 MIN	Clear Liquid
Position Extreme	30° Cant MAX	Off Vertical

10-782 MODES OF OPERATION

The switch action of the 10-782 can be configured for either normally open or normally closed switch action pending upon the orientation of the float on the stem. The product is shipped with the float in the “magnets up” normally closed condition. To reverse this action, remove the float and retaining ring, turn the float over and reassemble the float and retaining ring.

Modular Rating Tables

Please refer to the ratings tables in the Series 10 and Series 11 Product Family Overviews for:

- Electrical contact ratings for 10-782 float switch components
- Thermal actuation ranges and SPST contact forms for 11-800 temperature switches

Combination sets inherit the full performance characteristics of each component in accordance with their material and installation method.

Why Choose Series 10 Combination Sets?

- Save space and wiring with two functions in one compact assembly
- Match any liquid media using three enclosure materials
- Field replaceable components reduce lifetime costs
- Fully compatible with all ERECTA SWITCH installation accessories
- Factory assembled or kitted to your specs—no custom tooling required

Choose Series 10 Combination Float Level and Temperature Switch Sets when you need modular sensing that’s built for real-world chemical environments, not just the lab.

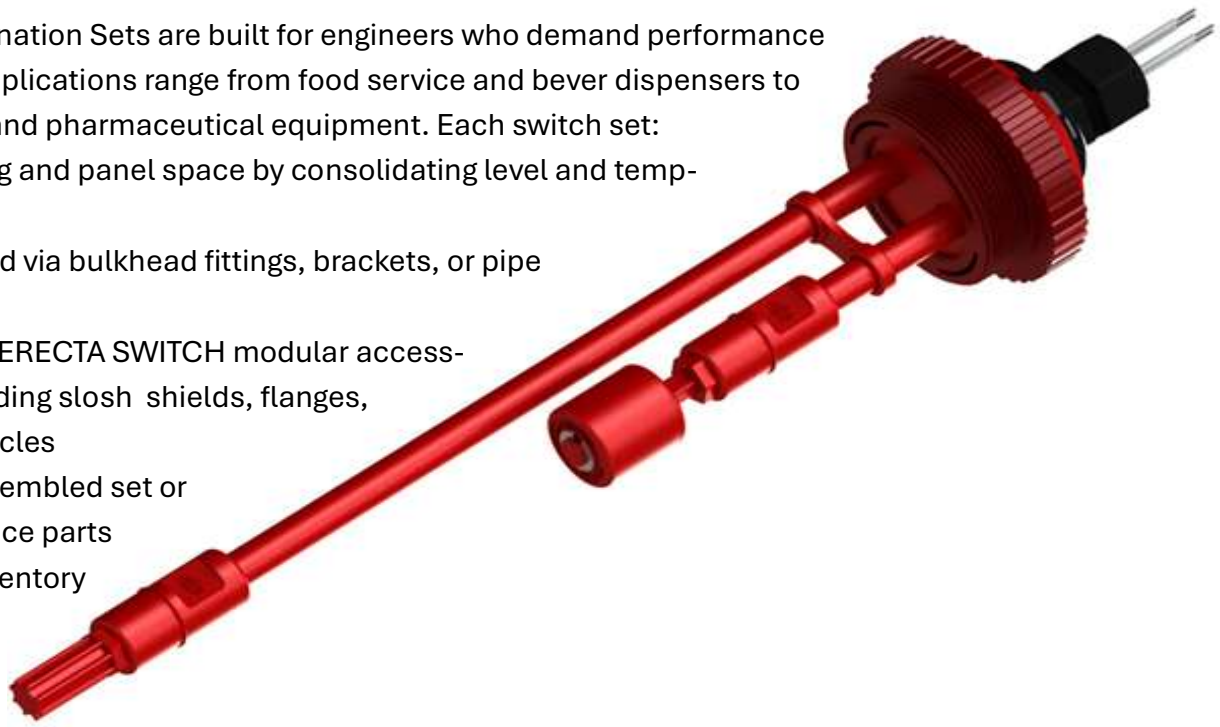
Get the advantage of Compac’s ERECTA SWITCH platform **and turn your level sensing into a design asset instead of a design burden. Choose Series 10 for reliable sensing, easy installation, full modularity, and unmatched chemical compatibility—built for OEMs that don’t settle.**

Chemical Compatibility with Three Proven Plastics

As with all ERECTA SWITCH assemblies, our combination sets are available in three materials to serve the widest range of chemical environments:

- Polypropylene (PP) – Ideal for water, soaps, and light acids
- Acetal (AC) – Suited for hydrocarbons such as gasoline and hydraulic oils
- PVDF Kynar (KR) – Best for corrosive acids, caustics, chlorine-based and high-purity applications

Engineered for OEM Flexibility



Series 10 Combination Sets are built for engineers who demand performance and flexibility. Applications range from food service and bever dispensers to chemical tanks and pharmaceutical equipment. Each switch set:

- Simplifies wiring and panel space by consolidating level and temperature control
- Can be mounted via bulkhead fittings, brackets, or pipe threads
- Utilizes the full ERECTA SWITCH modular accessory system including slosh shields, flanges, and wire receptacles
- Ships as unassembled set or as separate service parts for maximum inventory flexibility

Application Highlights

These combination sets have been field-proven in:

- Coffee brewers with water level & overheat protection
- Chemical tanks where both freeze prevention and level detection are essential
- Chiller bypass systems to verify coolant level and prevent thermal lockout
- Agricultural dispensers to ensure safe temperature and fluid volume during dosing

- Factory assembled or kitted to your specs—no custom tooling required

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