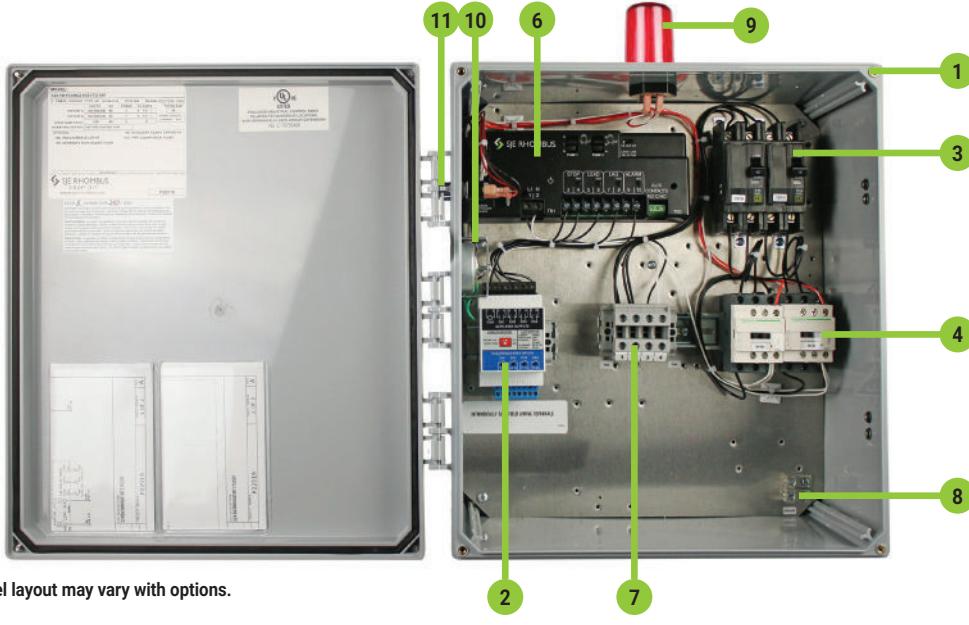


MODEL 124 CONTROL PANEL

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.



124	1	W	1	PUMP FULL LOAD AMPS	4	LEVEL CONTROL APPLICATION	6A10E19B
CONTROL PANEL	ALARM PACKAGE	ENCLOSURE RATING	STARTING DEVICE	PUMP FULL LOAD AMPS	PUMP DISCONNECTS	LEVEL CONTROL APPLICATION	OPTIONS (LISTED BELOW)
CONTROL PANEL	✓	124	Single Phase Duplex Intrinsically Safe (includes Options 6A and 19B as standard)				
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				
		0	0 - 7 FLA				
		1	7 - 15 FLA				
		2	15 - 20 FLA				
		3	20 - 30 FLA				
		4	30 - 40 FLA				
PUMP DISCONNECTS	✓	4	Circuit Breaker 120/208/240V				
		H	Pump Down (select Option 17 below)				
LEVEL CONTROL APPLICATION		L	Pump Up (select Option 17 below)				
		E	EZconnex® Float Switch System				
		X	No Floats				

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

PRICING WORKSHEET

Model 124 Base Price	_____
Alarm Package	_____
Enclosure Rating	_____
Starting Device	_____
Pump Full Load Amps	_____
Pump Disconnects	_____
Level Control Application	_____
Total Options	_____
TOTAL LIST PRICE	_____

OPTIONS	DESCRIPTION	
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)	
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 - NEMA 4X (included as standard, must select Enclosure Rating W above)	
10F	Lightning Arrestor (must select Pump Circuit Breaker)	
10K	Anti-condensation Heater	
12B	Customer Supplied Motor Start Components, Mounted in Enclosure by SJE Rhombus	
12C	Motor Start Component, Mounted and Supplied by SJE Rhombus	

For additional control panel options, please contact Technical Support at techsupport@sjeinc.com.

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)
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 (3 Floats) - Mercury	
17D	Sensor Float® / Externally Weighted (3 Floats) - Mercury	
17G	SJE MilliAmpMaster™ / Pipe Clamp (3 Floats) - Mechanical	
17H	SJE MilliAmpMaster™ / Externally Weighted (3 Floats) - Mechanical	
17J	Sensor Float® / Pipe Clamp (3 Floats) - 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	
33D	EZconnex® 3-Port, 25', with 10' Floats (3) / Pipe Clamp	
35D	EZconnex® 4-Port, 25', with 10' Floats (4) / Pipe Clamp	