

MODEL 312 Control Panel

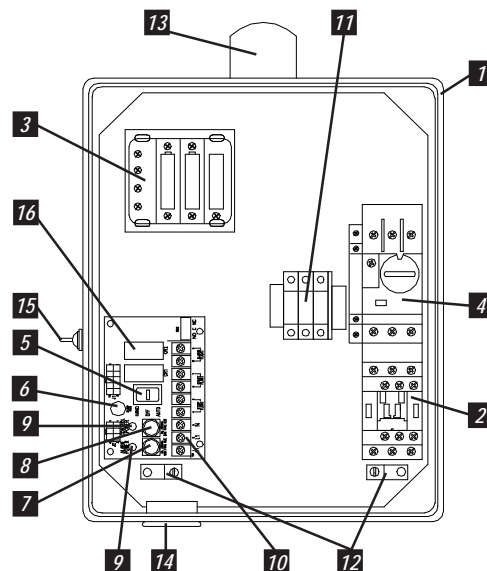
Three phase, simplex motor contactor control.

The Model 312 control panel provides industrial and commercial customers with a reliable means of controlling one three phase pump in water and sewage installations. Two control switches activate a IEC 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, irrigation systems, and lift stations.

PANEL COMPONENTS

1. **Enclosure** measures 12 x 10 x 6 inches (30.48 x 25.40 x 15.24 cm). NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use).
2. **IEC Motor Contactor** controls pump by switching electrical lines.
3. **Multi-Tap Transformer** (208/240/480 VAC primary) provides 120V control/ alarm voltage.
4. **Motor Protective Switch** provides adjustable overload, branch circuit protection and pump disconnect.
5. **HOA Switch** for manual pump control (mounted on circuit board).
6. **Green Pump Run Indicator Light** mounted on circuit board.
7. **Alarm Fuse** (mounted on circuit board).
8. **Control Fuse** (mounted on circuit board).
9. **Alarm and Control Power Indicators** (mounted on circuit board).
10. **Float Switch Terminal Block** (mounted on circuit board).
11. **Input Power Terminal Block**
12. **Ground Lugs**

NOTE: Schematic/Wiring Diagram is located inside the panel on enclosure cover.



Model Shown 3121W511X

STANDARD ALARM PACKAGE

13. **Red Alarm Beacon** provides 360° visual check of alarm condition.
14. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
15. **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.
16. **Horn Silence Relay** (mounted on circuit board).

NOTE: other options available.



FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' SignalMaster® control switches
- Complete with step-by-step installation instructions
- Five-year limited warranty

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**SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.
SEE PRICE BOOK FOR LIST PRICE.**

312

1

W

H

6A17A

MODEL 312

ALARMPACKAGE

- ☐
- 0 = select options or no alarm package
-
- ☒
- 1 = alarm package (includes test/normal/silence switch, fuse, red light, horn, & float)

ENCLOSURERATING

- ☒
- W = Weatherproof, NEMA 4X (engineered thermoplastic)

PUMP FULL LOAD AMPS

- ☐
- 001 = 1.0-1.6 FLA
-
- ☐
- 101 = 1.6-2.5 FLA
-
- ☐
- 201 = 2.5-4.0 FLA
-
- ☐
- 301 = 4.0-6.3 FLA
-
- ☐
- 401 = 6.0-10.0 FLA
-
- ☐
- 511 = 9.0-14.0 FLA
-
- ☐
- 611 = 13.0-18.0 FLA
-
- ☐
- 621 = 17.0-23.0 FLA
-
- ☐
- 701 = 20.0-25.0 FLA

FLOATSWITCHAPPLICATION

- ☒
- H or L = pump down or pump up (select 17 option)
-
- ☐
- X = no floats
-
- WITH alarm package
-
- WITHOUT alarm package

OPTIONS *Listed below*

CODE DESCRIPTION

- ☐
- 1A Red beacon only / no audio
-
- (must select 1E if floats included)*
-
- ☐
- 1C Horn only / no visual
-
- (must select 1E if floats included)*
-
- ☐
- 1E Alarm float
-
- ☐
- 3A Alarm flasher
-
- ☐
- 3B Manual alarm reset
-
- ☐
- 4A Redundant off
-
- (select option 4D if floats included)*
-
- ☐
- 4B Red redundant off indicator & alarm
-
- activation
- (must select 4A also)*
-
- ☐
- 4D Redundant off float
-
- (must select 4A option) (select 17 option)*
-
- ☐
- 5A Thermal cutout/heat sensor auto
-
- reset (for pumps w/thermal switch leads)
-
- ☐
- 5E Seal failure circuit & red indicator
-
- (2 wire)
-
- ☒
- 6A Auxiliary alarm contact, form C
-
- ☐
- 8A Elapsed time meter
-
- ☐
- 8C Event (cycle) counter
-
- ☐
- *10A Clear inner swing-out door w/dead front
-
- (lights and switches mounted on inner door)
-
- *Panels ordered with this option cannot be returned.
-
- ☐
- 10E Lockable latch - NEMA 4X
-
- ☐
- 10G Lightning arrestor
-
- ☐
- 10K Anti-condensation heater

CODE DESCRIPTION

- ☐
- 11C NEMA 1 alarm panel
- (must select option 6A)*
-
- ☐
- 11D NEMA 4X alarm panel
- (must select option 6A)*
-
- ☐
- 14B Main Disconnect
- (14X12 enclosure upgrade)*
-
- (rotary style, mounted through door, non-fused)
-
- ☐
- 16A 10' cord in lieu of 20'
- (per float)*
-
- ☐
- 16B 15' cord in lieu of 20'
- (per float)*
-
- ☐
- 16C 30' cord in lieu of 20'
- (per float)*
-
- ☐
- 16D 40' cord in lieu of 20'
- (per float)*
-
- ☒
- 17A SJE SignalMaster® / mounting strap ●
- (per float)*
-
- ☐
- 17B SJE SignalMaster® / externally weighted ●
- (per float)*
-
- ☐
- 17C Sensor Float® / internally weighted ▲
- (per float)*
-
- ☐
- 17D Sensor Float® / externally weighted ▲
- (per float)*
-
- ☐
- 17E Sensor Float® Mini / pipe clamp ▲
- (per float)*
-
- ☐
- 17F Sensor Float® Mini / externally weighted ▲
- (per float)*
-
- ☐
- 17J Sensor Float® / pipe clamp ▲
- (per float)*
-
- ☐
- 19T TOA (Test/Off/Automatic) switch and pump run light through .
-
- door mounted
-
- ☐
- 19U HOA (Hand/Off/Automatic) switch and pump run light through
-
- door mounted
-
- ☐
- 19X Door mounted pump run indicator
-
- ☐
- 21A SJE PumpMaster® in lieu of on/off switches ●
-
- ☐
- 21B SJE PumpMaster® Plus in lieu of on/off switches ●
-
- ☐
- 21C Super Single® in lieu of on/off switches ▲
-
- ☐
- 21D Double Float® in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

If additional features are required, call the factory for a quote on an Engineered Custom control panel.

SAMPLE

MODEL

312

1

W

401

H

3A 8A 17A

Alarm Package

Enclosure Rating

Pump Full Load Amps

Float Switch Application

Options: Flasher, Elapsed Time Meter,

SJE SignalMaster® / pipe clamp

SJE SIGNALMASTER® Control Switch

Mechanically-activated, narrow-angle float switch designed to activate pump control panels and alarms.

This narrow-angle sensing device is used to accurately monitor liquid levels in:

- potable water
- water
- sewage applications

The SJE SignalMaster® control switch is not sensitive to rotation.

Normally Open Model (high level)

The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)

The control switch turns on (closes) when the float tips slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.



FEATURES

- Passed NSF Standard 61 protocol by an approved Water Quality Association laboratory.
- Mechanically-activated, snap action contacts.
- High impact, corrosion resistant, polypropylene float housing.
- Not sensitive to rotation.
- Control differential of 1.5 inches (4 cm) above or below horizontal.
- Yellow colored cap for easy identification of normally open control switch.
- White colored cap for easy identification of normally closed control switch.
- UL Listed for use in water and sewage.
- CSA Certified.
- Five-year limited warranty.



OPTIONS

This switch is available:

- CE certified unit available upon request.
- for normally open (high level) applications ~~or normally closed (low level) applications.~~
- in standard cable lengths of ~~40, 45, 20, or 30~~ feet and 3, 5, 6, or 10 meters (longer lengths available)
- with two mounting options that allow for flexibility in installation:

➔ **Mounting Clamp:** for applications where the switch can be attached to a discharge pipe or similar mounting device.

~~**Externally Weighted:** for applications where the switch can be suspended from above.~~

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

FLOAT: 2.74 inch diameter x 4.83 inch long (7.0 x 12.3 cm) high impact, corrosion resistant, polypropylene housing for use in sewage and water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi (90 kPa)

ELECTRICAL: 5 amp, 125/250 VAC, 50/60 Hz

NOTE: This switch is not recommended for controlling:

- electric loads less than 100 milliamps, 12 VAC
- non-arcing electric loads

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