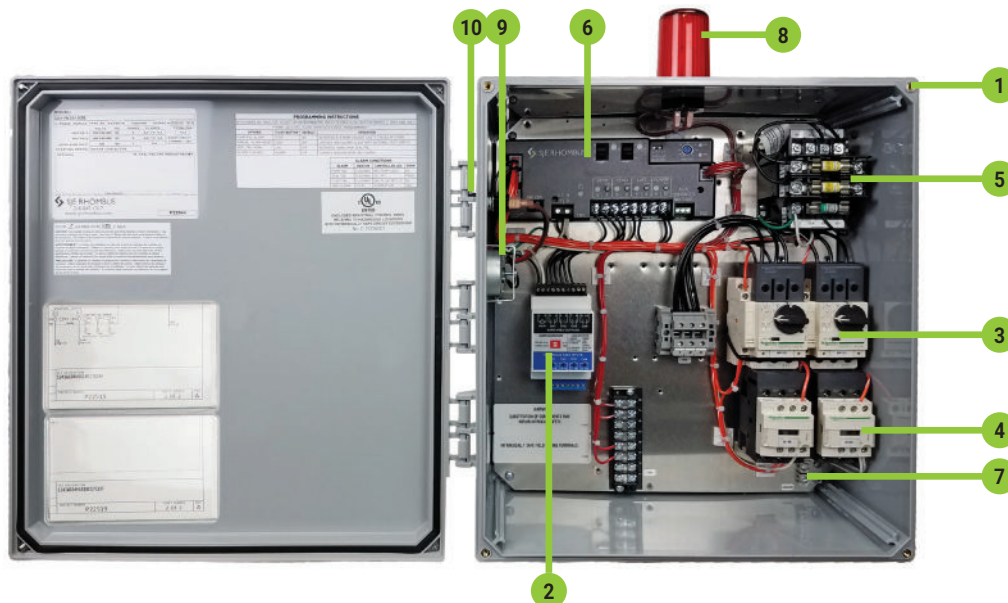


# MODEL 324 CONTROL PANEL

Three Phase, Duplex Alternating Pump Control with Intrinsically Safe Circuits



Panel layout may vary with options.

The Model 324 control panel is designed to control two 208/240/480 VAC three 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 optional EZconnex® float connection system.

Other features include:

- Touch safe circuit board housing and low voltage 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

## 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 gases
3. Motor protective switches provide adjustable overload, branch circuit protection and pump disconnect
4. IEC motor contactors control pumps by switching electrical lines
5. Multi-tap transformer (208/240/480 VAC primary or 600 VAC primary transformer) provides 120 VAC control/alarm voltage
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. 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 324 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 324 - Three phase, duplex pump control with intrinsically safe circuits.**

324 CONTROL PANEL		ALARM PACKAGE		W ENCLOSURE RATING		PUMP FULL LOAD AMPS		LEVEL CONTROL APPLICATION		6A10E19B OPTIONS (LISTED BELOW)	
CONTROL PANEL	✓	324	Three Phase Duplex Intrinsically Safe						\$4,578.35		
ALARM PACKAGE		0	Select Options or No Alarm Package						- \$40.17		
		1	Alarm Package (includes test/normal/silence switch, red light, & horn)						Base		
ENCLOSURE RATING	✓	W	Weatherproof, NEMA 4X (engineered thermoplastic)						Base		
PUMP FULL LOAD AMPS		208/240/480V				600V					
		001	1.0 - 1.6 FLA			005	1.0 - 1.6 FLA		Base		
		101	1.6 - 2.5 FLA			105	1.6 - 2.5 FLA		Base		
		201	2.5 - 4.0 FLA			205	2.5 - 4.0 FLA		Base		
		301	4.0 - 6.3 FLA			305	4.0 - 6.3 FLA		Base		
		401	6.0 - 10.0 FLA			405	6.0 - 10.0 FLA		Base		
		511	9.0 - 14.0 FLA			515	9.0 - 14.0 FLA		\$86.52		
		611	13.0 - 18.0 FLA			615	13.0 - 18.0 FLA		\$86.52		
		621	17.0 - 23.0 FLA			625	17.0 - 23.0 FLA		\$114.33		
		701	20.0 - 25.0 FLA			705	20.0 - 25.0 FLA		\$114.33		
LEVEL CONTROL APPLICATION		H	Floats - Pump Down (select Option 17 below)						See Options		
		L	Floats - Pump Up (select Option 17 below)						See Options		
		E	EZconnex® Float Switch System						See Options		
		X	No Floats						Base		

PRICING WORKSHEET

**Model 324 Base Price** \$4,578.35

Alarm Package \_\_\_\_\_

Enclosure Rating \_\_\_\_\_

Pump Full Load Amps \_\_\_\_\_

Level Control Application \_\_\_\_\_

Total Options \_\_\_\_\_

**TOTAL LIST PRICE** \_\_\_\_\_

OPTIONS				DESCRIPTION				LIST PRICE		
	4A	Redundant Off (must also select Option 4D if floats are required)				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)	\$515.00	
	4B	Red Redundant Off Indicator & Alarm (must also select Option 4A)					20-50 FLA (total of both pumps)	\$592.25		
	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)				16C	30' Cord in Lieu of 20' Cord (per float)		\$8.24	
	5E	Seal Failure Circuit & Red Indicator (2 wire)				16D	40' Cord in Lieu of 20' Cord (per float)		\$16.48	
✓	6A	Auxiliary Alarm Contact, Form C (included as standard)				17C	Sensor Float® / Internally Weighted (3 Floats) - Mercury		\$170.10	
	6G	Auxiliary Contact, Dry, Seal Fail, Normally Open (must select Option 5E)				17D	Sensor Float® / Externally Weighted (3 Floats) - Mercury		\$176.40	
	8A	Elapsed Time Meter				17G	SJE MilliAmpMaster™ / Pipe Clamp (3 Floats) - Mechanical		\$120.51	
	8C	Event (Cycle) Counter				17H	SJE MilliAmpMaster™ / Externally Weighted (3 Floats) - Mechanical		\$148.32	
	10A	Clear Inner Swing-Out Door with Dead Front (lights and switches mounted on inner door) <b>PANELS ORDERED WITH THIS OPTION CANNOT BE RETURNED</b>				17J	Sensor Float® / Pipe Clamp (3 Floats) - Mercury		\$144.90	
✓	10E	Lockable Latch - NEMA 4X (included as standard, must select Enclosure Rating W above)				✓	19B	Lead Lag Selector Switch (included as standard)		\$0.00
	10G	Lightning Arrestor					19F	Fourth Float to Separate Alarm Function from Lag		\$40.17
	10K	Anti-condensation Heater					19T	TOA (Test/Off/Automatic) Switches and Pump Run Lights Through Door Mounted		\$216.30
							19U	HOA (Hand/Off/Automatic) Switches and Pump Run Lights Through Door Mounted		\$216.30
							19X	Door Mounted Pump Run Indicator		\$216.30
							33D	EZconnex® 3-Port, 25', with 10' Floats (3) / Pipe Clamp		\$350.27
							35D	EZconnex® 4-Port, 25', with 10' Floats (4) / Pipe Clamp		\$424.73

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