

# INSTALLER FRIENDLY SERIES® - IFS Single Phase Simplex Capacitor (Start/Run)

Single phase, simplex demand dose or timed dose, float or C-Level™ controlled system for pump control and system monitoring.

The IFS single phase simplex capacitor (start/run) control panel is designed to control one 120, 208, or 240 VAC single phase pump in water and sewage installations. The IFS single phase simplex capacitor (start/run) control panel features a simple, easy-to-use touch pad on the inner door for programming and monitoring pump and float operation.

The optional C-Level™ sensor is a pressure transducer that senses the liquid level in the tank and sends a signal to the IFS panel. Pump activation levels can be adjusted by using the panel touch pad. C-Level™ CL40 sensor operating range is 3-39.9 inches (7.6-101.3 cm). C-Level™ CL100 operating range is 3-99.5 inches (7.6-252.7 cm).

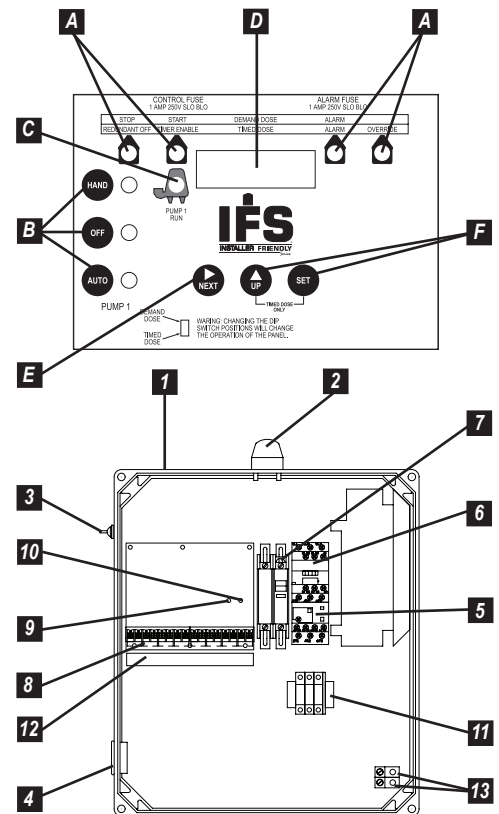
## TOUCH PAD FEATURES

- A. **Level Status Indicators** illuminate when floats or set points are activated. Alarm will activate if a float operates out of sequence.
- B. **HOA (Hand-Off-Automatic) Buttons** control pump mode with indication. Hand mode defaults to Automatic when stop level or redundant off level is reached.
- C. **Pump Run Indicator** illuminates when pump is called to run.
- D. **LED Display** shows system information including: level in inches or centimeters (C-Level™ only), mode, pump elapsed time (hh:mm), events (cycles), alarm counter, float error count, timed dose override counter (timed dose only), and ON/OFF times (timed dose only).
- E. **NEXT Push Button** toggles display.
- F. **UP and SET Push Buttons** set pump ON/OFF times (timed dose only) or activation levels (C-Level™ only).

## PANEL COMPONENTS

1. **Enclosure base** 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). **Note:** Options, voltage, and amp range selected may change enclosure size and component layout.
2. **Red Alarm Beacon** provides 360° visual check of alarm condition.
3. **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.
4. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
5. **Overload Relay** (optional) provides pump overload protection.
6. **IEC Motor Contactor** controls pump by switching electrical lines.
7. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.
8. **Float and Control/Alarm Incoming Terminal Block**
9. **Control Power Indicator/Fuse** indicator light illuminates if control power is present in panel. Alarm will activate if control fuse is blown.
10. **Alarm Power Indicator/Fuse** indicator light illuminates if alarm power is present in panel.
11. **Large Pump Connection Power Terminal Block**
12. **Terminal Block Float and Control/Alarm Incoming Power Wiring Label**
13. **Ground Lugs**

**NOTE:** Schematic/Wiring Diagram and Pump Specification Label are located inside the panel on enclosure cover.



Model Shown IFS71W114X912A8AC

Reg. Cdn Pat. & TM Off

C-Level™ Sensor US Patent No. 8,336,385; 8,567,242; 8,650,949

## FEATURES

- Entire control system 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' control switches
- Available with EZconnex® float system
- Complete with step-by-step installation instructions
- Five-year limited warranty. This express warranty does not apply to the motor start kit components. 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.



**SJE RHOMBUS**

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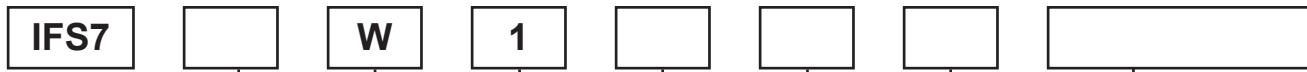
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**SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.  
SEE PRICE BOOK FOR LIST PRICE.**



## MODEL IFS7

### ALARM PACKAGE

1 = alarm package (includes test/normal/silence switch, fuse, red light, horn, & float)

### ENCLOSURE RATING

W = Weatherproof, NEMA 4X (engineered thermoplastic)

### STARTING DEVICE

1 = IEC motor contactor 120/208/240V

### PUMP FULL LOAD AMPS

- 0 = 0-7 FLA
- 1 = 7-15 FLA
- 2 = 15-20 FLA
- 3 = 20-30 FLA
- 4 = 30-40 FLA

### PUMP DISCONNECTS

- 0 = no pump disconnect
- 4 = circuit breaker

### FLOAT SWITCH APPLICATION

- H or L = pump down or pump up (select 17 option)
- E = Ezconnex® float switch system (select 33 or 34 option)  
WITH alarm package
- X = no floats  
WITH alarm package
- C = C-Level™ sensor (must select 24 or 29 option)  
(select option 3E and/or 4A & 4D for high water alarm and/or redundant off floats)

**Note:** Pump down applications only.

**Industry practices suggest that a secondary device, such as a float switch, be used for redundant activation of the high level alarm and pump shut off.**

### OPTIONS Listed below

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

- | CODE                                    | DESCRIPTION  |
|---|--|
| <input type="checkbox"/> 3A             | Alarm flasher  |
| <input type="checkbox"/> 3B             | Manual alarm reset   |
| <input type="checkbox"/> 3E             | High water alarm float (must select 17 option)<br><b>(Available only when Switch Applications = C)</b>   |
| <input type="checkbox"/> 4A             | Redundant off<br>(select option 4D if floats are required)   |
| <input type="checkbox"/> 4D             | Redundant off float<br>(must select 4A option) (must select 17 option)                                   |
| <input type="checkbox"/> 5A             | Thermal cutout/heat sensor auto reset<br>(for pumps w/thermal switch leads)                              |
| <input type="checkbox"/> 5E             | Seal failure circuit & red indicator (2 wire)  |
| <input type="checkbox"/> 6A             | Auxiliary alarm contacts, form C   |
| <input checked="" type="checkbox"/> 8AC | Display board includes: ETM counter, events (cycles) counter, alarm counter. (Included as standard).     |
| <input type="checkbox"/> 9_A            | Pump overload<br>specify amperage after number 9 followed by letter "A".<br>Example: 912A = 12 amp pump. |
| <input type="checkbox"/>                | 0-30 FLA   |
| <input type="checkbox"/>                | 30-100 FLA   |
| <input type="checkbox"/> 10E            | Lockable latch - NEMA 4X   |
| <input type="checkbox"/> 10F            | Lightning arrestor (must select pump circuit breakers, control and alarm power combined)                 |
| <input type="checkbox"/> 10K            | Anti-condensation heater   |
| <input type="checkbox"/> 11C            | NEMA 1 remote alarm panel<br>(must select option 6A)   |
| <input type="checkbox"/> 11D            | NEMA 4X remote alarm panel<br>(must select option 6A)  |
| <input type="checkbox"/> 12B            | Customer supplied motor start components, mounted in enclosure by SJE-Rhombus                            |
| <input type="checkbox"/> 12C            | Motor start component, mounted and supplied by SJE-Rhombus   |

- | CODE                         | DESCRIPTION   |
|------------------------------|---|
| <input type="checkbox"/> 16A | 10' cord in lieu of 20' (per float)                                 |
| <input type="checkbox"/> 16B | 15' cord in lieu of 20' (per float)                                 |
| <input type="checkbox"/> 16C | 30' cord in lieu of 20' (per float)                                 |
| <input type="checkbox"/> 16D | 40' cord in lieu of 20' (per float)                                 |
| <input type="checkbox"/> 17C | Sensor Float® / internally weighted ▲ (per float)                   |
| <input type="checkbox"/> 17D | Sensor Float® / externally weighted ▲ (per float)                   |
| <input type="checkbox"/> 17G | SJE MilliAmpMaster™ / pipe clamp ● (per float)                      |
| <input type="checkbox"/> 17H | SJE MilliAmpMaster™ / externally weighted ● (per float)             |
| <input type="checkbox"/> 17J | Sensor Float® / pipe clamp ▲ (per float)                            |
| <input type="checkbox"/> 24E | C-Level™ CL40 sensor with 4' vent tube & 20' cord                   |
| <input type="checkbox"/> 24F | C-Level™ CL40 sensor with 4' vent tube & 40' cord                   |
| <input type="checkbox"/> 24G | C-Level™ CL40 sensor with 8' vent tube & 20' cord                   |
| <input type="checkbox"/> 24H | C-Level™ CL40 sensor with 8' vent tube & 40' cord                   |
| <input type="checkbox"/> 24X | No C-Level™ CL40 sensor   |
| <input type="checkbox"/> 29A | C-Level™ CL100 sensor w/10' vent tube & 20' cord                    |
| <input type="checkbox"/> 29B | C-Level™ CL100 sensor w/10' vent tube & 40' cord                    |
| <input type="checkbox"/> 29X | No C-Level™ CL100 sensor  |
| <input type="checkbox"/> 33D | EZconnex® 3-Port, 25', w/10' floats (3) /pipe clamp *               |
| <input type="checkbox"/> 33E | EZconnex® 3-Port, 50', w/10' floats (3) /pipe clamp *               |
| <input type="checkbox"/> 33G | EZconnex® 3-Port, 25', w/20' floats (3) /pipe clamp *               |
| <input type="checkbox"/> 33H | EZconnex® 3-Port, 50', w/20' floats (3) /pipe clamp *               |
| <input type="checkbox"/> 34D | EZconnex® 4-Port, 25', w/10' floats (3) /pipe clamp, sealing plug * |
| <input type="checkbox"/> 34E | EZconnex® 4-Port, 50', w/10' floats (3) /pipe clamp, sealing plug * |
| <input type="checkbox"/> 34G | EZconnex® 4-Port, 25', w/20' floats (3) /pipe clamp, sealing plug * |
| <input type="checkbox"/> 34H | EZconnex® 4-Port, 50', w/20' floats (3) /pipe clamp, sealing plug * |

● Mechanically-activated ▲ Mercury-activated \* EZconnex® mechanically-activated, narrow angle float switches with quick release connections.