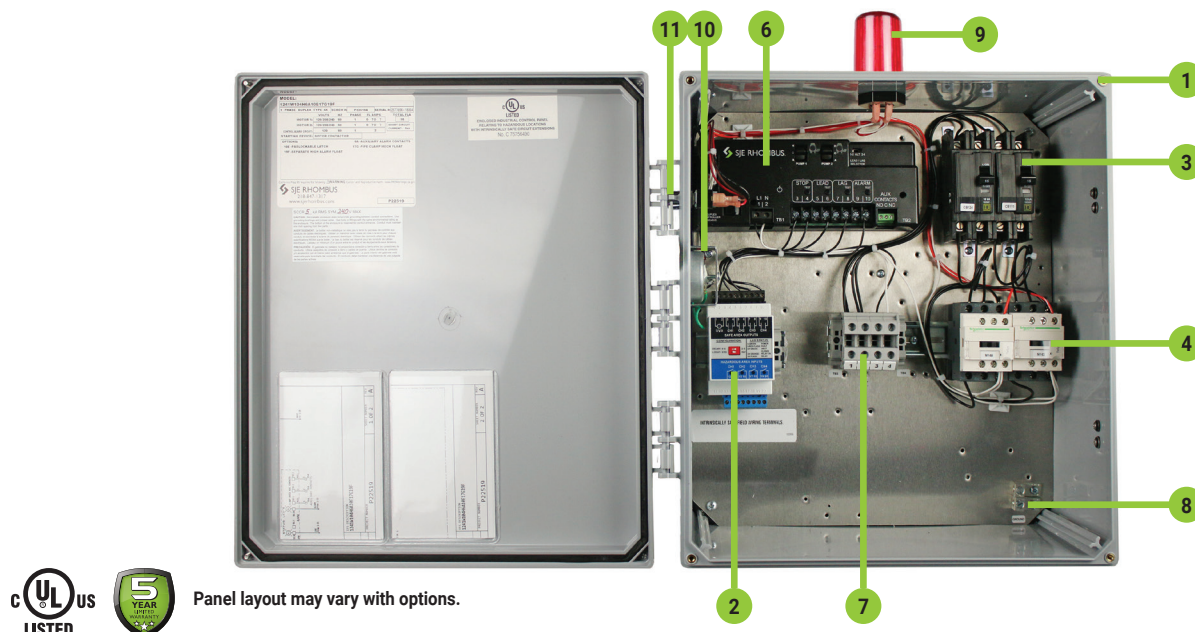


MODEL 124 CONTROL PANEL

Single Phase, Duplex Alternating Pump Control with Intrinsically Safe Circuits



Panel layout may vary with options.

The Model 124 control panel is designed to control two 120/208/240 VAC single phase pumps for applications requiring intrinsically safe float circuits. 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, lift stations, or other installations classified as hazardous locations requiring intrinsically safe circuits. 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. Intrinsically safe module limits the amount of energy to switches preventing ignition of flammable gasses
3. Circuit breakers (optional) provide pump disconnect and branch circuit protection
4. IEC motor contactors control pumps by switching electrical lines
5. Adjustable overloads (optional) provide thermal overload protection for pump (Not shown)
6. 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)
7. Input power terminal block
8. Ground lugs
9. Red LED beacon provides 360° visual check of alarm condition
10. Alarm horn provides audible alarm warning (83 to 85 decibel rating)
11. 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 124 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.



MODEL 124 - Single phase, duplex alternating pump control with intrinsically safe circuits.

124 CONTROL PANEL	ALARM PACKAGE	W ENCLOSURE RATING	STARTING DEVICE	PUMP FULL LOAD AMPS	PUMP DISCONNECTS	FLOAT SWITCH APPLICATION	6A19B OPTIONS (LISTED BELOW)
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CONTROL PANEL	✓	124	Single Phase Duplex Intrinsically Safe (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	Magnetic Motor Contactor 120/208/240V
		9	Magnetic Motor Contactor 120V only
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 120V (select STARTING DEVICE option 9 above)
			Circuit Breaker 120/208/240V (select STARTING DEVICE option 1 above)
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.

OPTIONS	DESCRIPTION
1A	Red Beacon Only / No Audio (must select "0" for ALARM PACKAGE)
1C	Horn Only / No Visual (must select "0" for ALARM PACKAGE)
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)
5M	Seal Fail Alarm Activation (must select Option 5E)
✓ 6A	Auxiliary Alarm Contact, Form C (included as standard)
6G ♦	Auxiliary Contact, Dry, Seal Fail, Normally Open (must select Option 5E)
8A ♦	Elapsed Time Meter
8C ♦	Event (Cycle) Counter
9_A	<div style="display: flex; justify-content: space-between;"> <div>Pump Overload - Specify Amperage After Number 9 Followed by Letter "A" Example: 912A = 12 Amp Pump</div> <div>0-25 FLA 25-40 FLA</div> </div>
10A	Clear Inner Swing-Out Door with Dead Front (lights and switches mounted on inner door) PANELS ORDERED WITH THIS OPTION CANNOT BE RETURNED
10E	Lockable Latch
10F	Lightning Arrestor (must select Pump Circuit Breaker)
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

PRICING WORKSHEET

Model 124 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 (must select "0" for ALARM PACKAGE)		
1C	Horn Only / No Visual (must select "0" for ALARM PACKAGE)		
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)		
5M	Seal Fail Alarm Activation (must select Option 5E)		
✓ 6A	Auxiliary Alarm Contact, Form C (included as standard)		
6G ♦	Auxiliary Contact, Dry, Seal Fail, Normally Open (must select Option 5E)		
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	0-25 FLA 25-40 FLA	
10A	Clear Inner Swing-Out Door with Dead Front (lights and switches mounted on inner door) PANELS ORDERED WITH THIS OPTION CANNOT BE RETURNED		
10E	Lockable Latch		
10F	Lightning Arrestor (must select Pump Circuit Breaker)		
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		

OPTIONS	DESCRIPTION		
14B ♦	Main Disconnect (rotary style, mounted through door, non-fused, padlockable in the OFF position, door interlock in the ON-position) (must select circuit breaker)	0-20 FLA (total of both pumps) 20-80 FLA (total of both pumps)	
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		
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