

# MODEL 123 Control Panel

Single phase, duplex capacitor start/run pump control with override.

Model 123 control panels are designed to alternately control two 120, 208, or 240 VAC single phase pumps requiring external starting components in water and sewage installations. The alternating action equalizes pump wear. In addition to the alternating pump control, these systems provide override control should either pump fail. If an alarm condition occurs, an alarm switch activates the audio/visual alarm system. Common applications include pump chambers and lift stations.

## PANEL COMPONENTS

1. **Enclosure** measures 16 X 14 X 6 inches (40.64 X 35.56 X 15.24 cm); NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use). **Note:** Options selected may increase enclosure size and change component layout.
2. **IEC Motor Contactors** control pumps by switching electrical lines.
3. **HOA Switches** for manual pump control (mounted on circuit board).
4. **Alternating Circuit Board** provides pump control and alternation (U.S. Patent 5,909,352).
5. **Green pump Run Indicator Lights** (mounted on circuit board).
6. **Incoming Pump Power Terminal Block / Pump Terminal Block**
7. **Circuit Breakers** (optional) provide pump disconnect and branch circuit protection.
8. **Control ON/OFF Switch** (mounted on circuit board).
9. **Ground Lugs**
10. **Float Status Indicator Lights** (mounted on circuit board).
11. **Control / Alarm Power Indicator Light** (mounted on circuit board).
12. **Capacitor Start Modules** - start/run capacitor kits must be ordered separately.

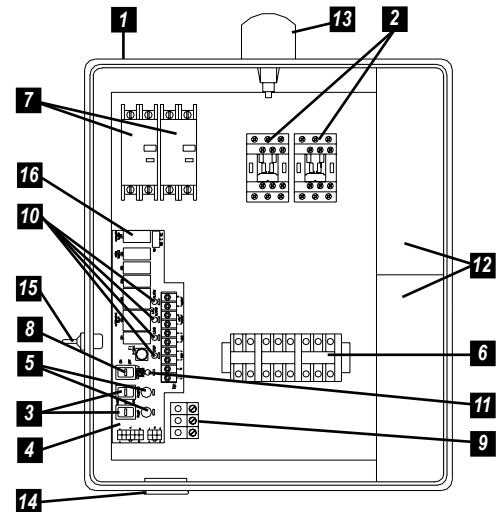
**NOTE:** Schematic/Wiring Diagram is located inside the panel on enclosure cover.

## STANDARD ALARM PACKAGE

13. **Red Alarm Beacon** provides 360° visual check of alarm condition.
14. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
15. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
16. **Horn Silence Relay** (mounted on circuit board).

**NOTE:** other options available.

Model 123 control panels cannot be returned. Please refer to the Product Return section.



Model Shown 1231W124X

## FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' SJE SignalMaster® control switches
- Complete with step-by-step installation instructions
- Five-year limited warranty. This express warranty does not apply to the motor start kit components. SJE-Rhombus will warranty motor start kit components supplied by SJE-Rhombus for one year. SJE-Rhombus makes no warranties of any type with respect to motor start kits supplied by a customer.



**SJE Rhombus**

PO Box 1708, Detroit Lakes, MN 56502  
1-888-DIAL-SJE • 1-218-847-1317

1-218-847-4617 Fax

email: customer.service@sjerhombus.com

**www.sjerhombus.com**

SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.  
SEE PRICE BOOK FOR LIST PRICE.

**123** **1** **W** **1** **2** **4** **H** **6A917A16C17A**

**MODEL 123**

**ALARM PACKAGE**

- 0 = select options or no alarm package
- 1 = alarm package (includes test/normal/silence switch, fuse, red light, horn)

**ENCLOSURE RATING**

- W = Weatherproof, NEMA 4X (engineered thermoplastic)

**STARTING DEVICE**

- 1 = IEC motor contactor 120/208/240V

**PUMP FULL LOAD AMPS**

- 0 = 0-7 FLA
- 1 = 7-15 FLA
- 2 = 15-20 FLA
- 3 = 20-30 FLA
- 4 = 30-40 FLA

**PUMP DISCONNECTS**

- 0 = no pump disconnect
- 4 = circuit breaker

**FLOAT SWITCH APPLICATION**

- H or L = pump down or pump up (select 17 option)
- X = no floats

**OPTIONS** *Listed below*

Start/run capacitor kits must be ordered separately (see option 12 below or call factory).

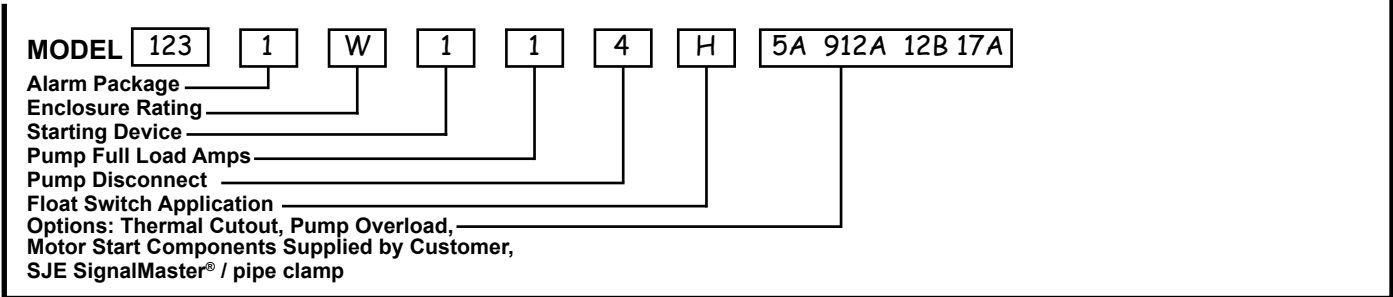
**★ ENCLOSURE UPSIZE** - If one or more of the ★ options are selected, add a one-time \$130.00 list enclosure upsize

CODE	DESCRIPTION	CODE	DESCRIPTION
<input type="checkbox"/>	1A Red beacon only / no audio	<input type="checkbox"/>	12B Customer supplied motor start components, mounted in enclosure by SJE-Rhombus
<input type="checkbox"/>	1C Horn only / no visual	<input type="checkbox"/>	12C Motor start component, mounted and supplied by SJE-Rhombus
<input type="checkbox"/>	3A Alarm flasher	<input type="checkbox"/>	★ 14B Main disconnect ( <i>rotary style, mounted through door, non-fused</i> ) ( <i>must select pump circuit breakers</i> )
<input type="checkbox"/>	3B Manual alarm reset	<input type="checkbox"/>	★ 0-20 FLA
<input type="checkbox"/>	★ 4A Redundant off ( <i>select option 4D if floats included</i> )	<input type="checkbox"/>	★ 20-80 FLA
<input type="checkbox"/>	4B Red redundant off indicator & alarm ( <i>must select 4A also</i> )	<input type="checkbox"/>	16A 10' cord in lieu of 20' ( <i>per float</i> )
<input type="checkbox"/>	4D Redundant off float ( <i>must select 4A &amp; 17 option</i> )	<input type="checkbox"/>	16B 15' cord in lieu of 20' ( <i>per float</i> )
<input type="checkbox"/>	★ 5A Thermal cutout/heat sensor auto reset ( <i>for pumps with thermal switch leads</i> )	<input checked="" type="checkbox"/>	16C 30' cord in lieu of 20' ( <i>per float</i> )
<input type="checkbox"/>	★ 5 E Seal fail circuit and indicator (2 wire)	<input type="checkbox"/>	16D 40' cord in lieu of 20' ( <i>per float</i> )
<input checked="" type="checkbox"/>	6A Auxiliary alarm contact, form C	<input checked="" type="checkbox"/>	17A SJE SignalMaster® / pipe clamp ● ( <i>per float</i> )
<input type="checkbox"/>	★ 8A Elapsed time meter	<input type="checkbox"/>	17B SJE SignalMaster® / externally weighted ● ( <i>per float</i> )
<input type="checkbox"/>	★ 8C Event (cycle) counter	<input type="checkbox"/>	17C Sensor Float® / internally weighted ▲ ( <i>per float</i> )
<input checked="" type="checkbox"/>	9_A Pump overload specify amperage after number 9 followed by letter "A". Example: 912A = 12 amp pump.	<input type="checkbox"/>	17D Sensor Float® / externally weighted ▲ ( <i>per float</i> )
<input checked="" type="checkbox"/>	0-30 FLA	<input type="checkbox"/>	17E Sensor Float® Mini / pipe clamp ▲ ( <i>per float</i> )
<input type="checkbox"/>	30-40 FLA	<input type="checkbox"/>	17F Sensor Float® Mini / externally weighted ▲ ( <i>per float</i> )
<input type="checkbox"/>	10E Lockable latch	<input type="checkbox"/>	17J Sensor Float® / pipe clamp ▲ ( <i>per float</i> )
<input type="checkbox"/>	★ 10F Lightning arrestor ( <i>must select pump circuit breakers</i> )	<input type="checkbox"/>	19B Lead lag selector switch
<input type="checkbox"/>	10K Anti-condensation heater	<input type="checkbox"/>	19F Fourth float to separate alarm from lag
<input type="checkbox"/>	11C NEMA 1 alarm panel ( <i>must select option 6A</i> )	<input type="checkbox"/>	19T TOA (Test/Off/Automatic) switches and pump run lights through door mounted
<input type="checkbox"/>	11D NEMA 4X alarm panel ( <i>must select option 6A</i> )	<input type="checkbox"/>	19U HOA (Hand/Off/Automatic) switches and pump run lights through door mounted
		<input type="checkbox"/>	19X Door mounted pump run indicator

● Mechanically-activated ▲ Mercury-activated

*If additional features are required, call the factory for a quote on an Engineered Custom control panel.*

**SAMPLE**



# SJE SIGNALMASTER® Control Switch

Mechanically-activated, narrow-angle float switch designed to activate pump control panels and alarms.

This narrow-angle sensing device is used to accurately monitor liquid levels in:

- potable water
- water
- sewage applications

The SJE SignalMaster® control switch is not sensitive to rotation.

## → Normally Open Model (high level)

The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

## Normally Closed Model (low level)

The control switch turns on (closes) when the float tips slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.



## FEATURES

- Passed NSF Standard 61 protocol by an approved Water Quality Association laboratory.
- Mechanically-activated, snap action contacts.
- High impact, corrosion resistant, polypropylene float housing.
- Not sensitive to rotation.
- Control differential of 1.5 inches (4 cm) above or below horizontal.
- UL Listed for use in water and sewage.
- CSA Certified.
- Three-year limited warranty.



## OPTIONS

This switch is available:

- CE certified unit available upon request.
- for normally open (high level) applications ~~or normally closed (low level) applications.~~
- in standard cable lengths of ~~10, 15, 20, or 30~~-feet and 3, 5, 6, or 10 meters (longer lengths available)
- with two mounting options that allow for flexibility in installation:

→ **Mounting Clamp:** for applications where the switch can be attached to a discharge pipe or similar mounting device.

**Externally Weighted:** for applications where the switch can be suspended from above.

## SPECIFICATIONS

**CABLE:** flexible 18 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

**FLOAT:** 2.74 inch diameter x 4.83 inch long (7.0 x 12.3 cm) high impact, corrosion resistant, polypropylene housing for use in sewage and water up to 140°F (60°C)

**MAXIMUM WATER DEPTH:** 30 feet (9 meters), 13 psi (90 kPa)

**ELECTRICAL:** 5 amp, 125/250 VAC, 50/60 Hz

**NOTE:** This switch is not recommended for controlling:

- electric loads less than 100 milliamps, 12 VAC
- non-arcing electric loads

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