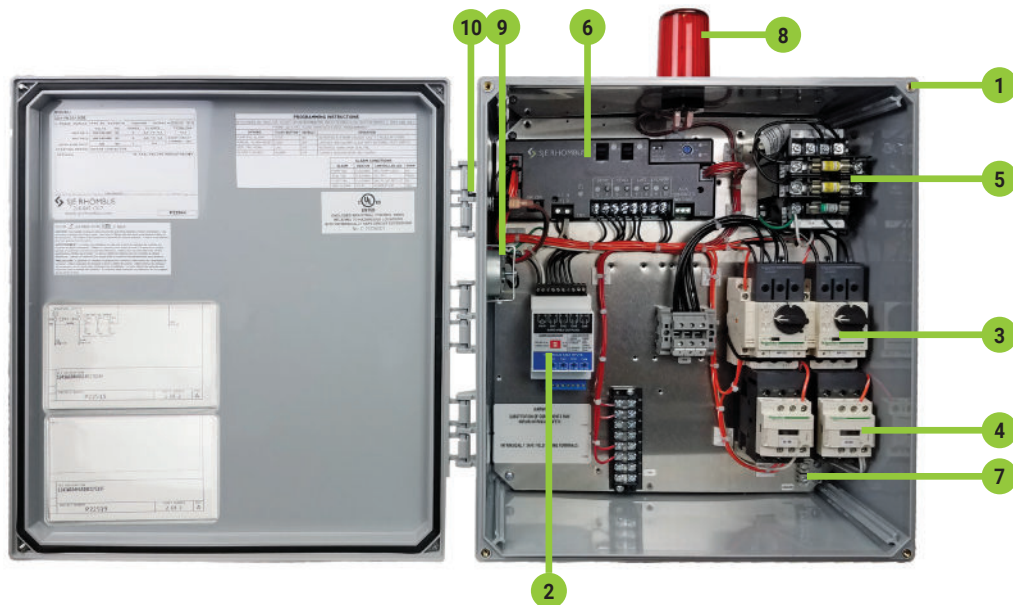# MODEL 324 CONTROL PANEL
Three Phase, Duplex Alternating Pump Control with Intrinsically Safe Circuits

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.

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MODEL 324 - Three phase, duplex pump control with intrinsically safe circuits.

324		W			6A19B
CONTROL PANEL	**ALARM PACKAGE**	**ENCLOSURE RATING**	**PUMP FULL LOAD AMPS**	**FLOAT SWITCH APPLICATION**	**OPTIONS (LISTED BELOW)**

CONTROL PANEL	✓	324	Three Phase Duplex Intrinsically Safe
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)

PUMP FULL LOAD AMPS		208/240/480V		600V	
		001	1.0 - 1.6 FLA	005	1.0 - 1.6 FLA
		101	1.6 - 2.5 FLA	105	1.6 - 2.5 FLA
		201	2.5 - 4.0 FLA	205	2.5 - 4.0 FLA
		301	4.0 - 6.3 FLA	305	4.0 - 6.3 FLA
		401	6.0 - 10.0 FLA	405	6.0 - 10.0 FLA
		511	9.0 - 14.0 FLA	515	9.0 - 14.0 FLA
		611	13.0 - 18.0 FLA	615	13.0 - 18.0 FLA
		621	17.0 - 23.0 FLA	625	17.0 - 23.0 FLA
		701	20.0 - 25.0 FLA	705	20.0 - 25.0 FLA

FLOAT SWITCH APPLICATION	H	Floats - Pump Down (select Option 17 below)
	L	Floats - Pump Up (select Option 17 below)
	E	EZconnex® Float Switch System (select Option 34 or 35 below)
	X	No Floats

PRICING WORKSHEET

Model 324 Base Price _____

Alarm Package _____

Enclosure Rating _____

Pump Full Load Amps _____

Float Switch Application _____

Total Options _____

Enclosure Upsize _____

TOTAL LIST PRICE _____

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
	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)
	5M	Seal Failure Alarm Activation (must selection 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
	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
	10G	Lightning Arrestor
	10K ◆	Anti-condensation Heater
	11C	Additional NEMA 1 Remote Alarm Panel (must select Option 6A)
	11D	Additional NEMA 4X Remote Alarm Panel (must select Option 6A)

	OPTIONS	DESCRIPTION	
	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)
			20-50 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

Intrinsically Safe

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