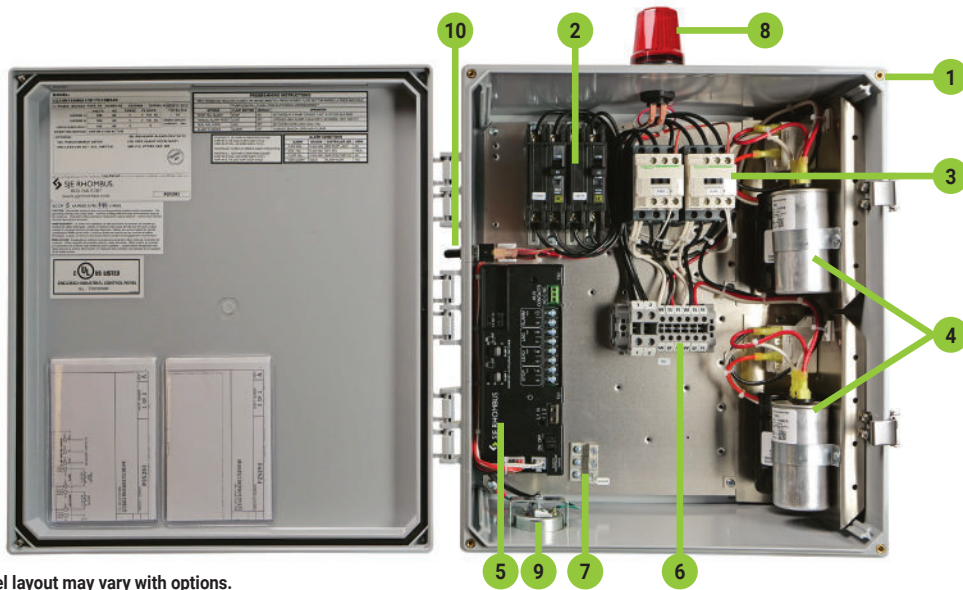# MODEL 123 CONTROL PANEL
Single Phase, Duplex Capacitor Start/Run Pump Control with Override

Panel layout may vary with options.

The Model 123 control panel is designed to control two 120, 208, or 240 VAC single phase pumps requiring external starting components in water and sewage installations. The controller is provided with a pump selector switch that can be set to alternate the pumps to equalize wear or to call either pump to activate first with the other pump to activate in lag condition. If an alarm occurs, the alarm activates the audible-visual system. The alarm conditions include: high water, float out-of-sequence, pump fail-to-run, seal failure (optional). Common applications include pump chambers and lift stations. This panel is available with the optional EZconnex® float connection system.

Other features include:

- Touch safe circuit board housing and low voltage 12 VDC float circuits
- Constant alarm (field programmable to flash)
- Alarm automatic reset (field programmable to manual alarm reset)
- Float out-of-sequence detection with automatic float reassignment
- Pump fail-to-run detection (field programmable to deactivate)
- Controller protected by four auto resettable fuses, no fuse replacement
- Three second lag pump delay time, prevents simultaneous pump start-up

Note: 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.

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)
2. Circuit breakers (optional) provide pump disconnect and branch circuit protection
3. IEC motor contactors control pumps by switching electrical lines
4. Capacitor start modules - start/run capacitor kits available
5. Duplex controller provides pump control, alternation and alarm
   a. HOA switches for manual control Hand/Off/Automatic
   b. Control power ON/OFF switch
   c. Power ON green LED indicator
   d. Float status red LED indicators
   e. Float push-to-test buttons
   f. Pump selector switch: Alt, 1-lead 2-lag, 2-lead 1 lag
   g. Auxiliary alarm contacts Form-C
   h. Terminal block: incoming power
   i. Terminal block: float switches
   j. Option: adjustable seal failure circuits and red LED indicators (must select option 5E when ordering)
6. Incoming pump power terminal block/pump terminal block
7. Ground lugs
8. Red LED beacon provides 360° visual check of alarm condition
9. Alarm horn provides audible alarm warning (83 to 85 decibel rating)
10. 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

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

Note: Other options available. Options selected may increase enclosure size and change component layout.

Note: Schematic/Wiring Diagram and Pump Specification Label are located inside the panel.

SJE RHOMBUS®

Capacitor Start/Run

MODEL 123 - Single phase, duplex capacitor start/run pump control.

123		W	1				6A19B
CONTROL PANEL	**ALARM PACKAGE**	**ENCLOSURE RATING**	**STARTING DEVICE**	**PUMP FULL LOAD AMPS**	**PUMP DISCONNECTS**	**FLOAT SWITCH APPLICATION**	**OPTIONS (LISTED BELOW)**

CONTROL PANEL	✓	123	Single Phase Duplex Capacitor Start/Run (includes Options 6A and 19B as standard)	
ALARM PACKAGE		0	Select Options or No Alarm Package	
		1	Alarm Package (includes test/normal/silence switch, 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	Pump Down (select Option 17 below)	
		L	Pump Up (select Option 17 below)	
		E	EZconnex® Float Switch System (select Option 34 or 35 below)	
		X	No Floats	

ENCLOSURE UPSIZE:
If you selected one or more of the ◆ options, **add a one-time charge** for enclosure upsize.

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

PRICING WORKSHEET

Model 123 Base Price _____

Alarm Package _____

Enclosure Rating _____

Starting Device _____

Pump Full Load Amps _____

Pump Disconnects _____

Float Switch Application _____

Total Options _____

Enclosure Upsize _____

TOTAL LIST PRICE _____

	OPTIONS	DESCRIPTION
	1A	Red Beacon Only / No Audio
	1C	Horn Only / No Visual
	3A	Alarm Flasher (Factory Programmed)
	3B	Manual Alarm Reset (Factory Programmed)
	4A ◆	Redundant Off (must also select Option 4D if floats are required)
	4B	Red Redundant Off Indicator & Alarm (must also select Option 4A)
	4D	Redundant Off Float (must also select Option 4A and Option 17)
	5A ◆	Thermal Cutout/Heat Sensor Auto Reset (for pumps with thermal switch leads)
	5E ◆	Seal Failure Circuit & Red Indicator (2 wire)
✓	6A	**Auxiliary Alarm Contact, Form C (included as standard)**
	8A ◆	Elapsed Time Meter
	8C ◆	Event (Cycle) Counter
	9_A	Pump Overload - Specify Amperage After Number 9 Followed by Letter "A" Example: 912A = 12 Amp Pump — 0-20 FLA / 30-40 FLA
	10E	Lockable Latch - NEMA 4X
	10F ◆	Lightning Arrestor (must select Pump Circuit Breakers)
	10K	Anti-condensation Heater
	11C	Additional NEMA 1 Remote Alarm Panel
	11D	Additional NEMA 4X Remote Alarm Panel
	12B	Customer Supplied Motor Start Components, Mounted in Enclosure by SJE Rhombus
	12C	Motor Start Component, Mounted and Supplied by SJE Rhombus
	14B ◆	Main Disconnect (rotary style, mounted through door, non-fused, padlockable in the OFF position, door interlock in the ON-position) — 0-20 FLA (total of both pumps) / 20-80 FLA (total of both pumps)

	OPTIONS	DESCRIPTION
	16A	10' Cord in Lieu of 20' Cord (per float)
	16B	15' Cord in Lieu of 20' Cord (per float)
	16C	30' Cord in Lieu of 20' Cord (per float)
	16D	40' Cord in Lieu of 20' Cord (per float)
	17C	Sensor Float® / Internally Weighted (per Float) - Mercury
	17D	Sensor Float® / Externally Weighted (per Float) - Mercury
	17E	Sensor Float® Mini / Pipe Clamp (per Float) - Mercury
	17F	Sensor Float® Mini / Externally Weighted (per Float) - Mercury
	17G	SJE MilliAmpMaster™ / Pipe Clamp (per Float) - Mechanical
	17H	SJE MilliAmpMaster™ / Externally Weighted (per Float) - Mechanical
	17J	Sensor Float® / Pipe Clamp (per Float) - Mercury
✓	19B	**Lead Lag Selector Switch (included as standard)**
	19F	Fourth Float to Separate Alarm Function from Lag
	19T	TOA (Test/Off/Automatic) Switches and Pump Run Lights Through Door Mounted
	19U	HOA (Hand/Off/Automatic) Switches and Pump Run Lights Through Door Mounted
	19X	Door Mounted Pump Run Indicator
	34D ■	EZconnex® 4-Port, 25', with 10' Floats (3) / Pipe Clamp, Sealing Plug
	34E ■	EZconnex® 4-Port, 50', with 10' Floats (3) / Pipe Clamp, Sealing Plug
	34G ■	EZconnex® 4-Port, 25', with 20' Floats (3) / Pipe Clamp, Sealing Plug
	34H ■	EZconnex® 4-Port, 50', with 20' Floats (3) / Pipe Clamp, Sealing Plug
	35D ■	EZconnex® 4-Port, 25', with 10' Floats (4) / Pipe Clamp
	35E ■	EZconnex® 4-Port, 50', with 10' Floats (4) / Pipe Clamp
	35G ■	EZconnex® 4-Port, 25', with 20' Floats (4) / Pipe Clamp
	35H ■	EZconnex® 4-Port, 50', with 20' Floats (4) / Pipe Clamp

■ EZconnex® mechanically-activated, narrow angle float switches with quick release connections

Capacitor Start/Run

SJE RHOMBUS