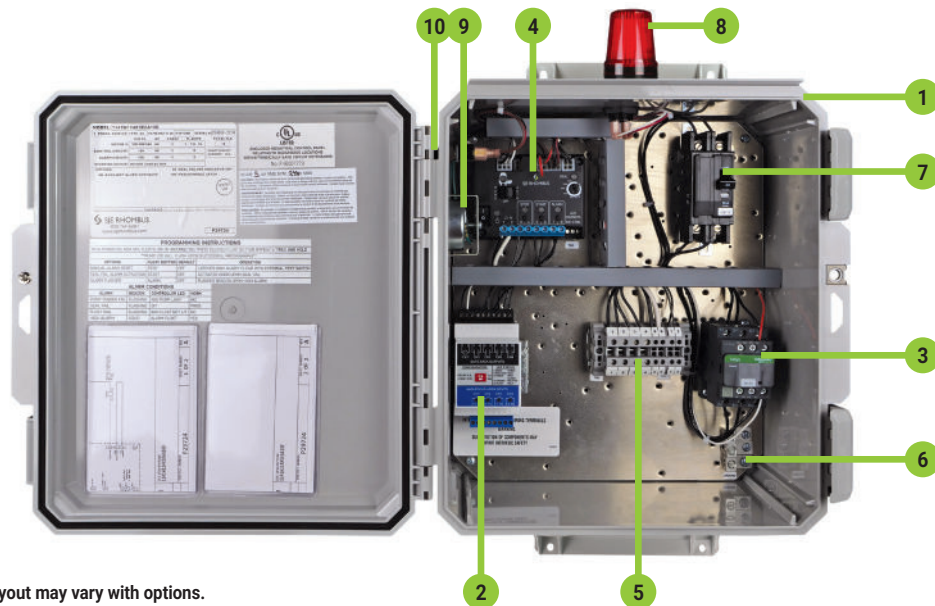


# MODEL 114 CONTROL PANEL

Single Phase, Simplex Pump Control with Intrinsically Safe Circuits



Panel layout may vary with options.

The Model 114 control panel is designed for applications requiring intrinsically safe float circuits or other circuit extensions. This panel will control one 120, 208, or 240 VAC single phase pump. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system. Common applications include pump chambers, lift stations, or other installations classified as hazardous locations requiring intrinsically safe circuits.

The Model 114 control panel features built in pump failure and float out of sequence detection. In addition, there are three user selectable field programmable options: alarm steady state or flashing; alarm auto reset or manual reset; and optional seal failure alarm beacon plus horn activation.

Simplex controller features include:

- Touch safe circuit board housing and low voltage 24 VDC float circuits
- Alarm (field programmable to flash)
- Alarm automatic reset (field programmable to manual alarm reset)
- Float out-of-sequence detection
- Pump contactor failure detection
- Controller protected by three auto resettable fuses (control, alarm, and pump 1)

**Note:** SJE Rhombus recommends separate pump and control/alarm power sources.

**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 14 x 12 x 6 inches (35.56 x 30.48 x 15.24 cm) NEMA 4X (ultraviolet stabilized thermoplastic, padlockable with integral mounting flanges, drip shield, (2) heavy duty cover latches, and stainless steel ¼ turn set screw; for outdoor or indoor use)
2. Intrinsically safe module limits the amount of energy to switches preventing ignition of flammable gases
3. IEC motor contactor controls pump by switching electrical lines
4. Simplex controller provides pump and alarm control; elevated in the enclosure for easy access and field wiring
  - a. HOA switch for manual control of the pump
  - b. Pump run green LED indicator
  - c. Control power ON/OFF switch
  - d. Power ON green LED indicator
  - e. Float push-to-test buttons
  - f. Float status red LED indicators
  - g. Auxiliary alarm contacts Form C
  - h. Option: adjustable seal failure circuit and red LED indicator (must select option 5E when ordering)
5. Input power terminal block
6. Ground lugs
7. Circuit breaker (optional) provides pump disconnect and branch circuit protection
8. Red LED beacon provides 360° visual check of alarm condition
9. Alarm horn provides audio warning of alarm condition (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.
11. Overload relay (optional) provides thermal overload protection for pump (**Not shown**)

Model 114 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 114 - Single phase, simplex pump control with intrinsically safe circuits.**

<b>114</b> CONTROL PANEL	<b>1</b> ALARM PACKAGE	<b>W</b> ENCLOSURE RATING	<b>1</b> STARTING DEVICE	<b>PUMP FULL LOAD AMPS</b>	<b>4</b> PUMP DISCONNECTS	<b>LEVEL CONTROL APPLICATION</b>	<b>6A10E</b> OPTIONS (LISTED BELOW)
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<b>CONTROL PANEL</b>	✓	114	Single Phase Simplex Intrinsically Safe	\$2,648.13
<b>ALARM PACKAGE</b>	✓	1	Alarm Package (includes test/normal/silence switch, fuse, red light, & horn)	Base
<b>ENCLOSURE RATING</b>	✓	W	Weatherproof, NEMA 4X (engineered thermoplastic)	Base
<b>STARTING DEVICE</b>	✓	1	Magnetic Motor Contactor 120/208/240V	Base
<b>PUMP FULL LOAD AMPS</b>		0	0 - 7 FLA	Base
		1	7 - 15 FLA	Base
		2	15 - 20 FLA	Base
		3	20 - 30 FLA	\$43.26
		4	30 - 40 FLA	\$71.07
<b>PUMP DISCONNECTS</b>	✓	4	Circuit Breaker 120/208/240V	Base
<b>LEVEL CONTROL APPLICATION</b>		H	Pump Down (select Option 17 below)	See Options
		L	Pump Up (select Option 17 below)	See Options
		E	EZconnex® Float Switch System	See Options
		X	No Floats	Base

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

**PRICING WORKSHEET**

<b>Model 114 Base Price</b>	<b>\$2,648.13</b>
Alarm Package	_____
Enclosure Rating	_____
Starting Device	_____
Pump Full Load Amps	_____
Pump Disconnects	_____
Level Control Application	_____
Total Options	_____
<b>TOTAL LIST PRICE</b>	_____

OPTIONS	DESCRIPTION	LIST PRICE
5A	Thermal Cutout/Heat Sensor Auto Reset (for pumps with thermal switch leads)	\$66.95
5E	Seal Failure Circuit & Red Indicator (2 wire)	\$255.44
✓ 6A	<b>Auxiliary Alarm Contact, Form C (included as standard)</b>	<b>0.00</b>
6G	Auxiliary Contact, Dry, Seal Fail, Normally Open (must select Option 5E)	\$108.15
8A	Elapsed Time Meter	\$108.15
8C	Event (Cycle) Counter	\$88.58
9_A	Pump Overload - Specify Amperage After Number 9 Followed by Letter "A" Example: 912A = 12 Amp Pump	0-25 FLA \$92.70
		25-40 FLA \$195.70
✓ 10E	<b>Lockable Latch - NEMA 4X (included as standard, must select Enclosure Rating W above)</b>	<b>\$0.00</b>
10F	Lightning Arrestor (select pump circuit breaker)	\$309.00
10K	Anti-condensation Heater	\$149.35
12B	Customer Supplied Motor Start Components, Mounted in Enclosure by SJE Rhombus	Call Factory
12C	Motor Start Component, Mounted and Supplied by SJE Rhombus	Call Factory

OPTIONS	DESCRIPTION	LIST PRICE
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 \$515.00
		20-40 FLA \$592.25
16C	30' Cord in Lieu of 20' Cord (per float)	\$8.24
16D	40' Cord in Lieu of 20' Cord (per float)	\$16.48
17G	SJE MilliAmpMaster™ / Pipe Clamp (3 Floats) - Mechanical	\$120.51
17H	SJE MilliAmpMaster™ / Externally Weighted (3 Floats) - Mechanical	\$148.32
19T	TOA (Test/Off/Automatic) Switch and Pump Run Light Through Door Mounted	\$108.15
19U	HOA (Hand/Off/Automatic) Switch and Pump Run Light Through Door Mounted	\$108.15
19X	Door Mounted Pump Run Indicator	\$108.15
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.