Manuals+ — User Manuals Simplified.

SJE RHOMBUS CL100 Demand Dose Float or C-Level Sensor Controlled System Owner's Manual

Contents

SJE RHOMBUS.

SJE RHOMBUS CL100 Demand Dose Float or C-Level Sensor Controlled System

Product Information

The Single Phase Duplex Capacitor (Start/Run) is a demand dose, float or C-LevelTM sensor controlled system for pump control and system monitoring. The panel utilizes the C-LevelTM sensor for continuous level monitoring in a tank. It can adjust pump activation levels using the panel touch pad. The C-LevelTM CL40 sensor has an operating range of 3-39.9 inches (7.6-101.3 cm), while the C-LevelTM CL100 has an operating range of 3-99.5 inches (7.6-252.7 cm). The touch pad features various indicators and buttons for easy control and monitoring. It includes level status indicators, HOA (Hand-Off-Automatic) buttons, pump run indicators, lead/lag selector, LED display for system information, NEXT push button, and UP and SET push buttons. The enclosure base measures 18 x 16 x 8 inches (45.72 x 40.64 x 20.32 cm) and is made of NEMA 4X fiberglass for outdoor or indoor use. The panel components include overload relays (optional), IEC motor contactors, circuit breakers (optional), float and control/alarm incoming power terminal block, control power indicator/fuse indicator light, alarm power indicator/fuse indicator light, large pump/incoming power terminal block, terminal block float and control/alarm incoming power wiring label, cap kits, and ground lugs.

The IFS duplex capacitor (start/run) control panel utilizes an innovative circuit board design to control two alternating 120/208/240V single phase pumps in water and sewage applications. IFS panels feature an easy-to-use touch pad on inner door for programming and system monitoring. The alternating action equalizes pump wear. In addition, this system provides override control should either pump fail. The panel configuration can be easily converted in the field to either a timed dose or demand dose. Available with the EZconnex® float system. The panel can utilize the C-Level™ sensor for continuous level monitoring. It senses the level in the tank and sends a signal to the 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).

NOTE: SJE Rhombus will warranty motor start kit components supplied by SJE Rhombus for one year. SJE Rhombus makes no warranty of any type with respect to motor start kits supplied by the customer.
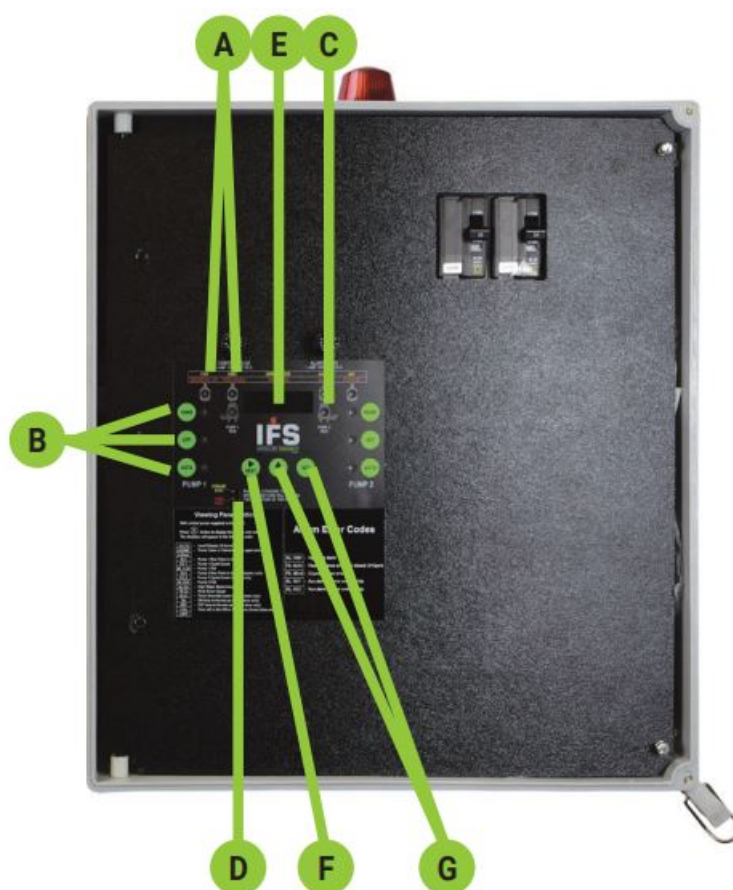
Product Usage Instructions

1. Connect the Single Phase Duplex Capacitor panel to the power source.
2. If using the C-LevelTM sensor, install it in the tank and ensure it is within the specified operating range.
3. Use the touch pad features to adjust pump activation levels and control pump mode.
4. Monitor the level status indicators to ensure proper float operation and alarm activation.
5. Toggle the lead/lag selector to alternate pump operation between pumps 1 and 2.
6. Refer to the LED display for system information including level, mode, elapsed time, events, alarm counter,

float error count, timed dose override counter, and ON/OFF times.

7. Use the NEXT push button to toggle the display and navigate through the system information.

8. Use the UP and SET push buttons to set pump ON/OFF times (timed dose only) and activation levels (C-LevelTM only).

9. Ensure that the enclosure is rated for outdoor or indoor use and that it meets the required specifications.

10. Refer to the schematic/wiring diagram and pump specification label inside the panel for further information.
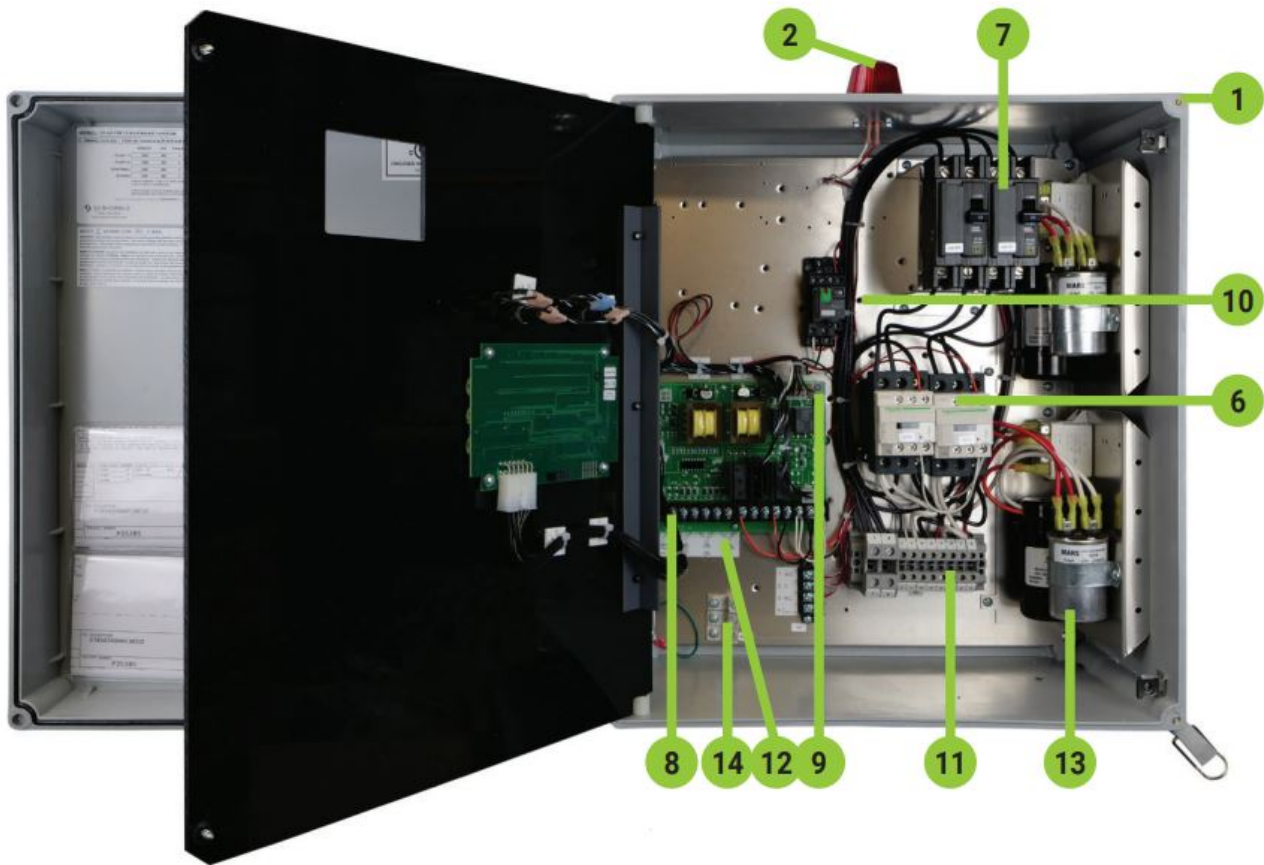
Note: The panel layout may vary with options selected. Make sure to follow the specific instructions provided for your chosen options.

TOUCHPAD 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 indicators will illuminate when pumps are called to run
- **D.** Lead/Lag selector toggles pump operation (alternate 1-2 and 2-1)
- **E.** LED display for system information including: level in inches or centimeters (C-Level™ only), mode, pumps 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)
- **F.** NEXT push button toggles display
- **G.** UP and SET push buttons set pump ON/OFF times (timed dose only) and activation levels (C-Level™ only)

COMPONENTS

1. Enclosure base measures 18 x 16 x 8 inches (45.72 x 40.64 x 20.32 cm); NEMA 4X fiberglass for outdoor or indoor use
2. Red LED 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 (Not shown)
4. Alarm horn provides audio warning of alarm condition (83 to 85 decibel rating) (Not shown)
5. Overload relays (optional) provide pumps overload protection (Not shown)
6. IEC motor contactors control pumps by switching electrical lines
7. Circuit breakers (optional) provide pump disconnect and branch circuit protection
8. Float and control/alarm incoming power 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/incoming power terminal block
12. Terminal block float and control/alarm incoming power wiring label
13. Cap kits
14. Ground lugs

Note: Options, voltage, and amp range selected may change enclosure size and component layout.
Note: Schematic/Wiring Diagram and Pump Specification Label are located inside the panel.

Control and System Monitoring

IFS	8	1	W	1				8AC
CONTROL PANEL	MODEL TYPE	ALARM PACKAGE	ENCLOSURE RATING	STARTING DEVICE	PUMP FULL LOAD AMPS	PUMP DISCONNECTS	FLOAT SWITCH APPLICATION	OPTIONS (LISTED BELOW)

CONTROL PANEL	✓	IFS	
MODEL TYPE	✓	8	Single Phase Duplex Capacitor (includes Option 8AC as standard)
ALARM PACKAGE	✓	1	Alarm Package (includes test/normal/silence switch, fuse, red light, & horn)
ENCLOSURE RATING	✓	W	Weatherproof, NEMA 4X (engineered thermoplastic)
STARTING DEVICE	✓	1	120/208/240V IEC Motor Contactor
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	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
		C	C-Level™ Sensor (select Option 24 or 29) Select Option 3E and/or 4A & 4D for high water alarm and/or redundant off floats. Pump down applications only.

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 when using the C-Level™ sensor.

ENCLOSURE UPSIZE: If you selected one or more of the options, add a one-time charge for enclosure upsize.

PRICING WORKSHEET

- IFS Single Phase Duplex Capacitor Base Price_____
- Alarm Package_____
- Enclosure Rating_____
- Starting Device_____
- Pump Full Load Amps_____

- Pump Disconnects_____
- Float Switch Application_____
- Total Options_____
- Enclosure Upsize_____
- TOTAL LIST PRICE_____

DESCRIPTION

	OPTIONS	DESCRIPTION
	3A	Alarm Flasher
	3B	Manual Alarm Reset
	3E	High Water Alarm Float (must also select Option 17) **Only Available with Float Switch Application = C**
	4A ◆	Redundant Off (must also select Option 4D if floats are required)
	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 and Red Indicator (2 Wire)
	6A	Auxiliary Alarm Contact, Form C
✓	8AC	**Display Board - Includes: ETM Counter, Events (Cycles) Counter, Alarm Counter and Lead/Lag Selector (included as standard)**
	9_A	Pump Overload - Specify Amperage after Number 9 Followed by Letter "A" Example: 912A = 12 amp pump — 0 - 30 FLA / 30 - 40 FLA
	10E	Lockable Latch - NEMA 4X
	10F	Lightning Arrestor (must select pump circuit breakers, control and alarm power combined)
	10K	Anti-condensation Heater
	11C	Additional NEMA 1 Remote Alarm Panel (must also select Option 6A)
	11D	Additional NEMA 4X Remote Alarm Panel (must also select Option 6A)
	12B	Customer Supplied Motor Start Components, Mounted in Enclosure by SJE Rhombus
	12C	Motor Start Components, Mounted and Supplied by SJE Rhombus

OPTIONS	DESCRIPTION
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
19F	Fourth Float to Separate Alarm Function from Lag
24E	C-Level™ CL40 Sensor with 4' Vent Tube and 20' Cord
24F	C-Level™ CL40 Sensor with 4' Vent Tube and 40' Cord
24G	C-Level™ CL40 Sensor with 8' Vent Tube and 20' Cord
24H	C-Level™ CL40 Sensor with 8' Vent Tube and 40' Cord
24X	No C-Level™ CL40 Sensor
29A	C-Level™ CL100 Sensor with 10' Vent Tube and 20' Cord
29B	C-Level™ CL100 Sensor with 10' Vent Tube and 40' Cord
29X	No C-Level™ CL100 Sensor
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.

www.sjerhombus.com
Toll Free 888-342-5753

www.sjerhombus.com
email: customer.service@sjeinc.com

Documents / Resources

SJE RHOMBUS CL100 Demand Dose Float or C-Level Sensor Controlled System [pdf] Owner's Manual
EC27110, CL40, CL100, CL100 Demand Dose Float or C-Level Sensor Controlled System, CL100, Demand Dose Float or C-Level Sensor Controlled System, -Level Sensor Controlled System, Sensor Controlled System, Controlled System

References

- ⚡ **Home - SJE Rhombus Control Products**

Manuals+,

- ⚡ **Home - SJE Rhombus Control Products**

Manuals+,