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ORDERING INFORMATION

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Possession of this CSI Controls product catalog does not constitute an offer to sell. To be qualified as a Factory Direct customer, please contact a CSI Sales Representative or the factory.

Prices, specifications, product offerings and policies are subject to change without notice.

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Returned Materials Authorization (RMA) numbers must be assigned to products being returned for warranty claim. Control panel models including PowerZone Series, Fusion Series, RK Series, and "Fusion" Plus Series; panels including any "non-catalog" options; obsolete panels; and panels more than one (1) year from date of manufacture cannot be returned for any reason. Contact your customer service representative for instructions on returning a product for warranty.

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For all products in this book: California Prop 65 requires the following:  WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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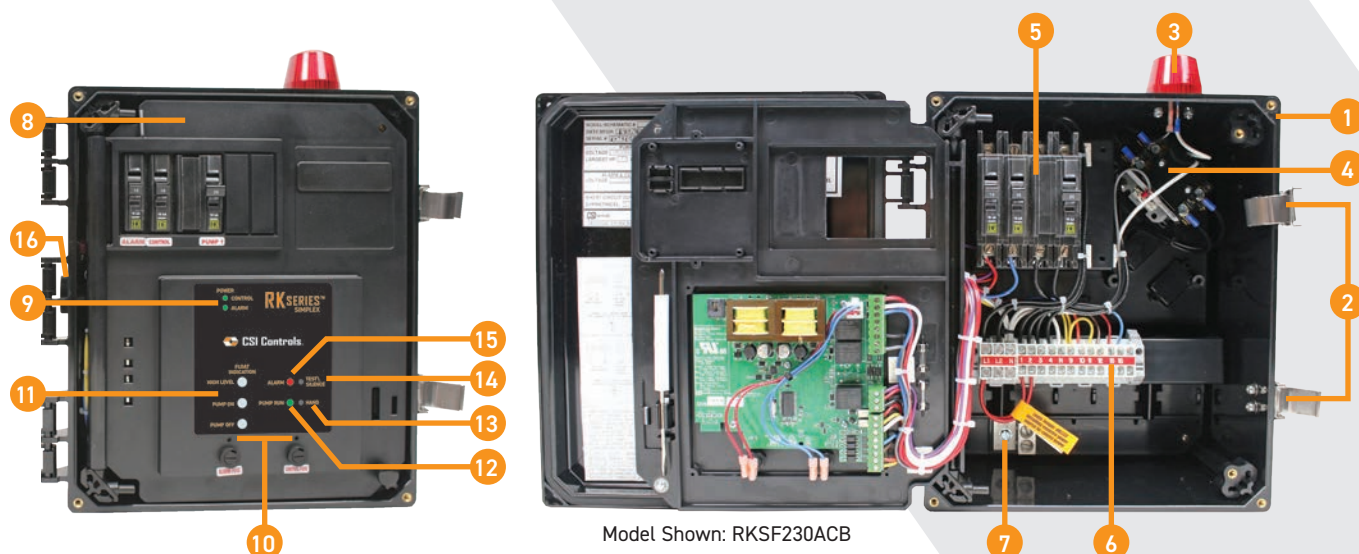


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RK Series™ Single Phase Simplex Control Panel

Single Phase, Simplex Demand Float Control System for Pump Control and System Monitoring



The RK Series™ Single Phase Simplex panel is designed to control one 115/230 VAC single phase pump in water and sewage installations. The protective inner door features panel operating status indicators, control buttons and provides access to the pump and control circuit breakers.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad.
- Float indication lights allow the user to see the status of each float and flashes should a float fail out-of-sequence.
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Timed dose control option available or can be easily retrofitted in the field



US Patent No.
7,075,443 and 7,471,207

OPTIONS



Optional Digital Interface Board (DIB)



Optional Digital Display Center (DDC)

Display options for viewing pump elapsed time, cycle counts and timed dose control

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. Magnetic motor contactors control the pump motor load by switching the electrical lines
5. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
6. Terminal strip field wiring of incoming power, floats, and pump
7. Ground lugs
8. Molded inner door protects from high voltage, and mounting location for indicators, control buttons, and controller circuit board
9. Green LEDs provide power indication for control and alarm circuit power
10. Red LEDs provide indication when either control or alarm fuse is blown
11. Float status LEDs provide tank level indication and float out-of-sequence detection (High Level - red, Pump Start Level - yellow, Pump Stop Level - green)
12. Green Pump Run LED provides indication when pump is called to run
13. Pump Hand/Run button operates the pump manually
14. Alarm Test/Silence button
15. Red LED alarm indication for high water
16. Piezo audible alarm



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RK SERIES™ SINGLE PHASE SIMPLEX CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKSF115CB	0-12	NEMA 4X	115-1	Motor & Control/Alarm
RKSF115ACB	0-12	NEMA 4X	115-1	Motor, Control & Alarm
RKSF230CB	0-12	NEMA 4X	230-1	Motor & Control/Alarm
RKSF230ACB	0-12	NEMA 4X	230-1	Motor, Control & Alarm
Options	Description			
AMB	Amber beacon (red beacon is standard)			
DC	Digital Display Center (DDC) 4-character LED			
DCTD	Time Dosing DDC 4-character LED			
FC20	(3) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(3) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(3) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(3) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(3) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(3) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(3) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(3) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(3) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(3) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(3) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(3) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
IB	Digital Interface Board (DIB) 32-character LCD			
IBTD	Time Dosing DIB 32-character LCD			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm and Redundant Off Circuitry (control switch not included)			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: magnetic motor contactor

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

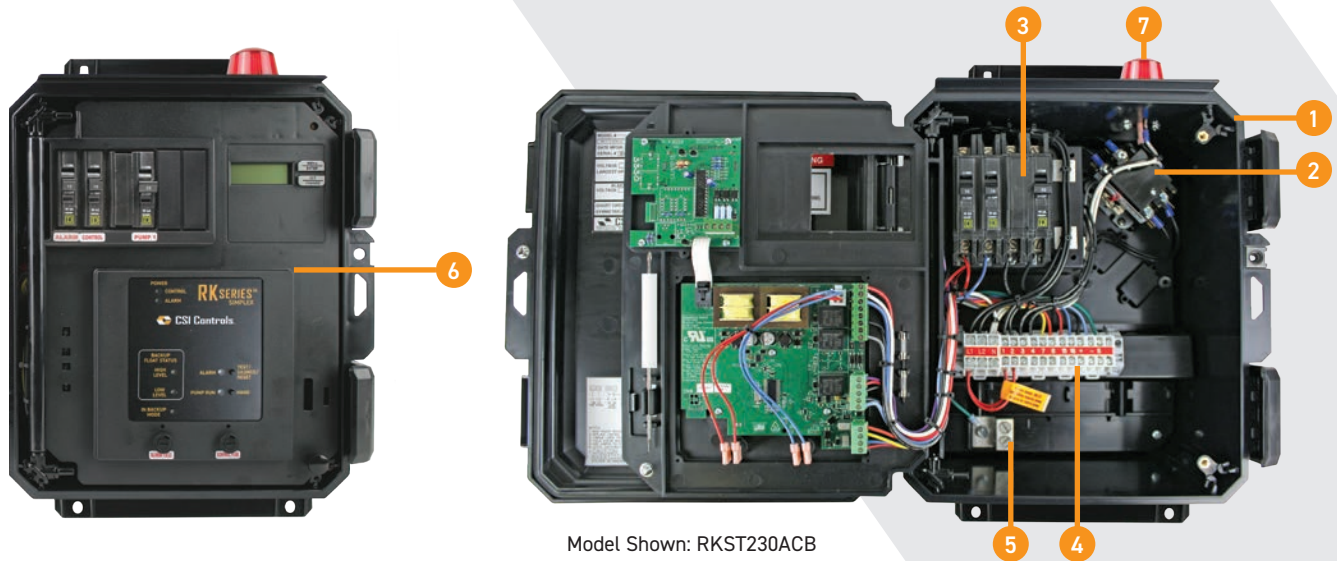
FLASHING RED LED ALARM LIGHT 360°



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RK Series™ Single Phase Simplex 4-20mA Control Panel

Single Phase, Simplex 4-20mA Continuous Level Control System for Pump Control and System Monitoring



Model Shown: RKST230ACB

The RK Series™ Single Phase Simplex 4-20 mA continuous level sensing panel is designed to control one 115/230 VAC single phase pump in water and sewage installations. The protective inner door features panel operating status indicators, LCD display, control buttons and provides access to the pump and control circuit breakers. Panel is designed for 4-20mA input and 2-float backup control.

FEATURES

- 4-20mA input for continuous level sensing
- High level backup float input with LED status indicator
- High level backup float mode provides pump timer control activation
- Low level redundant off float input with LED status indicator
- Digital backlit LCD for easy setup and system monitoring
- Timed dose or demand dose field programmable
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad, touch to test
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443 and 7,471,207

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
 - a. Padlockable cover with quarter turn stainless steel set screw and (2) heavy duty latches that can be secured for added safety
 - b. Drip shield
 - c. Integral mounting flanges
2. Magnetic motor contactor controls the pump motor load by switching the electrical lines
3. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
4. Terminal strip for field wiring of incoming power, backup floats, submersible level transmitter, and pump
5. Ground lugs
6. Molded inner door provides access to circuit breakers, and mounting location for indicators, display, and control buttons
 - a. Digital 32-character backlit LCD display
 - b. Green LEDs indicate control and alarm circuit power
 - c. Red LEDs indicate when either control or alarm fuse is blown
 - d. Backup Float Status LED indicator (green=low level redundant off, red=high level)
 - e. Amber LED indicates backup float control mode activated
 - f. Green Pump Run LED indicates when pump is called to run
 - g. Pump Hand/Run buttons operate the pump manually
 - h. Alarm Test/Silence reset button
 - i. Red LED indicate high water alarm
7. 360° red alarm beacon for visual alert
8. Piezo audible alarm (not shown)
9. Alarm silence touch pad (not shown)



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RK SERIES™ SINGLE PHASE SIMPLEX 4-20mA CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKST115CB	0-12	NEMA 4X	115-1	Motor & Control/Alarm
RKST115ACB	0-12	NEMA 4X	115-1	Motor, Control & Alarm
RKST230CB	0-12	NEMA 4X	230-1	Motor & Control/Alarm
RKST230ACB	0-12	NEMA 4X	230-1	Motor, Control & Alarm
Options	Description			
AMB	Amber beacon (red beacon is standard)			
FC20	(2) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(2) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(2) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(2) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(2) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(2) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(2) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(2) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(2) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(2) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(2) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(2) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)			
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)			
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)			
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)			
X	Auxiliary Alarm Contacts			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with integral mounting flange, padlockable cover with (2) heavy duty thermoplastic latches, and stainless steel 1/4 turn set screw

INNER DOOR: molded thermoplastic

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: magnetic motor contactor

PUMP AMPERAGE: up to 24 Amps

LCD DISPLAY: 2-16 character lines, backlight

ALARM HORN: 83-85 decibel rating

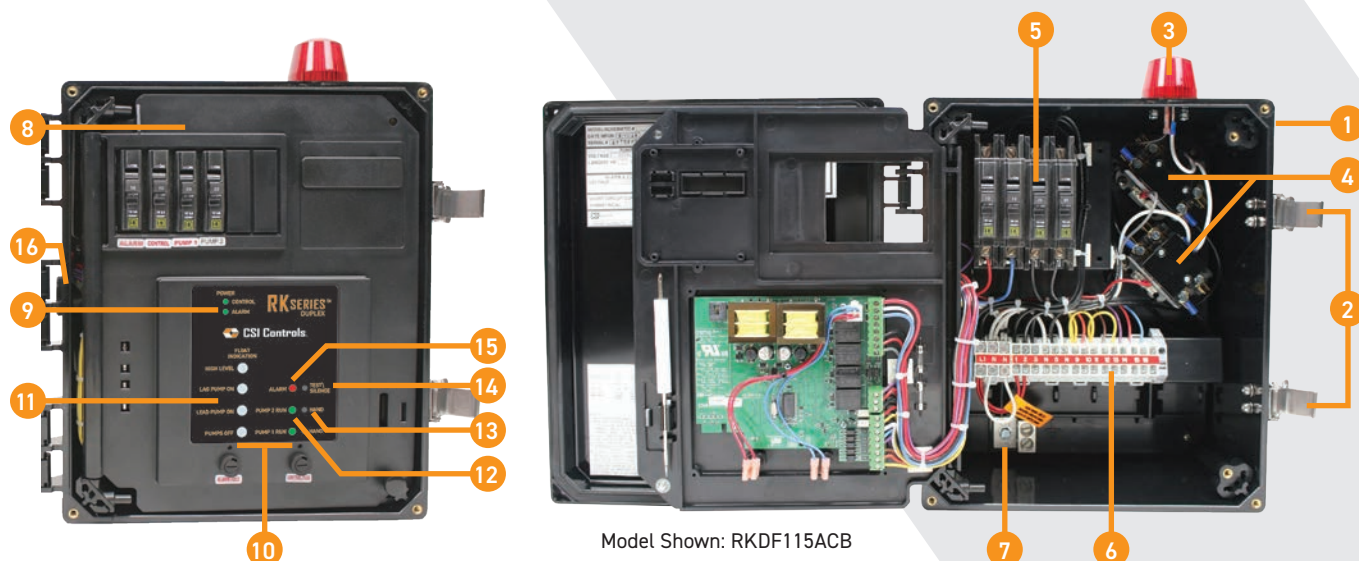
FLASHING RED LED ALARM BEACON: 360°



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RK Series™ Single Phase Duplex Control Panel

Single Phase, Duplex Demand Float Control System for Pump Control and System Monitoring



Model Shown: RKDF115ACB

The RK Series™ Single Phase Duplex panel is designed to control two 115/230 VAC single phase pumps in water and sewage installations. The protective inner door features panel operating status indicators, control buttons and provides access to the pump and control circuit breakers. The controller provides for alternation of the pumps for even usage.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad.
- Float indication lights allow the user to see the status of each float and flashes should a float fail out-of-sequence.
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Timed dose control option available or can be easily retrofitted in the field



US Patent No.
7,075,443 and 7,471,207

OPTIONS



Optional Digital Interface Board (DIB)



Optional Digital Display Center (DDC)

Display options for viewing pump elapsed time, cycle counts and timed dose control

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. Magnetic motor contactors control the pump motor load by switching the electrical lines
5. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
6. Terminal strip field wiring of incoming power, floats, and pumps
7. Ground lugs
8. Molded inner door protects from high voltage, and mounting location for indicators, control buttons, and controller circuit board
9. Green LEDs provide power indication for control and alarm circuit power
10. Red LEDs provide indication when either control or alarm fuse is blown
11. Float status LEDs provide tank level indication and float out-of-sequence detection (High Level - red, Pump Start Level - yellow, Pump Stop Level - green)
12. Green Pump Run LEDs provides indication when pumps are called to run
13. Pump Hand/Run buttons operate the pumps manually
14. Alarm Test/Silence button
15. Red LED alarm indication for high water
16. Piezo audible alarm



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RK SERIES™ SINGLE PHASE DUPLEX CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKDF115CB	0-12	NEMA 4X	115-1	Motor & Control/Alarm
RKDF115ACB	0-12	NEMA 4X	115-1	Motor, Control & Alarm
RKDF230CB	0-12	NEMA 4X	230-1	Motor & Control/Alarm
RKDF230ACB	0-12	NEMA 4X	230-1	Motor, Control & Alarm
Options	Description			
AMB	Amber beacon (red beacon is standard)			
DC	Digital Display Center (DDC) 4-character LED			
DCTD	Time Dosing DDC 4-character LED			
FC20	(4) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(4) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(4) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(4) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(4) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(4) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(4) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(4) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(4) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(4) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(4) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(4) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
IB	Digital Interface Board (DIB) 32-character LCD			
IBTD	Time Dosing DIB 32-character LCD			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm and Redundant Off Circuitry (control switch not included)			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pumps: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTERS: magnetic motor contactor

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

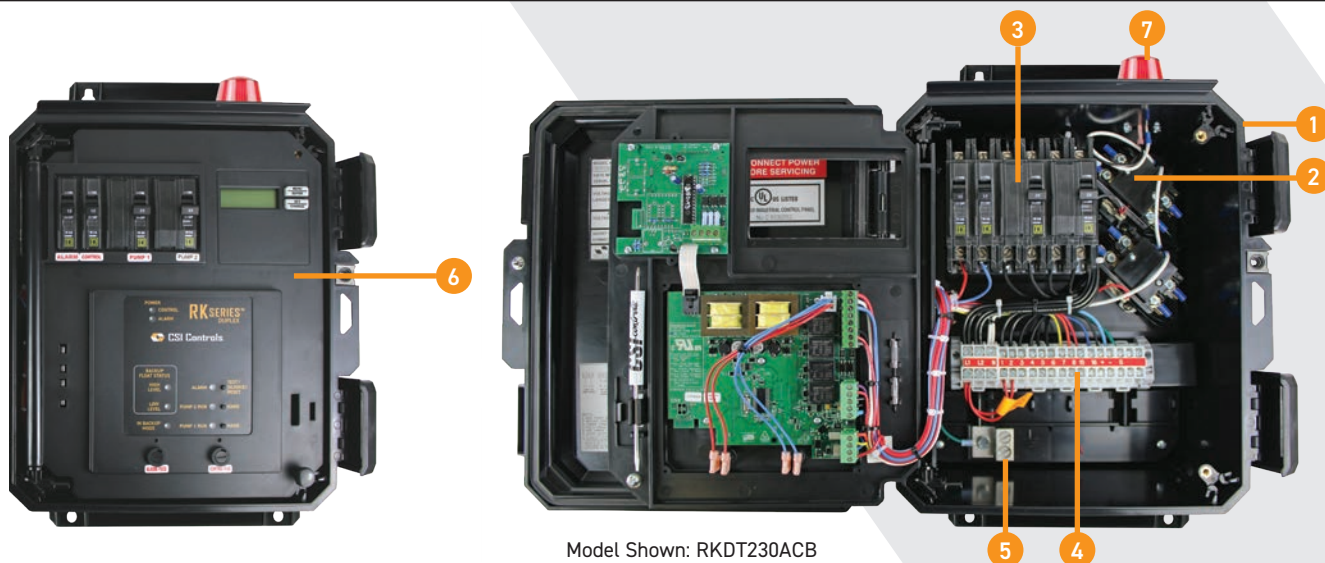
FLASHING RED LED ALARM LIGHT 360°



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RK Series™ Single Phase Duplex 4-20mA Control Panel

Single Phase, Duplex 4-20mA Continuous Level Control System for Pump Control and System Monitoring



Model Shown: RKDT230ACB

The RK Series™ Single Phase Duplex 4-20 mA continuous level sensing panel is designed to control two 115/230 VAC single phase pumps in water and sewage installations. The protective inner door features panel operating status indicators, LCD display, control buttons and provides access to the pump and control circuit breakers. The controller provides for alternation of the pumps for even usage. Panel is designed for 4-20mA input and 2-float backup control.

FEATURES

- 4-20mA input for continuous level sensing
- High level backup float input with LED status indicator
- High level backup float mode provides pump timer control activation
- Low level redundant off float input with LED status indicator
- Digital backlit LCD for easy setup and system monitoring
- Timed dose or demand dose field programmable
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad, touch to test
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443 and 7,471,207

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
 - a. Padlockable cover with quarter turn stainless steel set screw and (2) heavy duty latches that can be secured for added safety
 - b. Drip shield
 - c. Integral mounting flanges
2. Magnetic motor contactors control the pump motor load by switching the electrical lines
3. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
4. Terminal strip for field wiring of incoming power, backup floats, submersible level transmitter, and pumps
5. Ground lugs
6. Molded inner door provides access to circuit breakers, and mounting location for indicators, display, and control buttons
 - a. Digital 32-character backlit LCD display
 - b. Green LEDs indicate control and alarm circuit power
 - c. Red LEDs indicate when either control or alarm fuse is blown
 - d. Backup Float Status LED indicator (green=low level redundant off, red=high level)
 - e. Amber LED indicates backup float control mode activated
 - f. Green Pump Run LEDs indicate when pump is called to run
 - g. Pump Hand/Run buttons operate the pump manually
 - h. Alarm Test/Silence reset button
 - i. Red LED indicate high water alarm
7. 360° red alarm beacon for visual alert
8. Piezo audible alarm (not shown)
9. Alarm silence touch pad (not shown)



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RK SERIES™ SINGLE PHASE DUPLEX 4-20mA CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKDT115CB	0-12	NEMA 4X	115-1	Motor & Control/Alarm
RKDT115ACB	0-12	NEMA 4X	115-1	Motor, Control & Alarm
RKDT230CB	0-12	NEMA 4X	230-1	Motor & Control/Alarm
RKDT230ACB	0-12	NEMA 4X	230-1	Motor, Control & Alarm
Options	Description			
AMB	Amber beacon (red beacon is standard)			
FC20	(2) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(2) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(2) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(2) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(2) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(2) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(2) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(2) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(2) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(2) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(2) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(2) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)			
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)			
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)			
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)			
X	Auxiliary Alarm Contacts			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pumps: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with integral mounting flange, padlockable cover with (2) heavy duty thermoplastic latches, and stainless steel 1/4 turn set screw

INNER DOOR: molded thermoplastic

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTERS: magnetic motor contactors

PUMP AMPERAGE: up to 24 Amps

LCD DISPLAY: 2-16 character lines, backlight

ALARM HORN: 83-85 decibel rating

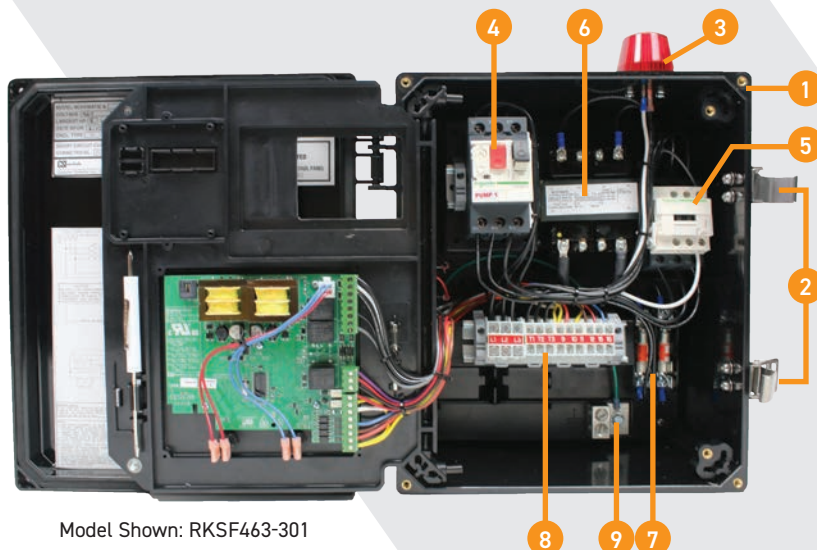
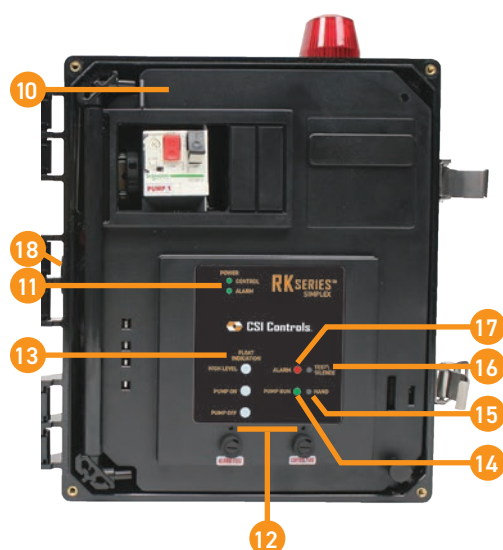
FLASHING RED LED ALARM BEACON: 360°



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RK Series™ Three Phase Simplex Control Panel

Three Phase, Simplex Demand Float Control System for Pumping Applications



Model Shown: RKSF463-301

The RK Series™ Three Phase Simplex panel is designed to control one 208/230/460 VAC three phase pump in water and sewage installations. The protective inner door features panel operating status indicators, control buttons and provides access to the pump motor protection switch.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad.
- Float indication lights allow the user to see the status of each float and flashes should a float fail out-of-sequence.
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Timed dose control option available or can be easily retrofitted in the field



US Patent No.
7,075,443 and 7,471,207

OPTIONS



Optional Digital Interface Board (DIB)



Optional Digital Display Center (DDC)

Display options for viewing pump elapsed time, cycle counts and timed dose control

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. Motor protective switch provides the adjustable overload, branch circuit protection, and pump disconnect
5. IEC motor contactor controls the pump motor load by switching the electrical lines
6. Multitap transformer (208/230/460 VAC primary) provides 120 VAC control/alarm voltage
7. Primary transformer voltage fuses provides transformer short circuit protection
8. Terminal strip field wiring of incoming power, floats, and pump
9. Ground lugs
10. Molded inner door protects from high voltage, and mounting location for indicators, control buttons, and controller circuit board
11. Green LEDs provides power indication for control and alarm circuit power
12. Red LEDs provide indication when either control or alarm fuse is blown
13. Float status LEDs provide tank level indication and float out-of-sequence detection (High Level - red, Pump Start Level - yellow, Pump Stop Level - green)
14. Green Pump Run LED provides indication when pump is called to run
15. Pump Hand/Run button operates the pump manually
16. Alarm Test/Silence button
17. Red LED alarm indication for high water
18. Piezo audible alarm



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RK SERIES™ THREE PHASE SIMPLEX CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKSF463-001	1.0-1.6	NEMA 4X	208/230/460-3	Motor
RKSF463-101	1.6-2.5	NEMA 4X	208/230/460-3	Motor
RKSF463-201	2.5-4.0	NEMA 4X	208/230/460-3	Motor
RKSF463-301	4.0-6.3	NEMA 4X	208/230/460-3	Motor
RKSF463-401	6.0-10.0	NEMA 4X	208/230/460-3	Motor
RKSF463-511	9.0-14.0	NEMA 4X	208/230/460-3	Motor
RKSF463-611	13.0-18.0	NEMA 4X	208/230/460-3	Motor
RKSF463-621	17.0-23.0	NEMA 4X	208/230/460-3	Motor
RKSF463-701	20.0-25.0	NEMA 4X	208/230/460-3	Motor
RKSF463-801	24.0-32.0	NEMA 4X	208/230/460-3	Motor
Options	Description			
AMB	Amber beacon (red beacon is standard)			
DC	Digital Display Center (DDC) 4-character LED			
DCTD	Time Dosing DDC 4-character LED			
FC20	(3) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(3) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(3) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(3) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(3) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(3) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(3) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(3) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(3) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(3) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(3) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(3) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
IB	Digital Interface Board (DIB) 32-character LCD			
IBTD	Time Dosing DIB 32-character LCD			
LA	Lightning Arrestor			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm and Redundant Off Circuitry (control switch not included)			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS**VOLTAGE SUPPLY:** 208/230/460 VAC 60 Hz 3Ø**ENCLOSURE:** 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

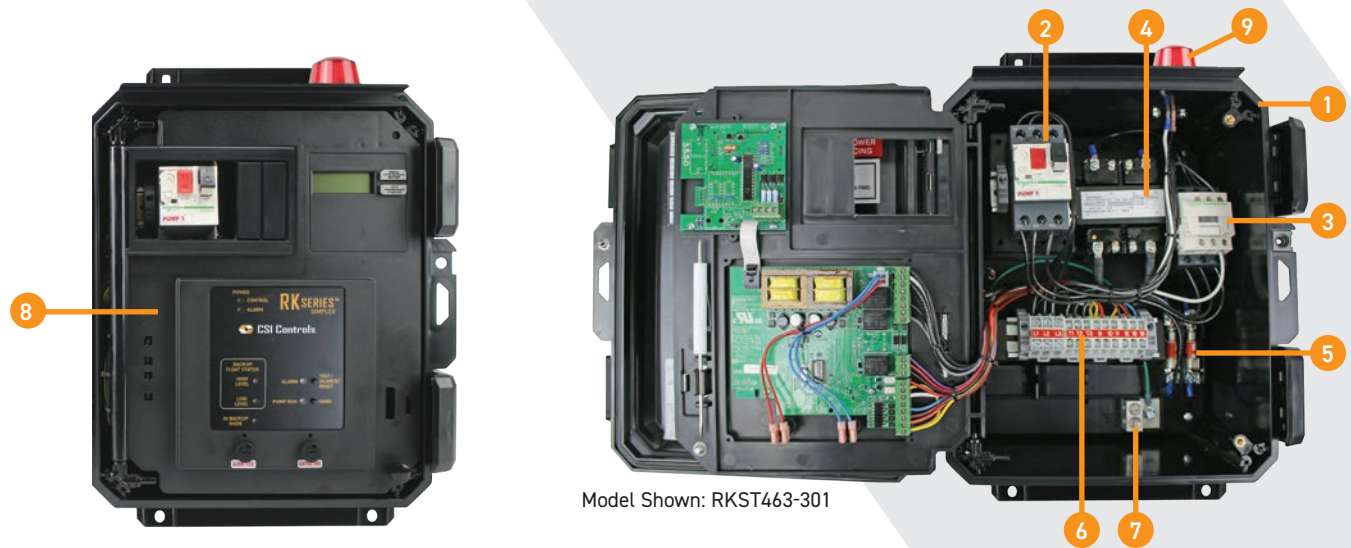
INNER DOOR: molded thermoplastic**LOCKING LATCHES (2):** stainless steel, padlockable**FLOAT CONTROL VOLTAGE:** 115 VAC**MOTOR STARTER:** IEC motor protection switch and IEC motor contactor**PUMP AMPS:** 1-32 Amps**ALARM HORN:** 83-85 decibel rating**FLASHING RED LED ALARM LIGHT 360°**

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California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

RK Series™ Three Phase Simplex 4-20mA Control Panel

Three Phase, Simplex 4-20mA Continuous Level Control System for Pump Control and System Monitoring



The RK Series™ Three Phase Simplex 4-20 mA continuous level sensing panel is designed to control one 208/230/460 VAC three phase pump in water and sewage installations. The protective inner door features panel operating status indicators, LCD display, control buttons and provides access to the pump motor protection switch. Panel is designed for 4-20mA input and 2-float backup control.

FEATURES

- 4-20mA input for continuous level sensing
- High level backup float input with LED status indicator
- High level backup float mode provides pump timer control activation
- Low level redundant off float input with LED status indicator
- Digital backlit LCD for easy setup and system monitoring
- Timed dose or demand dose field programmable
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad, touch to test
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443 and 7,471,207

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
 - a. Padlockable cover with quarter turn stainless steel set screw and (2) heavy duty latches that can be secured for added safety
 - b. Drip shield
 - c. Integral mounting flanges
2. Motor protective switch provides the adjustable overload, branch circuit protection, and pump disconnect
3. IEC motor contactor controls the pump motor load by switching the electrical lines
4. Multitap transformer (208/230/460 VAC primary) provides 115 VAC control/alarm voltage
5. Primary transformer voltage fuses provides transformer short circuit protection
6. Terminal Strip field wiring of incoming power, backup floats, submersible level transmitter, and pump
7. Ground lugs
8. Molded inner door provides access to circuit breakers, and mounting location for indicators, display, and control buttons
 - a. Digital 32-character backlit LCD display
 - b. Green LEDs indicate control and alarm circuit power
 - c. Red LEDs indicate when either control or alarm fuse is blown
 - d. Backup Float Status LED indicator (green=low level redundant off, red=high level)
 - e. Amber LED indicates backup float control mode activated
 - f. Green Pump Run LED indicates when pump is called to run
 - g. Pump Hand/Run button operates the pump manually
 - h. Alarm Test/Silence reset button
 - i. Red LED indicate high water alarm
9. 360° red alarm beacon for visual alert
10. Piezo audible alarm (not shown)
11. Alarm silence touch pad (not shown)



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RK SERIES™ THREE PHASE SIMPLEX 4-20mA CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKST463-001	1.0-1.6	NEMA 4X	208/230/460-3	Motor
RKST463-101	1.6-2.5	NEMA 4X	208/230/460-3	Motor
RKST463-201	2.5-4.0	NEMA 4X	208/230/460-3	Motor
RKST463-301	4.0-6.3	NEMA 4X	208/230/460-3	Motor
RKST463-401	6.0-10.0	NEMA 4X	208/230/460-3	Motor
RKST463-511	9.0-14.0	NEMA 4X	208/230/460-3	Motor
RKST463-611	13.0-18.0	NEMA 4X	208/230/460-3	Motor
RKST463-621	17.0-23.0	NEMA 4X	208/230/460-3	Motor
RKST463-701	20.0-25.0	NEMA 4X	208/230/460-3	Motor
RKST463-801	24.0-32.0	NEMA 4X	208/230/460-3	Motor
Options	Description			
AMB	Amber beacon (red beacon is standard)			
FC20	(2) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(2) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(2) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(2) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(2) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(2) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(2) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(2) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(2) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(2) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(2) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(2) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
SF	Seal Failure Indicator Light			
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)			
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)			
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)			
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)			
X	Auxiliary Alarm Contacts			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS**VOLTAGE SUPPLY:** 208/230/460 VAC 60 Hz 3Ø**ENCLOSURE:** 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with integral mounting flange, padlockable cover with (2) heavy duty thermoplastic latches, and stainless steel 1/4 turn set screw

INNER DOOR: molded thermoplastic**FLOAT CONTROL VOLTAGE:** 115 VAC**MOTOR STARTER:** IEC motor protection switch and IEC motor contactor**PUMP AMPS:** 1-32 Amps**LCD DISPLAY:** 2-16 character lines, backlight**ALARM HORN:** 83-85 decibel rating**FLASHING RED LED ALARM LIGHT 360°**

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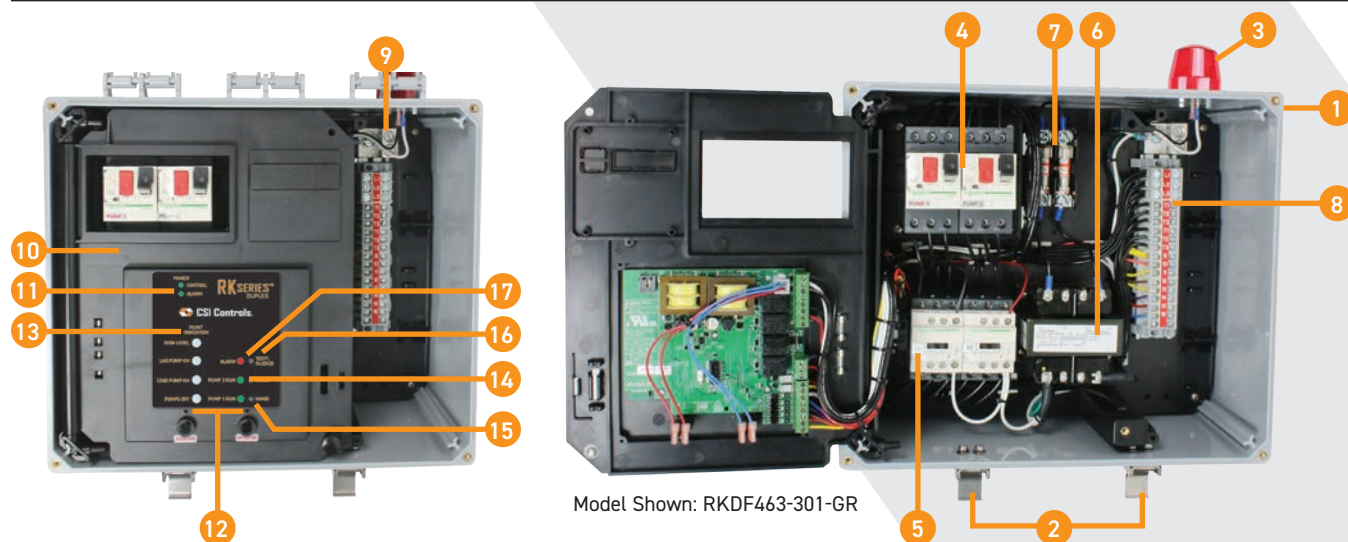
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9500423C 11/20

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RK Series™ Three Phase Duplex Control Panel

Three Phase, Duplex Demand Float Control System for Pump Control and System Monitoring



Model Shown: RKDF463-301-GR

The **RK Series™ Three Phase Duplex** panel is designed to control two 208/230/460 VAC three phase pump in water and sewage installations. The protective inner door features panel operating status indicators, control buttons and provides access to the pump motor protection switches. The controller provides alternation of the pump for even usage.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad.
- Float indication lights allow the user to see the status of each float and flashes should a float fail out-of-sequence.
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Timed dose control option available or can be easily retrofitted in the field



US Patent No.
7,075,443 and 7,471,207

OPTIONS



Optional Digital Interface Board (DIB)



Optional Digital Display Center (DDC)

Display options for viewing pump elapsed time, cycle counts and timed dose control

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. Motor protective switch provides the adjustable overload, branch circuit protection, and pump disconnect
5. IEC motor contactor controls the pump motor load by switching the electrical lines
6. Multitap transformer (208/230/460 VAC primary) provides 115 VAC control/alarm voltage
7. Primary transformer voltage fuses provides transformer short circuit protection
8. Terminal Strip field wiring of incoming power, floats, and pumps
9. Ground lugs
10. Molded inner door protects from high voltage, and mounting location for indicators, control buttons, and controller circuit board
11. Green LEDs provide power indication for control and alarm circuit power
12. Red LEDs provides indication when either control or alarm fuse is blown.
13. Float status LEDs provide tank level indication and float out-of-sequence detection (High Level - red, Pump Start Level - yellow, Pump Stop Level - green)
14. Green Pump Run LED provides indication when pump is called to run
15. Pump Hand/Run button provides mechanism to operate the pump manually
16. Alarm Test/Silence button
17. Red LED alarm indication for high water
18. Piezo audible alarm (not shown)



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RK SERIES™ THREE PHASE DUPLEX CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKDF463-001	1.0-1.6	NEMA 4X	208/230/460-3	Motor
RKDF463-101	1.6-2.5	NEMA 4X	208/230/460-3	Motor
RKDF463-201	2.5-4.0	NEMA 4X	208/230/460-3	Motor
RKDF463-301	4.0-6.3	NEMA 4X	208/230/460-3	Motor
RKDF463-401	6.0-10.0	NEMA 4X	208/230/460-3	Motor
RKDF463-511	9.0-14.0	NEMA 4X	208/230/460-3	Motor
RKDF463-611	13.0-18.0	NEMA 4X	208/230/460-3	Motor
RKDF463-621	17.0-23.0	NEMA 4X	208/230/460-3	Motor
RKDF463-701	20.0-25.0	NEMA 4X	208/230/460-3	Motor
RKDF463-801	24.0-32.0	NEMA 4X	208/230/460-3	Motor
Options	Description			
AMB	Amber beacon (red beacon is standard)			
DC	Digital Display Center (DDC) 4-character LED			
DCTD	Time Dosing DDC 4-character LED			
FC20	(4) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(4) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(4) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(4) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(4) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(4) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(4) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(4) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(4) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(4) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(4) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(4) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (included as standard)			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
IB	Digital Interface Board (DIB) 32-character LCD			
IBTD	Time Dosing DIB 32-character LCD			
LA	Lightning Arrestor			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm and Redundant Off Circuitry (control switch not included)			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS**VOLTAGE SUPPLY:** 208/230/460 VAC 60 Hz 3Ø**ENCLOSURE:** 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

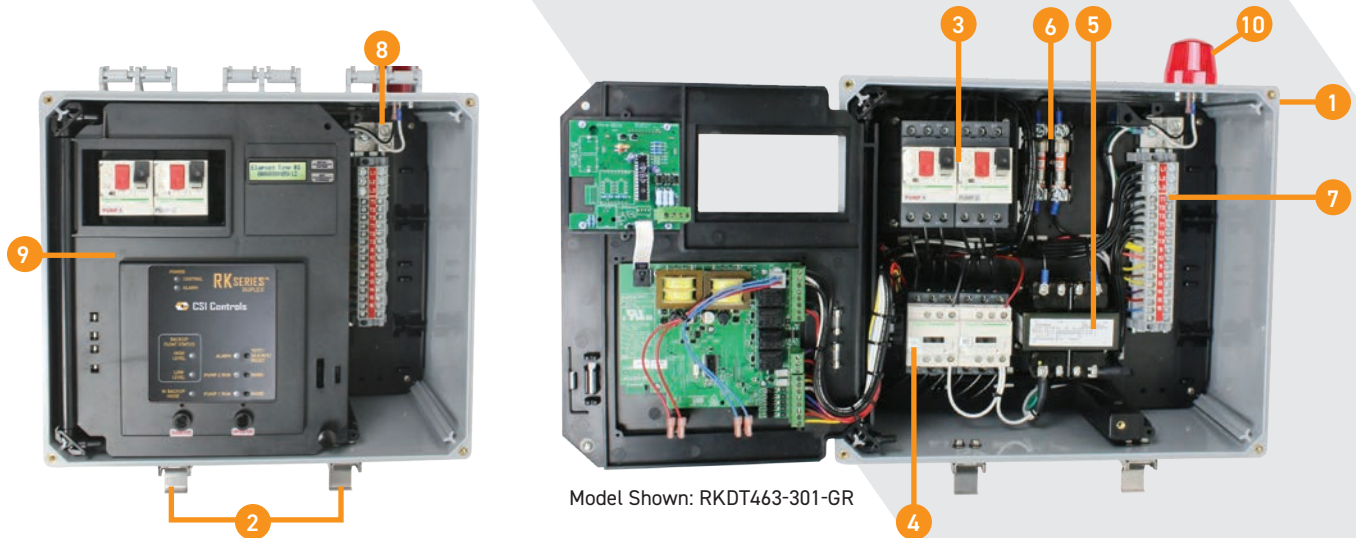
INNER DOOR: molded thermoplastic**LOCKING LATCHES (2):** stainless steel, padlockable**FLOAT CONTROL VOLTAGE:** 115 VAC**MOTOR STARTER:** IEC motor protection switches and IEC motor contactors**PUMP AMPS:** 1-32 Amps**ALARM HORN:** 83-85 decibel rating**FLASHING RED LED ALARM LIGHT 360°**

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RK Series™ Three Phase Duplex 4-20mA Control Panel

Three Phase, Duplex 4-20mA Continuous Level Control System for Pump Control and System Monitoring



Model Shown: RKDT463-301-GR

The RK Series™ Three Phase Duplex 4-20 mA continuous level sensing panel is designed to control two 208/230/460 VAC three phase pumps in water and sewage installations. The protective inner door features panel operating status indicators, LCD display, control buttons and provides access to the pump motor protection switches. The controller provides for alternation of the pumps for even usage. Panel is designed for 4-20mA input and 2-float backup control.

FEATURES

- 4-20mA input for continuous level sensing
- High level backup float input with LED status indicator
- High level backup float mode provides pump timer control activation
- Low level redundant off float input with LED status indicator
- Digital backlit LCD for easy setup and system monitoring
- Timed dose or demand dose field programmable
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad, touch to test
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443 and 7,471,207

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. Motor protective switches provide the adjustable overload, branch circuit protection, and pump disconnect
4. IEC motor contactors control the pump motor load by switching the electrical lines
5. Multitap transformer (208/230/460 VAC primary) provides 115 VAC control/alarm voltage
6. Primary transformer voltage fuses provides transformer short circuit protection
7. Terminal Strip field wiring of incoming power, backup floats, submersible level transmitter, and pumps
8. Ground lugs
9. Molded inner door provides access to circuit breakers, and mounting location for indicators, display, and control buttons
 - a. Digital 32-character backlit LCD display
 - b. Green LEDs indicate control and alarm circuit power
 - c. Red LEDs indicate when either control or alarm fuse is blown
 - d. Backup Float Status LED indicator (green=low level redundant off, red=high level)
 - e. Amber LED indicates backup float control mode activated
 - f. Green Pump Run LEDs indicate when pump is called to run
 - g. Pump Hand/Run buttons operate the pump manually
 - h. Alarm Test/Silence reset button
 - i. Red LED indicate high water alarm
10. 360° red alarm beacon for visual alert
11. Piezo audible alarm (not shown)
12. Alarm silence touch pad (not shown)



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RK SERIES™ THREE PHASE DUPLEX 4-20mA CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKDT463-001	1.0-1.6	NEMA 4X	208/230/460-3	Motor
RKDT463-101	1.6-2.5	NEMA 4X	208/230/460-3	Motor
RKDT463-201	2.5-4.0	NEMA 4X	208/230/460-3	Motor
RKDT463-301	4.0-6.3	NEMA 4X	208/230/460-3	Motor
RKDT463-401	6.0-10.0	NEMA 4X	208/230/460-3	Motor
RKDT463-511	9.0-14.0	NEMA 4X	208/230/460-3	Motor
RKDT463-611	13.0-18.0	NEMA 4X	208/230/460-3	Motor
RKDT463-621	17.0-23.0	NEMA 4X	208/230/460-3	Motor
RKDT463-701	20.0-25.0	NEMA 4X	208/230/460-3	Motor
RKDT463-801	24.0-32.0	NEMA 4X	208/230/460-3	Motor
Options	Description			
AMB	Amber beacon (red beacon is standard)			
FC20	(2) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(2) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(2) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(2) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(2) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(2) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(2) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(2) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(2) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(2) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(2) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(2) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (included as standard)			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
SF	Seal Failure Indicator Light			
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)			
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)			
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)			
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)			
X	Auxiliary Alarm Contacts			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS**VOLTAGE SUPPLY:** 208/230/460 VAC 60 Hz 3Ø**ENCLOSURE:** 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic**LOCKING LATCHES (2):** stainless steel, padlockable**FLOAT CONTROL VOLTAGE:** 115 VAC**MOTOR STARTER:** IEC motor protection switches and IEC motor contactors**PUMP AMPS:** 1-32 Amps**LCD DISPLAY:** 2-16 character lines, backlight**ALARM HORN:** 83-85 decibel rating**FLASHING RED LED ALARM LIGHT 360°**

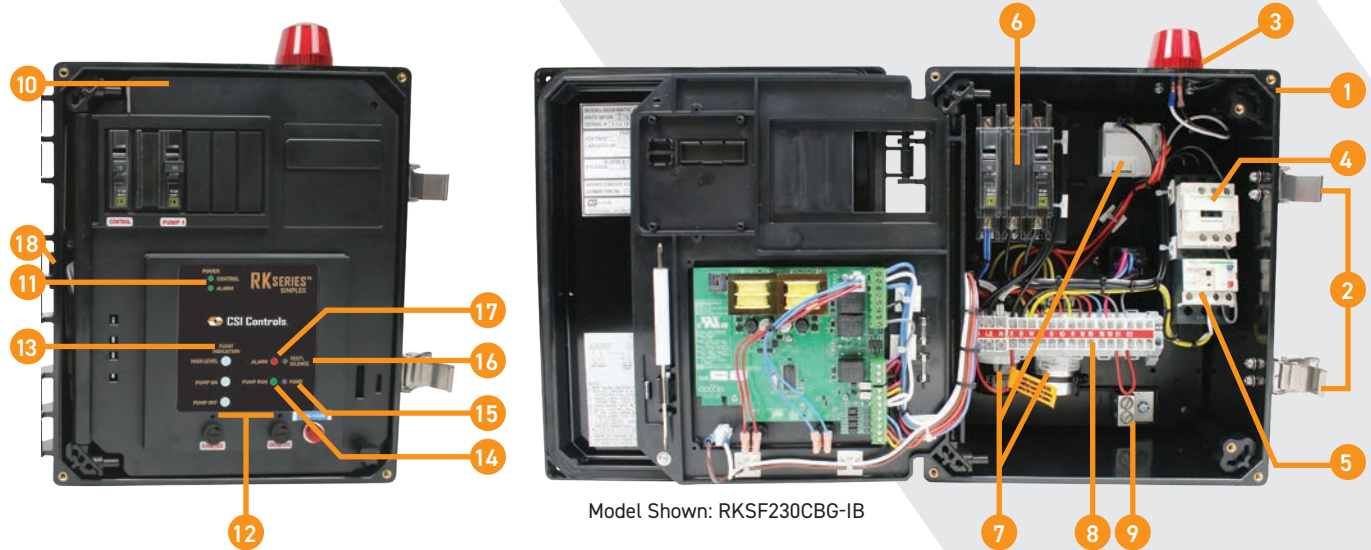
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RK Series™ Single Phase Simplex Capacitor Start/Run

Single Phase, Simplex Grinder with External Start/Run Capacitors



The RK Series™ Single Phase Simplex Grinder panel is designed to control one 230 VAC single phase pump with external starting components in water and sewage installations. The protective inner door features panel operating status indicators, control buttons and provides access to the pump and control circuit breakers.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad
- Float indication lights allow the user to see the status of each float and flashes should a float fail out-of-sequence
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Timed dose control option available or can be easily retrofitted in the field
- External capacitor kit components are installed for variety of pumps - consult factory when ordering



US Patent No.
7,075,443 and 7,471,207

OPTIONS



Optional Digital Interface Board (DIB)



Optional Digital Display Center (DDC)

Display options for viewing pump elapsed time, cycle counts and timed dose control

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. IEC motor contactor controls the pump motor load by switching the electrical lines
5. IEC overload to provide pump motor current overload protection
6. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
7. Capacitor kit includes start relay, start capacitor, run capacitor
8. Terminal strip easy field wiring of incoming power, floats, and pump
9. Ground lugs
10. Molded inner door protects from high voltage, and mounting location for indicators, control buttons, and controller circuit board
11. Green LEDs provide power indication for control and alarm circuit power
12. Red LEDs provide indication when either control or alarm fuse is blown
13. Float status LEDs provide tank level indication and float out-of-sequence detection (High Level - red, Pump Start Level - yellow, Pump Stop Level - green)
14. Green Pump Run LED provides indication when pump is called to run
15. Pump Hand/Run button operates the pump manually
16. Alarm Test/Silence button
17. Red LED alarm indication for high water
18. Piezo alarm horn



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RK SERIES™ SINGLE PHASE SIMPLEX CAPACITOR START/RUN CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKSF230CBG	0-12	NEMA 4X	230-1	Motor & Control/Alarm, Capacitor Circuitry*
RKSF230ACBG	0-12	NEMA 4X	230-1	Motor, Control & Alarm, Capacitor Circuitry*
Options	Description			
AMB	Amber beacon (red beacon is standard)			
DC	Digital Display Center (DDC) 4-character LED			
DCTD	Time Dosing DDC 4-character LED			
FC20	(3) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(3) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(3) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(3) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(3) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(3) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(3) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(3) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(3) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(3) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(3) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(3) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HD1	Heavy Duty 1: Increase breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increase breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
IB	Digital Interface Board (DIB) 32-character LCD			
IBTD	Time Dosing DIB 32-character LCD			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm and Redundant Off Circuitry (control switch not included)			

*Contact factory for capacitor circuitry details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: IEC contactor and IEC overload

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°

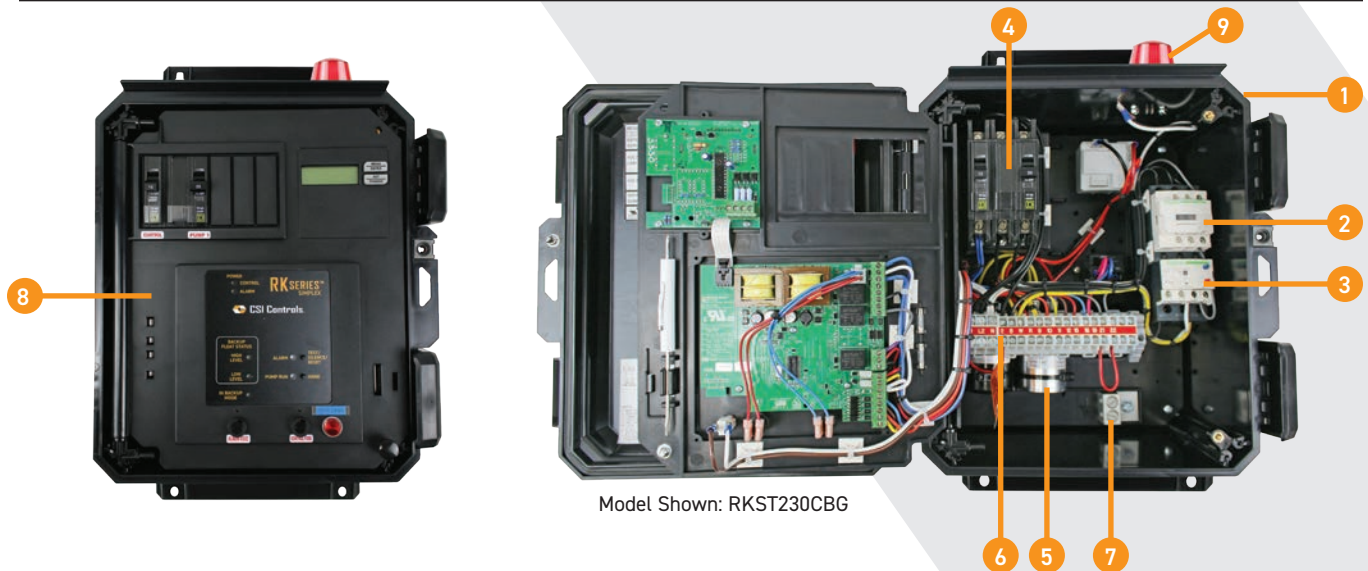


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California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

RK Series™ Single Phase Simplex 4-20mA Capacitor Start/Run

Single Phase, Simplex 4-20mA Continuous Level Control with External Start/Run Capacitors



Model Shown: RKST230CBG

The RK Series™ Single Phase Simplex 4-20 mA continuous level sensing panel is designed to control one 230 VAC single phase pump with external starting components in water and sewage installations. The protective inner door features panel operating status indicators, LCD display, control buttons and provides access to the pump and control circuit breakers. Panel is designed for 4-20mA input and 2-float backup control.

FEATURES

- 4-20mA input for continuous level sensing
- High level backup float input with LED status indicator
- High level backup float mode provides pump timer control activation
- Low level redundant off float input with LED status indicator
- Digital backlit LCD for easy setup and system monitoring
- Timed dose or demand dose field programmable
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad, touch to test
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443 and 7,471,207

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
 - a. Padlockable cover with quarter turn stainless steel set screw and (2) heavy duty latches that can be secured for added safety
 - b. Drip shield
 - c. Integral mounting flanges
2. IEC motor contactor controls the pump motor load by switching the electrical lines
3. IEC overload provides pump motor current overload protection
4. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
5. Capacitor kits includes start relay, start capacitor, and run capacitor
6. Terminal strip easy field wiring of incoming power, backup floats, submersible level transmitter, and pump
7. Ground lugs
8. Molded inner door provides access to circuit breakers, and mounting location for indicators, display, and control buttons
 - a. Digital 32-character backlit LCD display
 - b. Green LEDs indicate control and alarm circuit power
 - c. Red LEDs indicate when either control or alarm fuse is blown
 - d. Backup Float Status LED indicator (green=low level redundant off, red=high level)
 - e. Amber LED indicates backup float control mode activated
 - f. Green Pump Run LED indicates when pump is called to run
 - g. Pump Hand/Run button operates the pump manually
 - h. Alarm Test/Silence reset button
 - i. Red LED indicate high water alarm
9. 360° red alarm beacon for visual alert
10. Piezo audible alarm (not shown)
11. Alarm silence touch pad (not shown)



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RK SERIES™ SINGLE PHASE SIMPLEX 4-20mA CAPACITOR START/RUN CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKST230CBG	0-12	NEMA 4X	230-1	Motor & Control/Alarm, Capacitor Circuitry*
RKST230ACBG	0-12	NEMA 4X	230-1	Motor, Control & Alarm, Capacitor Circuitry*
Options	Description			
AMB	Amber beacon (red beacon is standard)			
FC20	(2) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(2) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(2) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(2) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(2) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(2) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(2) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(2) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(2) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(2) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(2) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(2) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (black enclosure is standard)			
HD1	Heavy Duty 1: Increase breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increase breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)			
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)			
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)			
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)			
X	Auxiliary Alarm Contacts			

*Contact factory for capacitor circuitry details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with integral mounting flange, padlockable cover with (2) heavy duty thermoplastic latches, and stainless steel 1/4 turn set screw

INNER DOOR: molded thermoplastic

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: IEC motor overload and IEC motor contactor

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

LCD DISPLAY: 2-16 character lines, backlight

ALARM HORN: 83-85 decibel rating

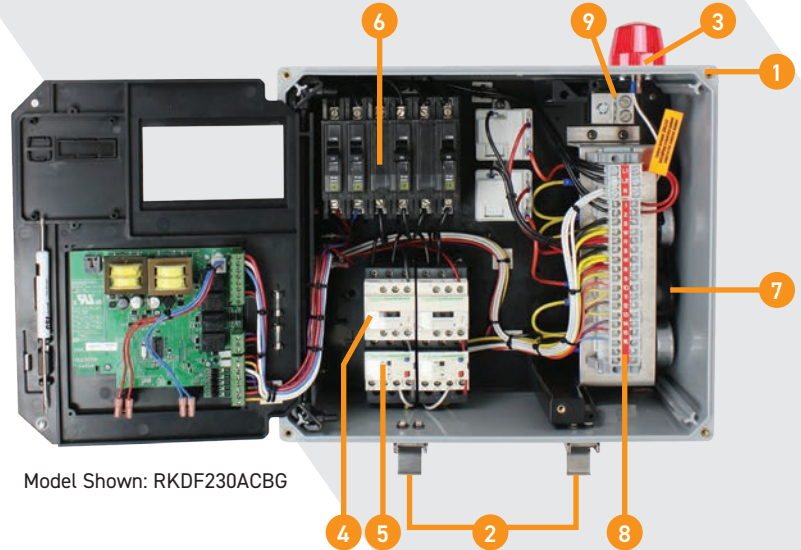
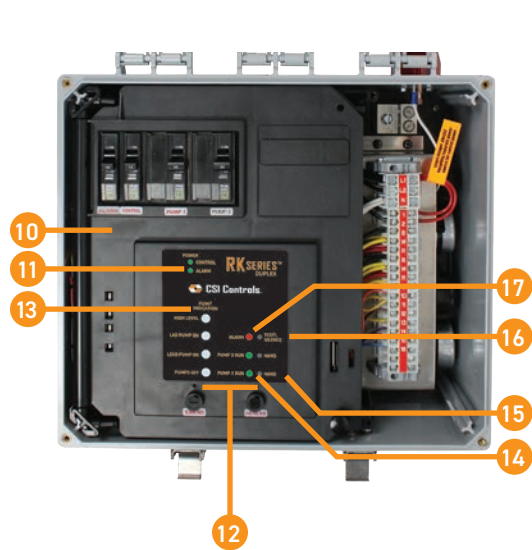
FLASHING RED LED ALARM LIGHT 360°



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RK Series™ Single Phase Duplex Capacitor Start/Run

Single Phase, Duplex Grinder with External Start/Run Capacitors



Model Shown: RKDF230ACBG

The RK Series™ Single Phase Duplex Grinder panel is designed to control two 230 VAC single phase pump with external starting components in water and sewage installations. The protective inner door features panel operating status indicators, control buttons and provides access to the pump and control circuit breakers.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad
- Float indication lights allow the user to see the status of each float and flashes should a float fail out-of-sequence
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Timed dose control option available or can be easily retrofitted in the field
- External capacitor kit components are installed for variety of pumps - consult factory when ordering



US Patent No.
7,075,443 and 7,471,207

OPTIONS



Optional Digital Interface Board (DIB)



Optional Digital Display Center (DDC)

Display options for viewing pump elapsed time, cycle counts and timed dose control

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. IEC motor contactors control the pump motor load by switching the electrical lines
5. IEC overloads to provide pump motor current overload protection
6. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
7. Capacitor kits includes start relay, start capacitor, run capacitor
8. Terminal strip easy field wiring of incoming power, floats, and pumps
9. Ground lugs
10. Molded inner door protects from high voltage, and mounting location for indicators, control buttons, and controller circuit board
11. Green LEDs provide power indication for control and alarm circuit power
12. Red LEDs provide indication when either control or alarm fuse is blown
13. Float status LEDs provide tank level indications (High Level - red, Pump Lag Start - yellow, Pump Start Level - green, Pump Stop Level - green)
14. Green Pump Run LED provides indication when pump is called to run
15. Pump Hand/Run button operates the pump manually
16. Alarm Test/Silence button
17. Red LED alarm indication for high water
18. Piezo audible alarm (not shown)



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RK SERIES™ SINGLE PHASE DUPLEX CAPACITOR START/RUN CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKDF230CBG	0-12	NEMA 4X	230-1	Motor & Control/Alarm, Capacitor Circuitry*
RKDF230ACBG	0-12	NEMA 4X	230-1	Motor, Control & Alarm, Capacitor Circuitry*
Options	Description			
AMB	Amber beacon (red beacon is standard)			
DC	Digital Display Center (DDC) 4-character LED			
DCTD	Time Dosing DDC 4-character LED			
FC20	(4) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(4) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(4) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(4) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(4) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(4) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(4) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(4) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(4) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(4) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(4) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(4) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (included as standard)			
HD1	Heavy Duty 1: Increase breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increase breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
IB	Digital Interface Board (DIB) 32-character LCD			
IBTD	Time Dosing DIB 32-character LCD			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm and Redundant Off Circuitry (control switch not included)			

*Contact factory for capacitor circuitry details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: IEC motor protection switches and IEC motor contactors

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°

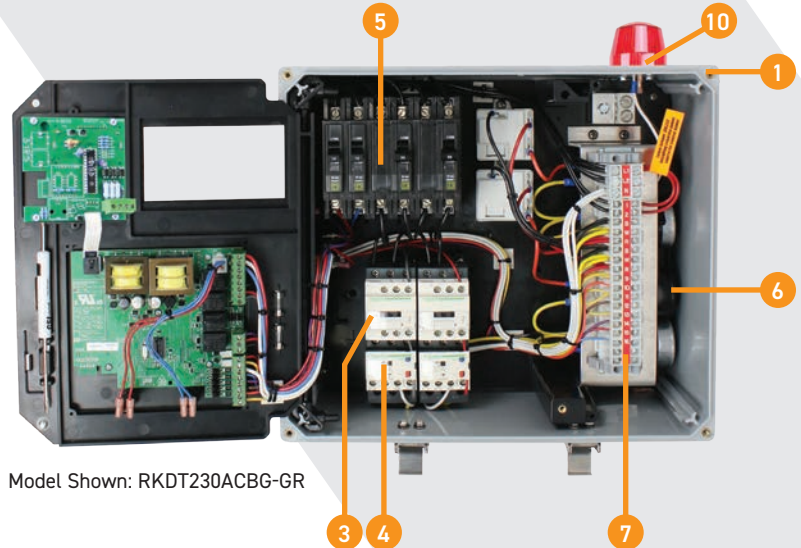
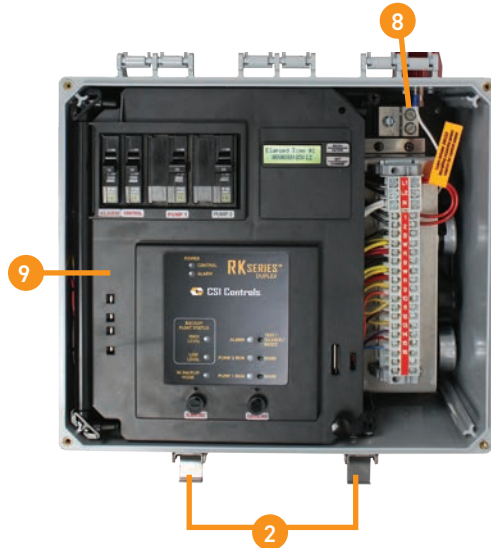


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California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

RK Series™ Single Phase Duplex 4-20mA Capacitor Start/Run

Single Phase, Duplex 4-20mA Continuous Level Control with External Start/Run Capacitors



Model Shown: RKDT230ACBG-GR

The RK Series™ Single Phase Duplex 4-20 mA continuous level sensing panel is designed to control two 230 VAC single phase pumps with external starting components in water and sewage installations. The protective inner door features panel operating status indicators, LCD display, control buttons and provides access to the pump and control circuit breakers. The controller provides for alternation of the pumps for even usage. Panel is designed for 4-20mA input and 2-float backup control.

FEATURES

- 4-20mA input for continuous level sensing
- High level backup float input with LED status indicator
- High level backup float mode provides pump timer control activation
- Low level redundant off float input with LED status indicator
- Digital backlit LCD for easy setup and system monitoring
- Timed dose or demand dose field programmable
- Flashing red 360° alarm beacon with horn, includes innovative touch to silence pad, touch to test
- Pump push to run with low level protection when activated manually
- Includes easy access touch safe fuses
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443 and 7,471,207

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. IEC motor contactors control the pump motor load by switching the electrical lines
4. IEC overloads provide pump motor current overload protection
5. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
6. Capacitor kits includes start relay, start capacitor, and run capacitor
7. Terminal strip easy field wiring of incoming power, backup floats, submersible level transmitter, and pumps
8. Ground lugs
9. Molded inner door provides access to circuit breakers, and mounting location for indicators, display, and control buttons
 - a. Digital 32-character backlit LCD display
 - b. Green LEDs indicate control and alarm circuit power
 - c. Red LEDs indicate when either control or alarm fuse is blown
 - d. Backup Float Status LED indicator (green=low level redundant off, red=high level)
 - e. Amber LED indicates backup float control mode activated
 - f. Green Pump Run LEDs indicate when pump is called to run
 - g. Pump Hand/Run buttons operate the pump manually
 - h. Alarm Test/Silence reset button
 - i. Red LED indicate high water alarm
10. 360° red alarm beacon for visual alert
11. Piezo audible alarm (not shown)
12. Alarm silence touch pad (not shown)



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RK SERIES™ SINGLE PHASE DUPLEX 4-20mA CAPACITOR START/RUN CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH	Circuit Breakers
RKDT230CBG	0-12	NEMA 4X	230-1	Motor & Control/Alarm, Capacitor Circuitry*
RKDT230ACBG	0-12	NEMA 4X	230-1	Motor, Control & Alarm, Capacitor Circuitry*
Options	Description			
AMB	Amber beacon (red beacon is standard)			
FC20	(2) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(2) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(2) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(2) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(2) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(2) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(2) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(2) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(2) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(2) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(2) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(2) 50 foot (15.2m) mercury control switches / cable weight			
GR	Gray enclosure (included as standard)			
HD1	Heavy Duty 1: Increase breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increase breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)			
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)			
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)			
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)			
X	Auxiliary Alarm Contacts			

*Contact factory for capacitor circuitry details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: IEC motor overloads and IEC motor contactors

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

LCD DISPLAY: 2-16 character lines, backlight

ALARM HORN: 83-85 decibel rating

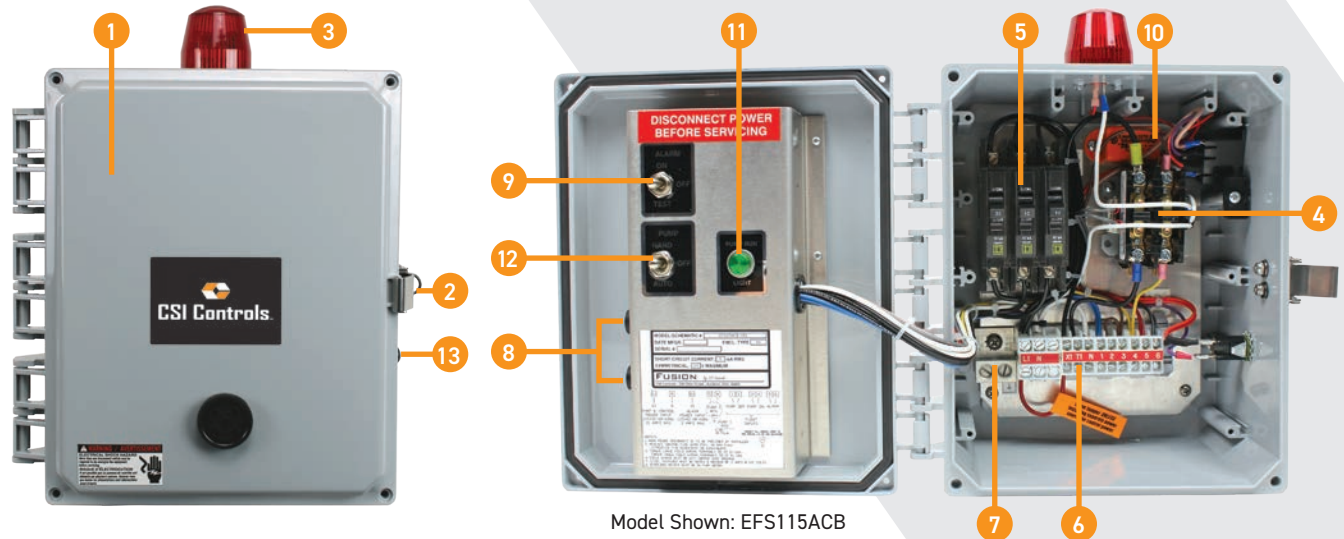
FLASHING RED LED ALARM LIGHT 360°



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Fusion™ Economy Control Panel

Single Phase, Simplex Demand Float Control System for Pumping Applications



Model Shown: EFS115ACB

The **Fusion™ Economy Single Phase Simplex** control panels utilize a traditional relay logic component-style design. Applications include sump and sewage basins, septic tanks, aeration systems, cisterns, atmospheric storage tanks, chemical solution tanks and more.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latch
- Flashing red 360° alarm beacon with horn and test/silence switch.
- Pump Hand-Off-Auto switch to manually activate pump, set in automatic float level control, or disable the pump operation
- Pump Run light to provide visual notification when the pump is called to run
- Includes easy access fuses



OPTIONS

- Heavy duty increases the circuit breakers and wire gauge HD1 12-18FLA, HD2 18-24FLA
- Heat sensor terminals
- Auxiliary alarm contacts
- Floats various configurations

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latch for added safety
3. 360° red alarm beacon for visual alert
4. Magnetic motor contactor controls the pump motor load by switching the electrical lines
5. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
6. Terminal strip easy field wiring of incoming power, floats, and pump
7. Ground lugs
8. Control circuit and alarm circuit fuses easy access touch safe fuse replacement
9. Alarm Arm-Off-Test switch provides method to test alarm circuit or disable the alarm
10. Alarm Flasher provides alarm flashing circuitry
11. Green Pump Run light provides indication when pump is called to run
12. Pump Hand-Off-Auto switch provides manual pump control
13. External alarm silence button to silence the audible alarm



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FUSION™ ECONOMY CONTROL PANEL

Model	Max FLA	Enclosure Type	Input Power VAC - PH	Circuit Breakers
EFS115	12	NEMA 4X	115-1	None
EFS115CB	12	NEMA 4X	115-1	Motor & Control
EFS115ACB	12	NEMA 4X	115-1	Motor, Control & Alarm
EFS230	12	NEMA 4X	230-1	None
EFS230CB	12	NEMA 4X	230-1	Motor & Control
EFS230ACB	12	NEMA 4X	230-1	Motor, Control & Alarm
Options	Description			
FC20	(3) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(3) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(3) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(3) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(3) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(3) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(3) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(3) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(3) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(3) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(3) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(3) 50 foot (15.2m) mercury control switches / cable weight			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
X	Auxiliary Alarm			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 10 x 8 x 6 inch (25.4 x 20.3 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCH: stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: magnetic motor contactor

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°



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Fusion™ Single Phase Simplex Control Panel

Single Phase, Simplex Demand Dose or Timed Dose Float Controlled System for Pumping Applications



Model Shown: FS230CB

The **Fusion™ Single Phase Simplex** control panels utilize a traditional relay logic component-style design. Applications include sump and sewage basins, septic tanks, aeration systems, cisterns, atmospheric storage tanks, chemical solution tanks and more.

FEATURES

- NEMA 4X engineered thermal plastic enclosure with mounting feet and lockable latches
- Flashing red 360° alarm beacon with an electronic horn, and test/silence switch
- Pump Hand-Off-Auto switch to manually activate pump, set in automatic float level control, or disable the pump operation
- Pump Run light to provide visual notification when the pump is called to run
- Includes easy access removable fuses
- Timed dose control option available



OPTIONS

- | | |
|--|--------------------------------|
| • Amber beacon | • Lightning arrestor |
| • Manual Alarm Reset | • Low level alarm |
| • Elapse Time Meter | • Overloads |
| • Heavy duty increases the circuit breakers and wire gauge | • Seal Failure indicator light |
| HD1 12-18FLA | • Time Dosing operation |
| HD2 18-24FLA | • Auxiliary alarm contacts |
| • Heat sensor terminals | • Float configurations |
| • Anti-condensation heater | |

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. IEC motor contactor controls the pump motor load by switching the electrical lines
5. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
6. Terminal strip easy field wiring of incoming power, floats, and pump
7. Ground lugs
8. Molded inner door protects from high voltage, and mounting location for indicators, and switches
9. Control circuit and alarm circuit fuses easy access touch safe fuse replacement
10. Alarm Arm-Off-Test to disable or test the alarm
11. Alarm Flasher provides alarm flashing circuitry
12. Green Pump Run light provides indication when pump is called to run
13. Pump Hand-Off-Auto switch provides manual pump control
14. External Alarm Silence button to silence the audible alarm



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FUSION™ SINGLE PHASE SIMPLEX CONTROL PANEL

Model	MAX FLA	Enclosure Type	Input Power VAC - PH	Circuit Breakers
FS115CB	12	NEMA 4X	115-1	Motor & Control
FS115ACB	12	NEMA 4X	115-1	Motor, Control & Alarm
FS230CB	12	NEMA 4X	230-1	Motor & Control
FS230ACB	12	NEMA 4X	230-1	Motor, Control & Alarm
FS230CBG	12	NEMA 4X	230-1	Motor & Control, Capacitor Circuitry*
FS230ACBG	12	NEMA 4X	230-1	Motor, Control & Alarm, Capacitor Circuitry*
Options	Description			
AMB	Amber beacon (red beacon is standard)			
AR	Manual Alarm Reset			
EC	Elapsed Time Meter and Cycle Counter			
FC20	(3) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(3) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(3) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(3) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(3) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(3) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(3) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(3) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(3) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(3) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(3) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(3) 50 foot (15.2m) mercury control switches / cable weight			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
LL	Low Level Alarm (control switch not included)			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
TD	Time Dosing Operation			
X	Auxiliary Alarm			

*Contact factory for capacitor circuitry details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 12 x 10 x 6 inch (30.5 x 25.4 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: IEC magnetic motor contactor

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°

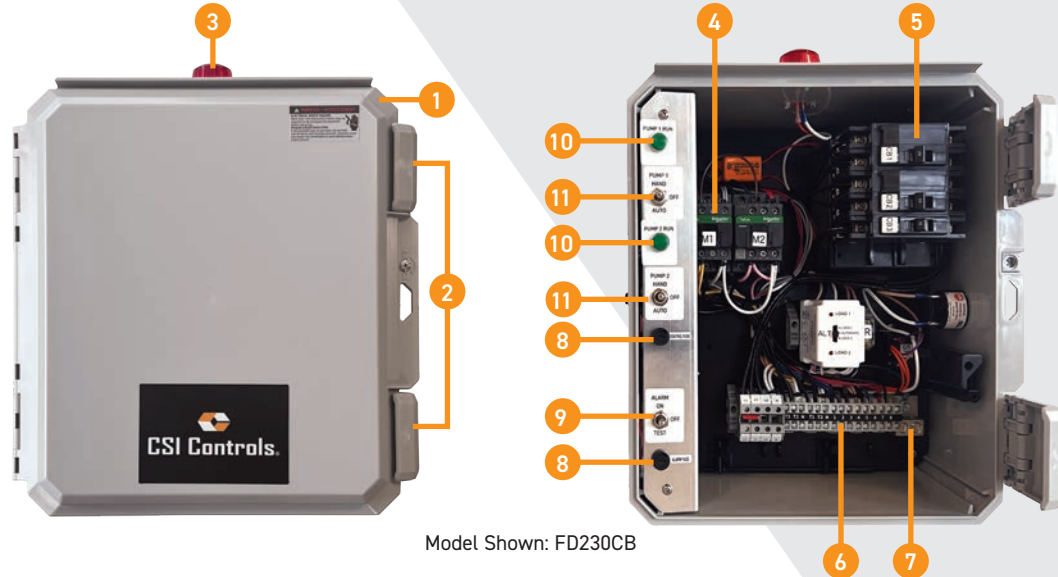


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California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Fusion™ Single Phase Duplex Control Panel

Single Phase, Duplex Demand Dose Float Controlled System for Pump Control and System Monitoring



Model Shown: FD230CB

The **Fusion™ Single Phase Duplex** control panels utilize a traditional relay logic component-style design. Applications include sump and sewage basins, septic tanks, aeration systems, cisterns, atmospheric storage tanks, chemical solution tanks and more.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable latches
- Flashing red 360° alarm beacon with an electronic horn, and test/silence switch.
- Pump Hand-Off-Auto switch to manually activate pump, set in automatic float level control, or disable the pump operation
- Pump Run lights to provide visual notification when the pumps are called to run
- Includes easy access fuses



OPTIONS

- Amber beacon
- Manual Alarm Reset
- Elapse Time Meter
- Heavy duty increases the circuit breakers and wire gauge
HD1 12-18FLA
HD2 18-24FLA
- Heat sensor terminals
- Anti-condensation heater
- Lightning arrestor
- Low level alarm
- Overloads
- Seal Failure indicator light
- Auxiliary alarm contacts
- Float configurations

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Lockable latches for added safety
3. 360° red alarm beacon for visual alert
4. IEC motor contactors control the pump motor load by switching the electrical lines
5. Circuit breakers provide pump and control/alarm disconnect and branch circuit protection
6. Terminal strip easy field wiring of incoming power, floats, and pumps
7. Ground lugs
8. Control circuit and alarm circuit fuses easy access touch safe fuse replacement
9. Alarm Arm-Off-Test switch to disable or test the alarm
10. Green Pump Run lights provides indication when pump is called to run
11. Pump Hand-Off-Auto switches provides manual pump control
12. External Alarm Silence button to silence the audible alarm (not shown)



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FUSION™ SINGLE PHASE DUPLEX CONTROL PANEL

Model	MAX FLA	Enclosure Type	Input Power VAC - PH	Circuit Breakers
FD115	12	NEMA 4X	115-1	None
FD115CB	12	NEMA 4X	115-1	Motor & Control
FD115ACB	12	NEMA 4X	115-1	Motor, Control & Alarm
FD230	12	NEMA 4X	230-1	None
FD230CB	12	NEMA 4X	230-1	Motor & Control
FD230ACB	12	NEMA 4X	230-1	Motor, Control & Alarm
Options	Description			
AMB	Amber beacon (red beacon is standard)			
AR	Manual Alarm Reset			
EC	Elapsed Time Meter and Cycle Counter			
FC20	(4) 20 foot (6.1m) mechanical control switches / pipe clamp			
FC20CW	(4) 20 foot (6.1m) mechanical control switches / cable weight			
FR20	(4) 20 foot (6.1m) mercury control switches / pipe clamp			
FR20CW	(4) 20 foot (6.1m) mercury control switches / cable weight			
FC30	(4) 30 foot (9.1m) mechanical control switches / pipe clamp			
FC30CW	(4) 30 foot (9.1m) mechanical control switches / cable weight			
FR30	(4) 30 foot (9.1m) mercury control switches / pipe clamp			
FR30CW	(4) 30 foot (9.1m) mercury control switches / cable weight			
FC50	(4) 50 foot (15.2m) mechanical control switches / pipe clamp			
FC50CW	(4) 50 foot (15.2m) mechanical control switches / cable weight			
FR50	(4) 50 foot (15.2m) mercury control switches / pipe clamp			
FR50CW	(4) 50 foot (15.2m) mercury control switches / cable weight			
HD1	Heavy Duty 1: Increases breakers and wire gauge to allow 12-18 FLA			
HD2	Heavy Duty 2: Increases breakers and wire gauge to allow 18-24 FLA			
HS	Heat Sensor Terminals			
HTR	Anti-Condensation Heater			
LA	Lightning Arrestor			
LL	Low Level Alarm (control switch not included)			
OL##	Pump Overload - specify amperage after OL (Example: OL02 = 2 amp pump, OL20 = 20 amp pump)			
SF	Seal Failure Indicator Light			
X	Auxiliary Alarm			

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)
NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting feet

INNER DOOR: molded thermoplastic

LOCKING LATCHES (2): stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: IEC magnetic motor contactors

PUMP AMPS: 0-12 Amps, 12-18 Amps, 18-24 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°

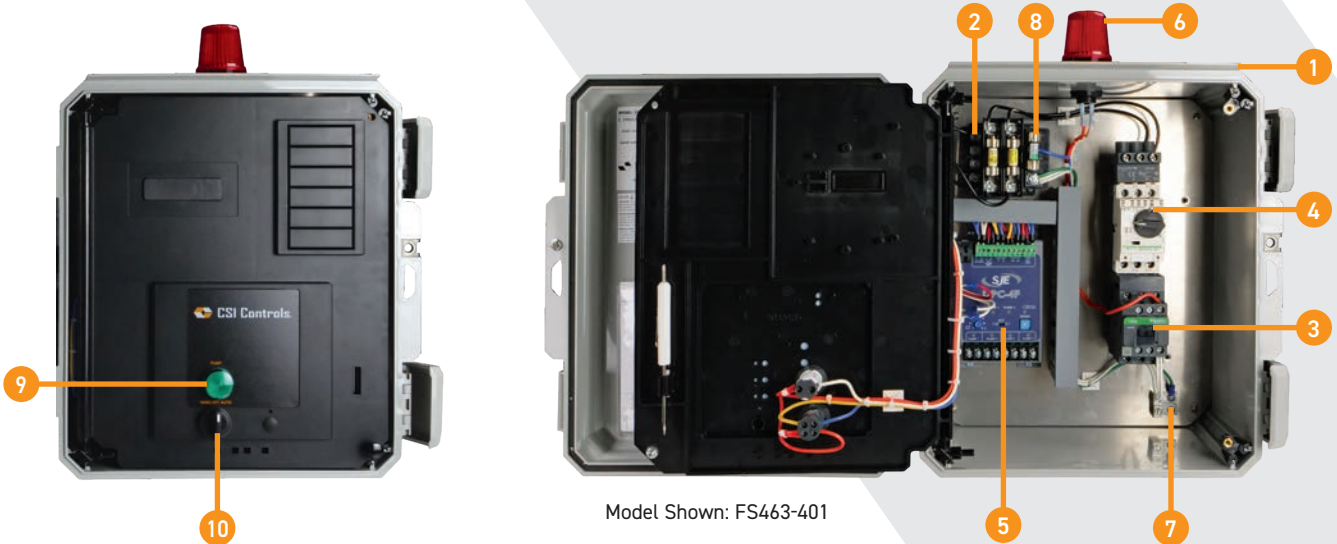


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California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Fusion™ Three Phase Simplex Control Panel

Three Phase, Simplex Pump Control



The **Fusion™ Three Phase Simplex** control panel is designed to control a 208/240/480 VAC three phase pump in industrial and commercial water and sewage systems. If an alarm condition occurs, the alarm switch activates the audible/visual alarm system. Common applications include lift stations, pump chambers, and irrigation systems.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable cover
- Flashing red 360° alarm beacon with an electronic horn, and test/silence switch
- Pump Hand-Off-Auto switch to manually activate pump, set in automatic float level control, or disable the pump operation
- Pump Run lights to provide visual notification when the pumps are called to run
- DPC-4F Pump Controller



OPTIONS

- Amber beacon
- Elapse Time Meter/Event counter
- Heat sensor terminals
- Anti-condensation heater
- Lightning arrestor
- Seal Failure indicator light
- Auxiliary alarm contacts
- Float configurations

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
 - a. Padlockable cover
 - b. Mounting flanges
2. Multi-Tap Transformer 208/240/480 VAC primary incoming voltage with primary and secondary fuses
3. IEC motor contactor controls the pump motor load by switching the electrical lines
4. Motor Protective Switch provide adjustable overload, branch circuit protection, phase loss/imbalance protection and pump disconnect
5. DPC-4F Pump Controller
 - a. Float Status Indicator Lights
 - b. Pump Run LED's
 - c. Power On Light
 - d. Low Voltage Float Switch Terminal Block
6. 360° red alarm beacon for visual alert
7. Ground lugs
8. Control/alarm circuit fuse
9. 22mm Green Pump Run light provides indication when pump is called to run
10. 22mm Pump Hand-Off-Auto switch provides manual pump control
11. Alarm Horn provides audible warning of alarm condition, 83 to 85 decibel (not shown)
12. 22mm External Alarm test/Silence Button (not shown)



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FUSION™ THREE PHASE SIMPLEX CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH
FS463-001*	1.0-1.6	NEMA 4X	208/240/480-3
FS463-101*	1.6-2.5	NEMA 4X	208/240/480-3
FS463-201*	2.5-4.0	NEMA 4X	208/240/480-3
FS463-301*	4.0-6.3	NEMA 4X	208/240/480-3
FS463-401*	6.0-10.0	NEMA 4X	208/240/480-3
FS463-511*	9.0-14.0	NEMA 4X	208/240/480-3
FS463-611*	13.0-18.0	NEMA 4X	208/240/480-3
FS463-621*	17.0-23.0	NEMA 4X	208/240/480-3
FS463-701*	20.0-25.0	NEMA 4X	208/240/480-3
FS463-801*	24.0-32.0	NEMA 4X	208/240/480-3
Options	Description		
AMB	Amber beacon (red beacon is standard)		
EC	Elapsed Time Meter and Cycle Counter		
FC20	(3) 20 foot (6.1m) mechanical control switches / pipe clamp		
FC20CW	(3) 20 foot (6.1m) mechanical control switches / cable weight		
FR20	(3) 20 foot (6.1m) mercury control switches / pipe clamp		
FR20CW	(3) 20 foot (6.1m) mercury control switches / cable weight		
FC30	(3) 30 foot (9.1m) mechanical control switches / pipe clamp		
FC30CW	(3) 30 foot (9.1m) mechanical control switches / cable weight		
FR30	(3) 30 foot (9.1m) mercury control switches / pipe clamp		
FR30CW	(3) 30 foot (9.1m) mercury control switches / cable weight		
FC50	(3) 50 foot (15.2m) mechanical control switches / pipe clamp		
FC50CW	(3) 50 foot (15.2m) mechanical control switches / cable weight		
FR50	(3) 50 foot (15.2m) mercury control switches / pipe clamp		
FR50CW	(3) 50 foot (15.2m) mercury control switches / cable weight		
HS	Heat Sensor Terminals		
HTR	Anti-Condensation Heater		
LA	Lightning Arrestor		
SF	Seal Failure Indicator Light		
X	Auxiliary Alarm		

*3 phase 600 VAC option available. Please contact factory for details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: 208/240/480 VAC 60 Hz 3Ø

ENCLOSURE: 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting flanges, padlockable cover

INNER DOOR: molded thermoplastic

FLOAT CONTROL VOLTAGE: 12 VDC

MOTOR STARTER: IEC motor protection switch and IEC motor contactor

PUMP AMPS: 1-32 Amps

ALARM HORN: 83-85 decibel rating

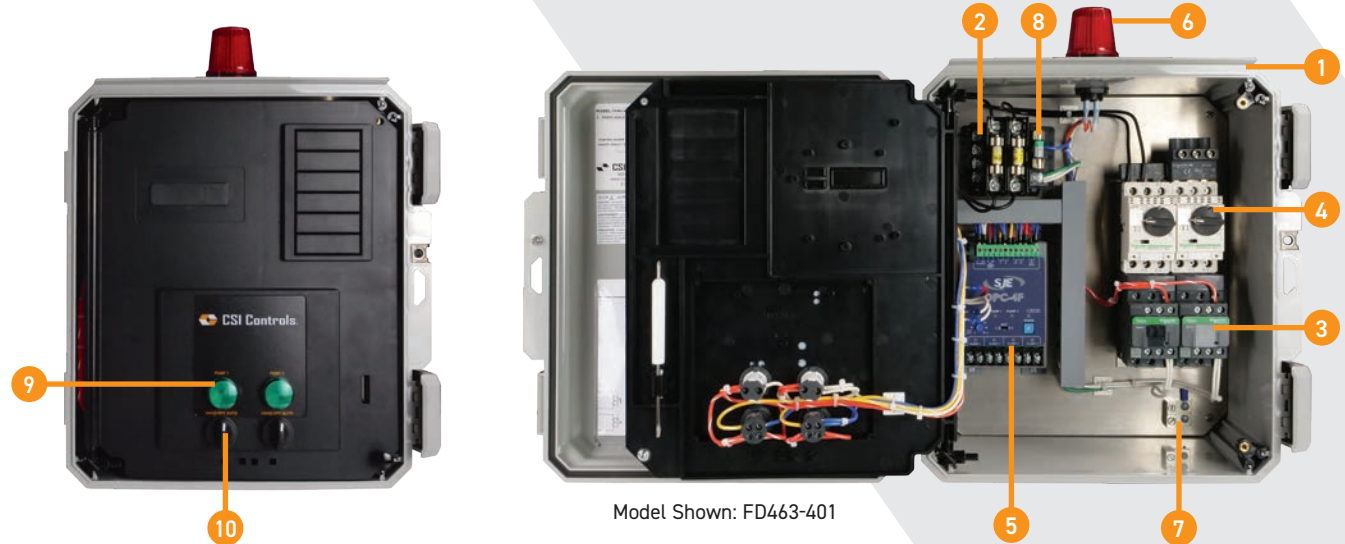
FLASHING RED LED ALARM LIGHT 360°



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Fusion™ Three Phase Duplex Control Panel

Three Phase, Duplex Alternating Pump Control



Model Shown: FD463-401

The **Fusion™ Three Phase Duplex** control panel is designed to alternately control two 208/240/480 VAC three phase pumps in industrial and commercial water and sewage systems. The alternating action equalizes pump wear. If an alarm condition occurs, the alarm switch activates the audible/visual alarm system. Common applications include lift stations, pump chambers, and irrigation systems.

FEATURES

- NEMA 4X engineered thermoplastic enclosure with lockable cover
- Flashing red 360° alarm beacon with an electronic horn, and test/silence switch
- Pump Hand-Off-Auto switches to manually activate a pump, set in automatic float level control, or disable the pump operation
- Pump Run lights to provide visual notification when the pumps are called to run
- DPC-4F Pump Controller



OPTIONS

- Amber beacon
- Elapse Time Meters/Event counters
- Heat sensor terminals
- Anti-condensation heater
- Lightning arrestor
- Seal Failure indicator lights
- Auxiliary alarm contacts
- Float configurations

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
 - a. Padlockable cover
 - b. Mounting flanges
2. Multi-Tap Transformer 208/240/480 VAC primary incoming voltage with primary and secondary fuses
3. IEC motor contactors control the pump motor load by switching the electrical lines
4. Motor Protective Switches provide adjustable overload, branch circuit protection, phase loss/imbalance protection and pump disconnect
5. DPC-4F Pump Controller
 - a. Float Status Indicator Lights
 - b. Pump Run LED's
 - c. Power On Light
 - d. Lead/Lag Selector Switch
 - e. Lag Pump on Delay Timer
 - f. Low Voltage Float Switch Terminal Block
6. 360° red alarm beacon for visual alert
7. Ground lugs
8. Control/alarm circuit fuse
9. 22mm Green Pump Run lights provides indication when pump is called to run
10. 22mm Pump Hand-Off-Auto switches provides manual pump control
11. Alarm Horn provides audible warning of alarm condition, 83 to 85 decibel (not shown)
12. 22mm External Alarm test/Silence Button (not shown)



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FUSION™ THREE PHASE DUPLEX CONTROL PANEL

Model	FLA Range	Enclosure Type	Input Power VAC - PH
FD463-001*	1.0-1.6	NEMA 4X	208/240/480-3
FD463-101*	1.6-2.5	NEMA 4X	208/240/480-3
FD463-201*	2.5-4.0	NEMA 4X	208/240/480-3
FD463-301*	4.0-6.3	NEMA 4X	208/240/480-3
FD463-401*	6.0-10.0	NEMA 4X	208/240/480-3
FD463-511*	9.0-14.0	NEMA 4X	208/240/480-3
FD463-611*	13.0-18.0	NEMA 4X	208/240/480-3
FD463-621*	17.0-23.0	NEMA 4X	208/240/480-3
FD463-701*	20.0-25.0	NEMA 4X	208/240/480-3
FD463-801*	24.0-32.0	NEMA 4X	208/240/480-3
Options	Description		
AMB	Amber beacon (red beacon is standard)		
EC	Elapsed Time Meter and Cycle Counter		
FC20	(4) 20 foot (6.1m) mechanical control switches / pipe clamp		
FC20CW	(4) 20 foot (6.1m) mechanical control switches / cable weight		
FR20	(4) 20 foot (6.1m) mercury control switches / pipe clamp		
FR20CW	(4) 20 foot (6.1m) mercury control switches / cable weight		
FC30	(4) 30 foot (9.1m) mechanical control switches / pipe clamp		
FC30CW	(4) 30 foot (9.1m) mechanical control switches / cable weight		
FR30	(4) 30 foot (9.1m) mercury control switches / pipe clamp		
FR30CW	(4) 30 foot (9.1m) mercury control switches / cable weight		
FC50	(4) 50 foot (15.2m) mechanical control switches / pipe clamp		
FC50CW	(4) 50 foot (15.2m) mechanical control switches / cable weight		
FR50	(4) 50 foot (15.2m) mercury control switches / pipe clamp		
FR50CW	(4) 50 foot (15.2m) mercury control switches / cable weight		
HS	Heat Sensor Terminals		
HTR	Anti-Condensation Heater		
LA	Lightning Arrestor		
SF	Seal Failure Indicator Light		
X	Auxiliary Alarm		

*3 phase 600 VAC option available. Please contact factory for details.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: 208/240/480 VAC 60 Hz 3Ø

ENCLOSURE: 14 x 12 x 6 inch (35.6 x 30.5 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use with mounting flanges, padlockable cover

INNER DOOR: molded thermoplastic

FLOAT CONTROL VOLTAGE: 12 VDC

MOTOR STARTER: IEC motor protection switches and IEC motor contactors

PUMP AMPS: 1-32 Amps

ALARM HORN: 83-85 decibel rating

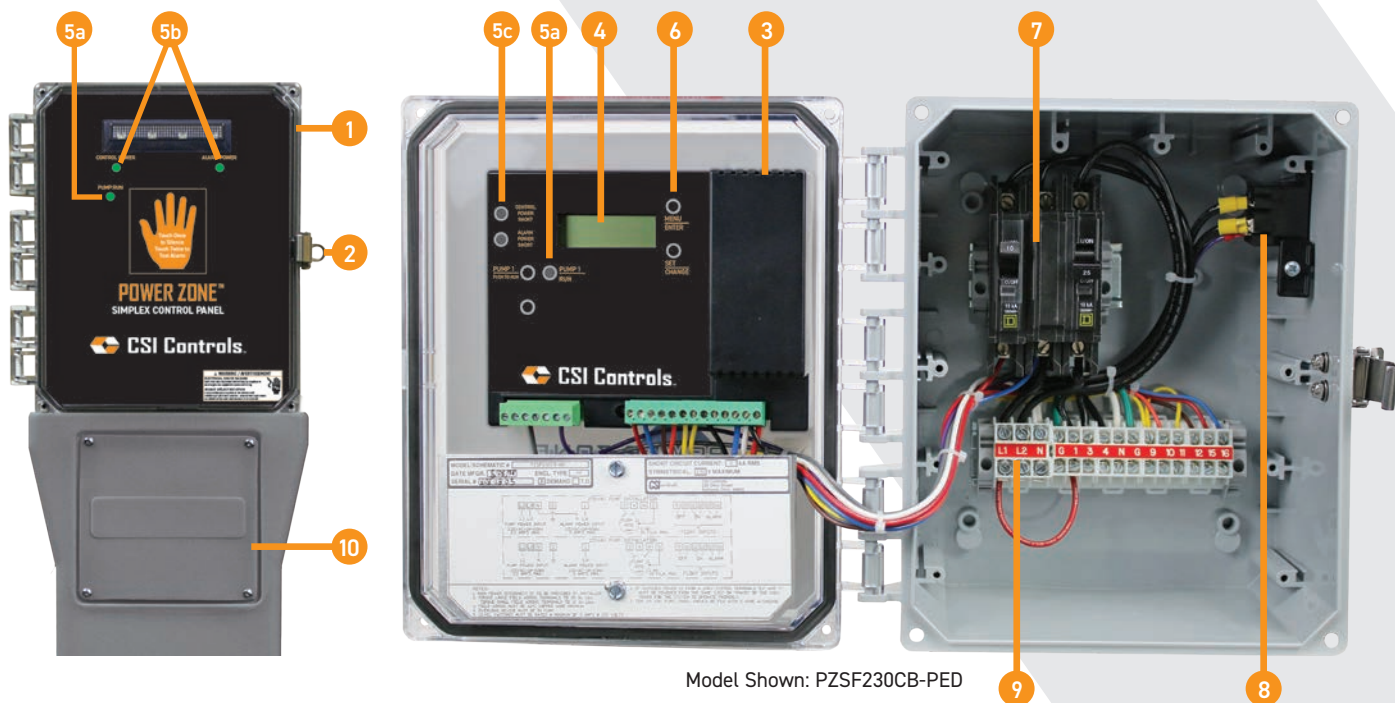
FLASHING RED LED ALARM LIGHT 360°



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Power Zone™ Single Phase Simplex

Single Phase Simplex Demand or Timed Dose Controlled System for Pump Control and System Monitoring



The **Power Zone™ Single Phase Simplex** panel is designed to control one 115/230V single phase pump in water and sewage installations. The easy to read LCD display provides for simple menu navigation, site setup, and access to critical alarm events, pump run times, and pump cycle counts.

FEATURES

- Float or 4-20mA continuous level sensing models
- 4-20mA model provides inputs for two float backup
- Digital backlit LCD for easy setup and system monitoring
- Field configurable for Demand or Timed Dose control
- Zero cross over sensing for extended motor relay life
- Exterior touch sensor for alarm silence and test
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443; 7,151,459;
7,224,283 and 7,557,722

OPTIONS

- Auxiliary alarm and redundant off circuitry
- Heavy duty option increases circuit breaker and wire gauge to allow 16-20 amps
- Poly pedestal with access cover
- Float configurations

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Locking latch for added safety
3. Controller touch safe housing
4. Digital backlit LCD display; 2 lines, 16 characters per line
5. (a) Pump Run LEDs, (b) Control Power and Alarm Power LEDs, and (c) Control and Alarm Power Short LEDs
6. Menu/Enter & Set/Change buttons for programming and viewing control panel
7. Two circuit breakers: one for pump power; another for control and alarm power
8. Pump run relay controls pump by switching electrical lines
9. Terminal strip for field wiring of incoming power, floats and pump
10. Pedestal (optional) with easy access cover



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POWER ZONE™ SIMPLEX FLOAT PANELS

Model	Max FLA	Description	Enclosure Type	Input Power Voltage Phase	Circuit Breakers
PZSF115CB	16	Power Zone Simplex Floats	NEMA 4x	115-1	Motor & Control
PZSF115ACB	16	Power Zone Simplex Floats	NEMA 4x	115-1	Motor, Control & Alarm
PZSF230CB	16	Power Zone Simplex Floats	NEMA 4x	230-1	Motor & Control
PZSF230ACB	16	Power Zone Simplex Floats	NEMA 4x	230-1	Motor, Control & Alarm
Power Zone™ Simplex Transmitter 4-20mA					
PZST115CB	16	Power Zone Simplex Transmitter	NEMA 4x	115-1	Motor & Control
PZST115ACB	16	Power Zone Simplex Transmitter	NEMA 4x	115-1	Motor, Control & Alarm
PZST230CB	16	Power Zone Simplex Transmitter	NEMA 4x	230-1	Motor & Control
PZST230ACB	16	Power Zone Simplex Transmitter	NEMA 4x	230-1	Motor, Control & Alarm
Options	Description				
FC20	(3) PZSF or (2) PZST 20 foot (6.1m) mechanical control switches / pipe clamp				
FC20CW	(3) PZSF or (2) PZST 20 foot (6.1m) mechanical control switches / cable weight				
FR20	(3) PZSF or (2) PZST 20 foot (6.1m) mercury control switches / pipe clamp				
FR20CW	(3) PZSF or (2) PZST 20 foot (6.1m) mercury control switches / cable weight				
FC30	(3) PZSF or (2) PZST 30 foot (9.1m) mechanical control switches / pipe clamp				
FC30CW	(3) PZSF or (2) PZST 30 foot (9.1m) mechanical control switches / cable weight				
FR30	(3) PZSF or (2) PZST 30 foot (9.1m) mercury control switches / pipe clamp				
FR30CW	(3) PZSF or (2) PZST 30 foot (9.1m) mercury control switches / cable weight				
FC50	(3) PZSF or (2) PZST 50 foot (15.2m) mechanical control switches / pipe clamp				
FC50CW	(3) PZSF or (2) PZST 50 foot (15.2m) mechanical control switches / cable weight				
FR50	(3) PZSF or (2) PZST 50 foot (15.2m) mercury control switches / pipe clamp				
FR50CW	(3) PZSF or (2) PZST 50 foot (15.2m) mercury control switches / cable weight				
HD	Heavy Duty - increases breakers and wire gauge to allow 16-20 Amps				
PED	Poly Pedestal with access door				
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)*				
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)*				
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)*				
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)*				
X	Auxiliary Alarm & Redundant Off Circuitry (control float not included)				

*Only available for PZST panel models.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø

Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 10 x 8 x 6 inch (25.4 x 20.3 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use

INNER DOOR: molded thermoplastic

LOCKING LATCH: stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: solid state power relay

PUMP AMPS: 0-16 Amps, 16-20 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT

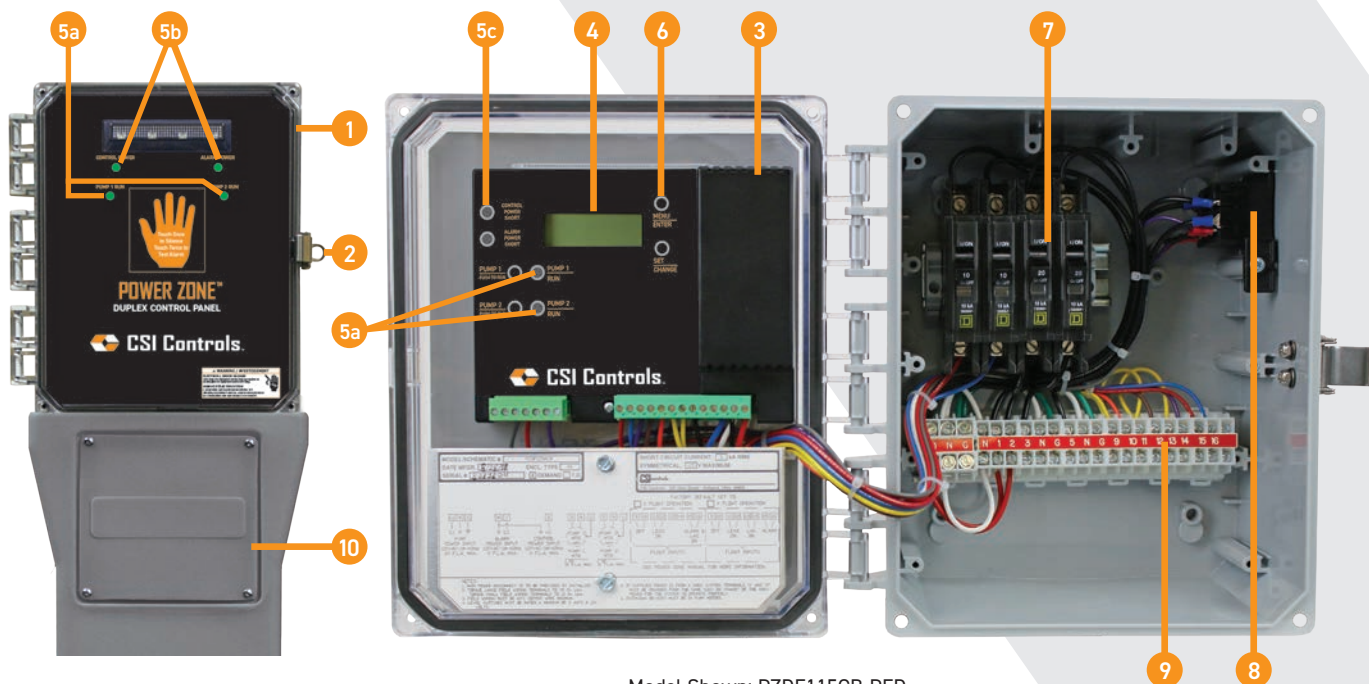


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Power Zone™ Single Phase Duplex

Single Phase Duplex Demand Controlled System for Pump Control and System Monitoring



Model Shown: PZDF115CB-PED

The **Power Zone™ Single Phase Duplex** panel is designed to control two 115/230V single phase pumps in water and sewage installations. The easy to read LCD display provides for simple menu navigation, site setup, and access to critical alarm events, pump run times, and pump cycle counts.

FEATURES

- Float or 4-20mA continuous level sensing models
- 4-20mA model provides inputs for two float backup
- Digital backlit LCD for easy setup and system monitoring
- Zero cross over sensing for extended motor relay life
- Exterior touch sensor for alarm silence and test
- Five-year limited warranty on panel
- Two-year limited warranty on 4-20mA transmitters



US Patent No.
7,075,443; 7,151,459;
7,224,283 and 7,557,722

OPTIONS

- Auxiliary alarm and redundant off circuitry
- Heavy duty option increases circuit breaker and wire gauge to allow 16-20 amps
- Poly pedestal with access cover
- Float configurations

COMPONENTS

1. NEMA 4X enclosure rated for indoor or outdoor use
2. Locking latch for added safety
3. Controller touch safe housing
4. Digital backlit LCD display; 2 lines, 16 characters per line
5. (a) Pump Run LEDs, (b) Control Power and Alarm Power LEDs, and (c) Control and Alarm Power Short LEDs
6. Menu/Enter & Set/Change buttons for programming and viewing control panel
7. Two circuit breakers: one for pump power; another for control and alarm power
8. Pump run relays control pumps by switching electrical lines
9. Terminal strip for field wiring or incoming power, floats and pumps
10. Pedestal (optional) with easy access cover



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POWER ZONE™ DUPLEX FLOAT PANELS

Model	Max FLA	Description	Enclosure Type	Input Power Voltage Phase	Circuit Breakers
PZDF115CB	16	Power Zone Duplex Floats	NEMA 4x	115-1	Motor & Control
PZDF115ACB	16	Power Zone Duplex Floats	NEMA 4x	115-1	Motor, Control & Alarm
PZDF230CB	16	Power Zone Duplex Floats	NEMA 4x	230-1	Motor & Control
PZDF230ACB	16	Power Zone Duplex Floats	NEMA 4x	230-1	Motor, Control & Alarm
Power Zone™ Duplex Transmitter 4-20mA					
PZDT115CB	16	Power Zone Duplex Transmitter	NEMA 4x	115-1	Motor & Control
PZDT115ACB	16	Power Zone Duplex Transmitter	NEMA 4x	115-1	Motor, Control & Alarm
PZDT230CB	16	Power Zone Duplex Transmitter	NEMA 4x	230-1	Motor & Control
PZDT230ACB	16	Power Zone Duplex Transmitter	NEMA 4x	230-1	Motor, Control & Alarm
Options	Description				
FC20	(4) PZDF or (2) PZDT 20 foot (6.1m) mechanical control switches / pipe clamp				
FC20CW	(4) PZDF or (2) PZDT 20 foot (6.1m) mechanical control switches / cable weight				
FR20	(4) PZDF or (2) PZDT 20 foot (6.1m) mercury control switches / pipe clamp				
FR20CW	(4) PZDF or (2) PZDT 20 foot (6.1m) mercury control switches / cable weight				
FC30	(4) PZDF or (2) PZDT 30 foot (9.1m) mechanical control switches / pipe clamp				
FC30CW	(4) PZDF or (2) PZDT 30 foot (9.1m) mechanical control switches / cable weight				
FR30	(4) PZDF or (2) PZDT 30 foot (9.1m) mercury control switches / pipe clamp				
FR30CW	(4) PZDF or (2) PZDT 30 foot (9.1m) mercury control switches / cable weight				
FC50	(4) PZDF or (2) PZDT 50 foot (15.2m) mechanical control switches / pipe clamp				
FC50CW	(4) PZDF or (2) PZDT 50 foot (15.2m) mechanical control switches / cable weight				
FR50	(4) PZDF or (2) PZDT 50 foot (15.2m) mercury control switches / pipe clamp				
FR50	(4) PZDF or (2) PZDT 50 foot (15.2m) mercury control switches / cable weight				
HD	Heavy Duty - increases breakers and wire gauge to allow 16-20 Amps				
PED	Poly Pedestal with access door				
TC25	(1) CS4-20 transmitter 100 inWC with 25 foot cable (backup floats recommended, add float code option)				
TC50	(1) CS4-20 transmitter 100 inWC with 50 foot cable (backup floats recommended, add float code option)				
TS25	(1) SLX transmitter 16.7 ftWC with 25 foot cable (backup floats recommended, add float code option)*				
TS50	(1) SLX transmitter 16.7 ftWC with 50 foot cable (backup floats recommended, add float code option)*				
X	Auxiliary Alarm & Redundant Off Circuitry (control float not included)				

*Only available for PZDT panel models.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø

Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 10 x 8 x 6 inch (25.4 x 20.3 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use

INNER DOOR: molded thermoplastic

LOCKING LATCH: stainless steel, padlockable

FLOAT CONTROL VOLTAGE: 115 VAC

MOTOR STARTER: solid state power relay

PUMP AMPS: 0-16 Amps, 16-20 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT

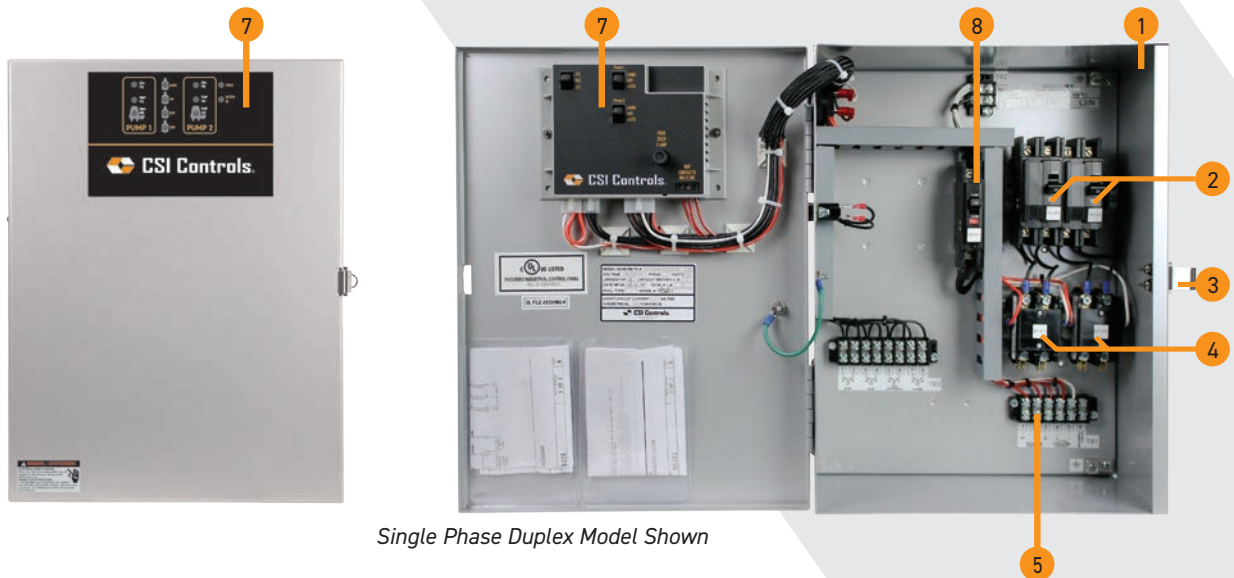


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Single Phase Duplex Model Shown

PRO-Grade™ (PG) control panels provide a convenient, flexible platform for a wide range of commercial applications. The PG panels can be configured for simplex and duplex pump control and with line voltage from 120/240 VAC. A large selection of configurable options is available.

All PG panels provide low voltage (12 VDC) interfaces for floats and other sensor control connections, and are available with optional intrinsically safe float connections, conforming with UL 508A and UL 698A standards. A 12V remote alarm interface is standard on the PG panels, compatible with the CSI Controls part #1063912 Lobby Alarm. Optional 12V battery backup capabilities. Leads provided. Battery not included.

External lightning arrestor available:

- 1014320 Hub
- 1028311 Single Phase Lightning Arrestor

BASIC CONFIGURATIONS

- **PG2** Single Phase Simplex
- **PG4** Single Phase Duplex



COMPONENTS

1. NEMA 1 enclosure for indoor use or NEMA 4X enclosure for outdoor use
2. Circuit breaker(s)
3. Lockable latch
4. Magnetic motor contactor(s)
5. Terminal block
6. Optional intrinsically safe module (not shown)
7. Pump controller with status indicators
 - a. Hand/Off/Auto Switches Pump 1 and Pump 2 (duplex only)
 - b. Control/alarm fuse
 - c. Optional adjustable seal failure
 - d. Form C powered contacts
 - e. Pump selector switch (Alt, 1-2, 2-1)
 - f. Pump Run 1 indicator (optional Seal Failure & Temp Failure)
 - g. Pump Run 2 indicator (duplex only) (optional Seal Failure & Temp Failure)
 - h. Float status - Alarm, Lag (duplex only), Start, Stop
 - i. Power indicator
 - j. Battery OK indicator
8. Alarm/control power circuit breaker



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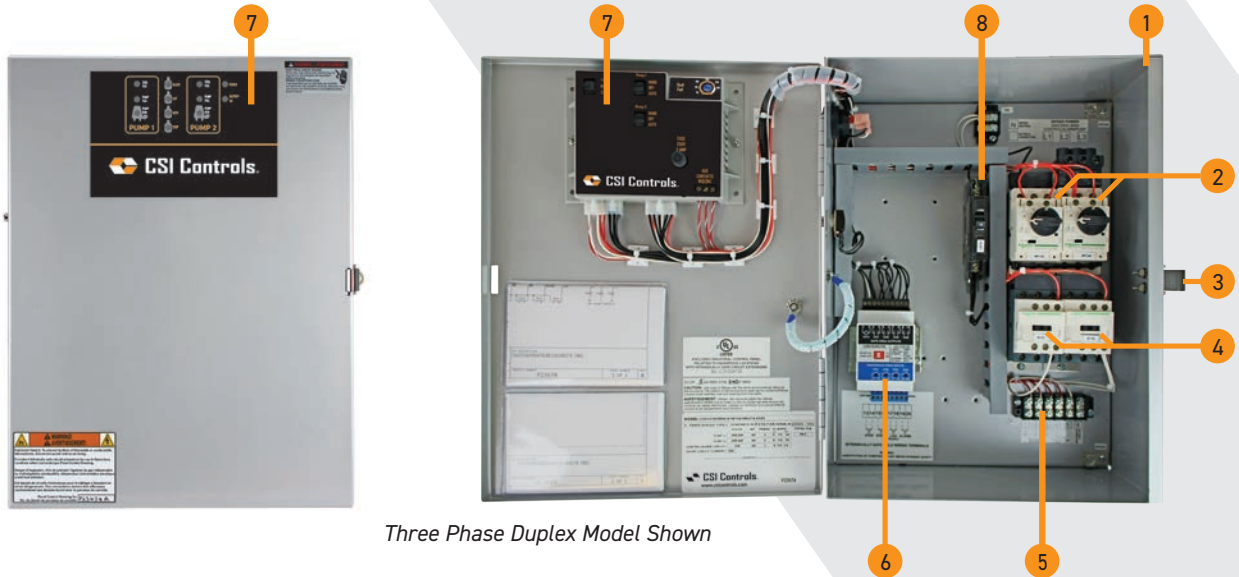
PRO-Grade™

Advanced Single Phase Control Panels for Commercial Applications

**PRO-GRADE SINGLE PHASE SIMPLEX PANELS				
MODEL #	FLA RANGE	ENCLOSURE TYPE	INPUT POWER VAC - PH	CIRCUIT BREAKERS
PG21I104X6A7A10E15A19X	0-7	NEMA 1	115/230-1	Motor & Control/Alarm
PG21W104X6A7A10E15A19X	0-7	NEMA 4X	115/230-1	Motor & Control/Alarm
PG21I114X6A7A10E15A19X	7-15	NEMA 1	115/230-1	Motor & Control/Alarm
PG21W114X6A7A10E15A19X	7-15	NEMA 4X	115/230-1	Motor & Control/Alarm
PG21I124X6A7A10E15A19X	15-20	NEMA 1	115/230-1	Motor & Control/Alarm
PG21W124X6A7A10E15A19X	15-20	NEMA 4X	115/230-1	Motor & Control/Alarm
PG21I134X6A7A10E15A19X	20-30	NEMA 1	115/230-1	Motor & Control/Alarm
PG21W134X6A7A10E15A19X	20-30	NEMA 4X	115/230-1	Motor & Control/Alarm
**PRO-GRADE SINGLE PHASE DUPLEX PANELS				
MODEL #	FLA RANGE	ENCLOSURE TYPE	INPUT POWER VAC - PH	CIRCUIT BREAKERS
PG41I104X6A7A10E15A19BX	0-7	NEMA 1	115/230-1	Motor & Control/Alarm
PG41W104X6A7A10E15A19BX	0-7	NEMA 4X	115/230-1	Motor & Control/Alarm
PG41I114X6A7A10E15A19BX	7-15	NEMA 1	115/230-1	Motor & Control/Alarm
PG41W114X6A7A10E15A19BX	7-15	NEMA 4X	115/230-1	Motor & Control/Alarm
PG41I124X6A7A10E15A19BX	15-20	NEMA 1	115/230-1	Motor & Control/Alarm
PG41W124X6A7A10E15A19BX	15-20	NEMA 4X	115/230-1	Motor & Control/Alarm
PG41I134X6A7A10E15A19BX	20-30	NEMA 1	115/230-1	Motor & Control/Alarm
PG41W134X6A7A10E15A19BX	20-30	NEMA 4X	115/230-1	Motor & Control/Alarm
OPTIONS	DESCRIPTION			
1P	Red Alarm			
3A	Beacon Flasher (option 1P required)			
3H	Beacon Steady On, Flash On Alarm (option 1P required)			
5AD	Overtemp Shutdown + Alarm			
5EM	Seal Fail Indication			
6A	Auxiliary Contacts, Form C (included as standard)			
7A	Powered Normally Open Alarm Contacts (included as standard)			
8F	Door Mounted ETM			
10E	Lockable Latch (included as standard)			
10K	Anti-Condensation Heater			
15A	Control/Alarm Circuit Breaker (included as standard)			
19B	Duplex Alternation (duplex models only, included as standard)			
19X	Door Mounted Pump Run Indicator (included as standard)			
27A	Intrinsically Safe Barrier			



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Three Phase Duplex Model Shown

PRO-Grade™ (PG) control panels provide a convenient, flexible platform for a wide range of commercial applications. The PG panels can be configured for simplex and duplex pump control and with three phase line voltages 208/240/480 VAC. A large selection of configurable options is available.

All PG panels provide low voltage (12 VDC) interfaces for floats and other sensor control connections, and are available with optional intrinsically safe float connections, conforming with UL 508A and UL 698A standards. A 12V remote alarm interface is standard on the PG panels, compatible with the CSI Controls part #1063912 Lobby Alarm. Optional 12V battery backup capabilities. Leads provided. Battery not included.

External lightning arrestor available:

- 1014320 Hub
- 6000368 Three Phase Lightning Arrestor

BASIC CONFIGURATIONS

- **PG5** Three Phase Simplex
- **PG6** Three Phase Duplex



COMPONENTS

1. NEMA 1 enclosure for indoor use or NEMA 4X enclosure for outdoor use
2. Motor protective switch(es)
3. Lockable latch
4. IEC motor contactor(s)
5. Terminal block
6. Optional intrinsically safe module
7. Pump controller with status indicators
 - a. Hand/Off/Auto Switches Pump 1 and Pump 2 (duplex only)
 - b. Control/alarm fuse
 - c. Optional adjustable seal failure
 - d. Form C powered contacts
 - e. Pump selector switch (Alt, 1-2, 2-1)
 - f. Pump Run 1 indicator (optional Seal Failure & Temp Failure)
 - g. Pump Run 2 indicator (duplex only) (optional Seal Failure & Temp Failure)
 - h. Float status - Alarm, Lag (duplex only), Start, Stop
 - i. Power indicator
 - j. Battery OK indicator
8. Alarm/control power circuit breaker
9. Multi-tap transformer (208/240/480 VAC primary) provides 120V control/alarm voltage (not shown)



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PRO-Grade™

Advanced Three Phase Control Panels for Commercial Applications

**PRO-GRADE THREE PHASE SIMPLEX PANELS				
PG51I101X5R6A7A10E15A19X	1.5-2.5	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W101X5R6A7A10E15A19X	1.5-2.5	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I201X5R6A7A10E15A19X	2.5-4.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W201X5R6A7A10E15A19X	2.5-4.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I301X5R6A7A10E15A19X	4.0-6.3	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W301X5R6A7A10E15A19X	4.0-6.3	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I401X5R6A7A10E15A19X	6.0-10.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W401X5R6A7A10E15A19X	6.0-10.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I511X5R6A7A10E15A19X	9.0-14.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W511X5R6A7A10E15A19X	9.0-14.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I611X5R6A7A10E15A19X	13.0-18.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W611X5R6A7A10E15A19X	13.0-18.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I621X5R6A7A10E15A19X	17.0-23.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W621X5R6A7A10E15A19X	17.0-23.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I701X5R6A7A10E15A19X	20.0-25.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W701X5R6A7A10E15A19X	20.0-25.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG51I801X5R6A7A10E15A19X	25.0-32.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG51W801X5R6A7A10E15A19X	25.0-32.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
**PRO-GRADE THREE PHASE DUPLEX PANELS				
MODEL #	FLA RANGE	ENCLOSURE TYPE	INPUT POWER VAC - PH	CIRCUIT BREAKERS
PG61I101X5R6A7A10E15A19BX	1.5-2.5	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W101X5R6A7A10E15A19BX	1.5-2.5	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I201X5R6A7A10E15A19BX	2.5-4.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W201X5R6A7A10E15A19BX	2.5-4.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I301X5R6A7A10E15A19BX	4.0-6.3	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W301X5R6A7A10E15A19BX	4.0-6.3	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I401X5R6A7A10E15A19BX	6.0-10.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W401X5R6A7A10E15A19BX	6.0-10.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I511X5R6A7A10E15A19BX	9.0-14.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W511X5R6A7A10E15A19BX	9.0-14.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I611X5R6A7A10E15A19BX	13.0-18.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W611X5R6A7A10E15A19BX	13.0-18.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I621X5R6A7A10E15A19BX	17.0-23.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W621X5R6A7A10E15A19BX	17.0-23.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I701X5R6A7A10E15A19BX	20.0-25.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W701X5R6A7A10E15A19BX	20.0-25.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
PG61I801X5R6A7A10E15A19BX	25.0-32.0	NEMA 1	208/240/460-3	Motor & Control/Alarm
PG61W801X5R6A7A10E15A19BX	25.0-32.0	NEMA 4X	208/240/460-3	Motor & Control/Alarm
OPTIONS	DESCRIPTION			
1P	Red Alarm			
3A	Beacon Flasher (option 1P required)			
3H	Beacon Steady On, Flash On Alarm (option 1P required)			
5AD	Overtemp Shutdown + Alarm			
5EM	Seal Fail Indication			
5R	Pump Fail Indication & Alarm (included as standard)			
6A	Auxiliary Contacts, Form C (included as standard)			
7A	Powered Normally Open Alarm Contacts (included as standard)			
8F	Door Mounted ETM			
10E	Lockable Latch (included as standard)			
10K	Anti-Condensation Heater			
15A	Control/Alarm Circuit Breaker (included as standard)			
19B	Duplex Alternation (duplex models only, included as standard)			
19X	Door Mounted Pump Run Indicator (included as standard)			
27A	Intrinsically Safe Barrier			

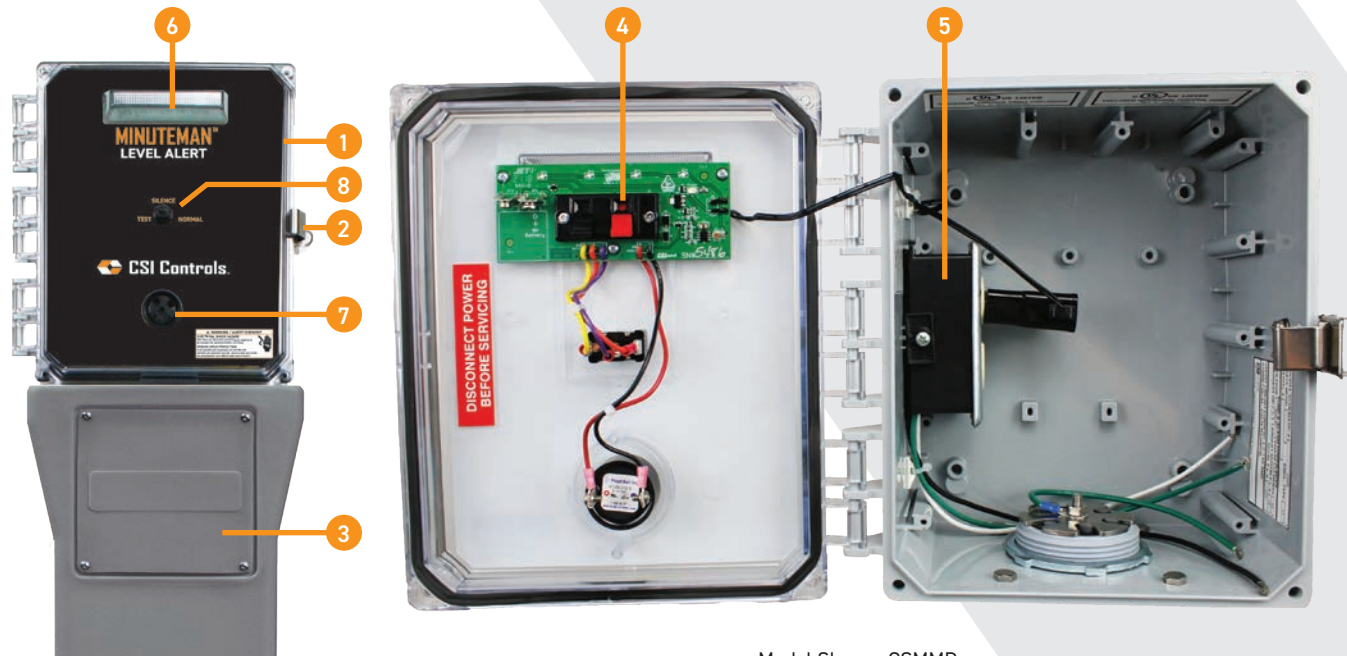


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Minuteman Level Alert™

Pedestal Mounted Plugger Control with High Water Alarm



Model Shown: CSMMP

The **Minuteman Level Alert™** is a pedestal mounted, plugger control panel level alarm. The pedestal features an easy access door allowing quick installation and wiring. It is equipped with an internal outlet for piggy-back pump operation and battery back-up alarm system.

FEATURES

- Battery back-up alarm system (9V battery not included)
- Weatherproof enclosure and pedestal
- Wiring concealed in pedestal (no exposed wires)
- Pedestal fits over a 4 x 4 or is ready for direct burial to 2 ft. below grade
- Low voltage alarm float switch included (15 foot cord)



OPTIONS

- 230 volt input voltage
- Float switch configurations
- Terminal block for incoming power connection
- Dual power - separate incoming alarm and pump control

COMPONENTS

1. NEMA 4X enclosure rated for outdoor use
2. Locking latch for added safety
3. Poly-pedestal with access door
4. High level float connection
5. Receptacle outlet for pump switch 115 VAC or 230 VAC piggy-back plug
6. Flashing red LED alarm light
7. Piezo audible alarm
8. External Test/Silence/Normal operation switch



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MINUTEMAN LEVEL ALERT™ PANELS

Part #	Description
CSMM	NEMA 4X alarm with LED alarm light, outlet for piggy-back float installation and 9V battery back-up. Includes a 15 ft. alarm float switch and enclosure mounting feet. Piggy-back pump switch and pedestal not included.
CSMMP	NEMA 4X pedestal mounted alarm with LED alarm light, outlet for piggy-back float installation and 9V battery back-up. Includes a 15 ft. alarm float switch and rubber grommet to seal incoming wires. Piggy-back pump switch not included.
Options	Description
230	230 VAC
D	Dual power - separate incoming power to Pump and Alarm/Control
GF	(1) 15 ft. piggy-back pump switch
NF	No float included - deducts standard 15 ft. alarm float
T	Terminal block incoming power connection

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC or 230 VAC 50/60 Hz 1Ø

Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 10 x 8 x 6 inch (25.4 x 20.3 x 15.2 cm)

NEMA 4X ultraviolet stabilized thermoplastic rated for indoor/outdoor use

INNER DOOR: molded thermoplastic

LOCKING LATCH: stainless steel, padlockable

PRIMARY ALARM FLOAT VOLTAGE: 12 VDC, 9 volt battery backup

MOTOR STARTER: wide angle pump float switch

PUMP AMPS: 0-15 Amps

ALARM HORN: 83-85 decibel rating

FLASHING RED ALARM LIGHT: high intensity LED



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H2Oil Alarm™ System

Monitors and Controls Pump Used in Water/Oil Environments

The **CSI H2Oil Alarm™** system is designed to provide pump control and alarm notification of potentially threatening water and oil levels in simplex pumping applications. The system features an innovative **Oil Water Switch** that **senses the difference between water and oil** to remove water from the tank, while preventing oil from being pumped into the environment.

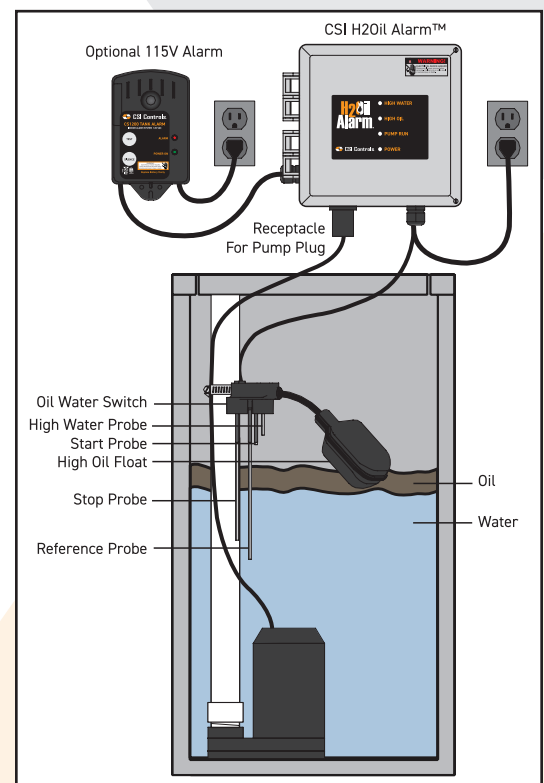
As water and oil enter the tank, the oil rises to create a floating layer on top of the water. The water level rises to reach the **Start Probe**, activating the pump to remove water from the tank. It continues pumping water out of the tank until the water level falls below the **Stop Probe**, deactivating the pump. If the water level continues to rise and reaches the **High Water Probe**, the red High Water LED indicator illuminates and auxiliary contacts close (activating an optional CS1200 tank alarm or other remote device). If the oil level rises to activate the mechanical **High Oil Float**, the red High Oil LED indicator illuminates and auxiliary contacts close (activating an optional CS1200 tank alarm or other remote device).

FEATURES

- Plug and play - no wiring for easy installation
- NEMA 1 rated for indoor use
- Receptacle to accept one 115 VAC pump plug (15 amp FLA max.)
- LED indicators: High water (red); High oil (red); Pump run (green); Power on (green)
- Factory-installed Oil Water Switch: high water probe, start probe, stop probe, reference probe
- Pump activation probes (start and stop levels) 5 inch pumping range
- Helps satisfy requirements of an ASME A17.1 compliant system



Receptacle on bottom of panel
115V model shown



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H2OIL ALARM™ SYSTEM

Part #	Description
1037497	H2Oil Alarm™ System
1037520	H2Oil Alarm™ System with CS1200 Alarm

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: Pump: 115 VAC 50/60 Hz 1Ø
Control/Alarm: 115 VAC 60 Hz 1Ø

ENCLOSURE: 8 x 8 x 4 inch (20.3 x 20.3 x 10.2 cm)
NEMA 1 thermoplastic rated for indoor use

RECEPTACLE: 115 VAC type 5-15

PUMP AMPS: 0-15 Amps



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VIP-331 Control Panel

Three Phase Duplex Industrial Grade Float Operated Control Panel

The **VIP-331** control panel is designed to alternately control two three phase pumps in industrial and commercial water and sewage systems using the robust DPC-4F Controller for pump sequence, alternation, lag pump delay time and alarm.

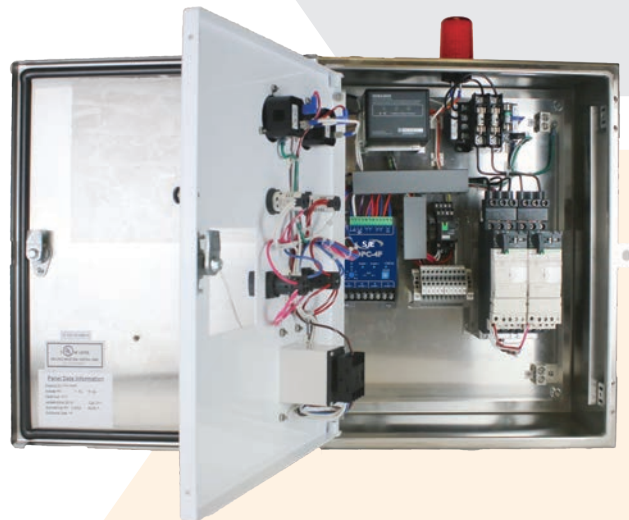
If a high water alarm condition occurs, the high water alarm float activates the audible/visual alarm system along with auxiliary contacts for remote alarm. Common applications include lift stations and pump chambers. Models available with intrinsically safe relay for extension into hazardous locations.

FEATURES

- Padlockable wall mount NEMA 4X, stainless steel or fiberglass
- White painted steel inner door and backplate
- Single-point power connection
- IEC HP rated motor starter with adjustable class 10 ambient compensated overloads
- 10 HP max @208VAC, 230VAC
- 20 HP max @460VAC
- Pump short circuit disconnect/overload reset through inner door
- Overtemp shutdown for motor winding switches (auto reset)
- DPC-4F controller
 - Pump sequence control
 - Pump selector switch (Alt, 1-2, 2-1)
 - Pump lag delay time adjustable (0-60 sec)
 - High water alarm
 - Float out-of-sequence alarm and float reassignment during event
 - Pump call (green), control power (green), float status (amber), and alarm (red) LED indicators
- Tri-voltage stepdown control transformer
- Dual Seal Fail module for two pumps, adjustable 1k-250k Ω with red LED indicators
- Red flashing alarm beacon and audible horn
- Alarm silence and push-to-test 22mm
- Hand-Off-Auto selector switches 22mm
- Pump Run (green) LED indicators 22mm
- Elapsed time meters
- Auxiliary contacts
- 4-channel intrinsically safe relay (IS models only)



Model Shown: 1059961 VIP-331SS



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VIP-331 CONTROL PANEL				
Part #	Max FLA	Enclosure Type	Input Power VAC - PH	Description
1059961	32	NEMA 4X	208/230/460-3	VIP-331SS Control Panel, Stainless Steel
1059962	32	NEMA 4X	208/230/460-3	VIP-331FG Control Panel, Fiberglass
1059963	32	NEMA 4X	208/230/460-3	VIP-331SSIS Control Panel, Stainless Steel, Intrinsically Safe
1059964	32	NEMA 4X	208/230/460-3	VIP-331FGIS Control Panel, Fiberglass, Intrinsically Safe

OPTIONS	
Part #	Description
1033805*	Overload Module 1.25 - 5.0 FLA
1023500*	Overload Module 4.5 - 18.0 FLA
1033806*	Overload Module 8.0 - 32.0 FLA
1036351	Surge Arrestor
- - -	Pedestal Option - Consult Factory

*Two overload modules required for panel operation.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: 208/230/460 VAC 50/60 Hz 3Ø

ENCLOSURE: VIP-331SS: 20 x 18 x 8 inch (50.8 x 45.7 x 20.3 cm) NEMA 4X stainless steel, rated for indoor/outdoor use
VIP-331FG: 18 x 16 x 10 inch (45.7 x 40.6 x 25.4 cm) NEMA 4X fiberglass, rated for indoor/outdoor use

INNER DOOR & BACK PLATE: white painted steel

LOCKING LATCH: (2) stainless steel VIP-331SS, or thermoplastic VIP-331FG, padlockable

DPC-4F CONTROLLER: Provides pump control sequence, pump selector switch, pump lag delay timer (0-60sec), high water alarm, float out-of-sequence alarm and float reassignment, green pump call-to-run LEDs, and amber float status LEDs

FLOAT CONTROL VOLTAGE: 12 DC

MOTOR STARTER: IEC motor protection switch, IEC motor contactor with disconnect/overload reset mounted through the inner door

PUMP AMPS: 0-32 FLA each

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°

PUMP HAND-OFF-AUTO SWITCHES: 22mm mounted on inner door

PUMP RUN LIGHTS: green LED, 22mm mounted on inner door

ELAPSED TIME METER: mounted on inner door

DUAL SEAL FAIL MODULE: two pumps, adjustable 1k-250kΩ, red LED's mounted on inner door

AUXILIARY ALARM CONTACTS: Form C, SPDT

INTRINSICALLY SAFE MODELS:

4 channel IS relay cUL 913 Listed

Control panel cUL 698A Listed



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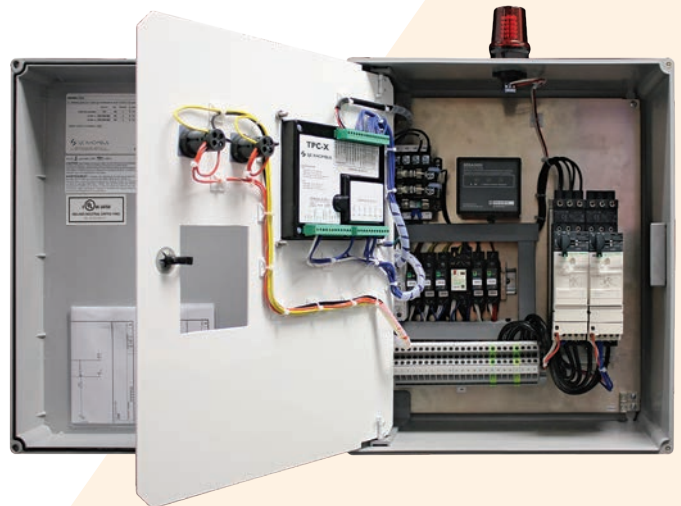
VIP-XR Three Phase Control Panel

Three Phase Duplex Industrial Grade Control Panel with Continuous Level Monitoring

The **VIP-XR** three phase duplex control panel is designed to be rugged, simple and versatile. One panel handles three voltages and a wide range variety of pump motor amperage requirements by simply field installing overload modules - up to 32 amps each. The VIP-XR operates with a 4-20mA level transmitter which can be configured for either 1 or 2 backup float switches. The VIP-XR features the simple to operate TPC-X controller with an intuitive menu and graphic display.

FEATURES

- Padlockable NEMA 4X fiberglass enclosure, 18 x 16 x 10 inches
- 208, 230 or 460V 3-phase power input
- IEC motor starters with interchangeable overload modules up to 32 FLA
- Pump disconnect/overload reset accessible through inner door
- 22mm Hand-Off-Auto controls on inner door
- Supports 1 or 2 float independent backups
- LED alarm beacon
- TPC-X controller
 - Simple, intuitive controller operation
 - Works with standard 4-20 mA level transmitters
 - Easily scalable for different depth ranges
 - Configurable display units: ft, in, cm, bar, etc.
 - Pump run indicators
 - Fault displays, including pump seal fail and overtemperature
 - Pump up/down and alternation selection
- White painted steel inner door and backplate
- Single-point power connection
- Tri-voltage stepdown control transformer



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VIP-XR CONTROL PANEL

Part #	Description
1051954	VIP-XR Control Panel
1036510*	Overload Module, 3.0 - 12.0 FLA
1033806*	Overload Module, 8.0 - 32.0 FLA

*Two overload modules required for panel operation.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE SUPPLY: 208/230/460 VAC 50/60 Hz 3Ø

ENCLOSURE: 18 x 16 x 10 inch (45.7 x 40.6 x 25.4 cm) NEMA 4X fiberglass, rated for indoor/outdoor use

INNER DOOR & BACK PLATE: white painted steel

LOCKING LATCH: (2) thermoplastic, padlockable

TPC-X CONTROLLER: Provides pump control sequence, pump selector switch, pump lag delay timer (0-60sec), high water alarm, pump status indication, ETM and cycle count, seal fail inputs, level set points, units of measurement selection, pump up or pump down, and industry standard 4-20mA analog input for level control

FLOAT CONTROL VOLTAGE: 12 DC

MOTOR STARTER: IEC motor protection switch, IEC motor contactor with disconnect/overload reset mounted through the inner door

PUMP AMPS: 0-32 FLA each

ALARM HORN: 83-85 decibel rating

FLASHING RED LED ALARM LIGHT 360°

PUMP HAND-OFF-AUTO SWITCHES: 22mm mounted on inner door

PUMP RUN LIGHTS: green LED, 22mm mounted on inner door

ELAPSED TIME METER: mounted on inner door



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Fusion Plus™

Expanded Fusion Plus Program

Our **Fusion Plus™ Program** is designed to benefit customers who require additional options beyond what our standard control panel line offers, but do not require a custom engineered solution. The **Fusion Plus™ Program** utilizes inventoried components.

FEATURES

- 24-hour quote response
- 3 week build-to-ship
- Affordable solutions
- Multiple enclosure options
- Multiple pumps



OPTIONS

- Motor starters up to 65 Amps per pump
- IEC rated starters
- Enclosure sizes up to 30 x 24 x 12 inches
- Inner door with indicators and operators
- Control panels with maximum SCCR 5kA
- Generator receptacles, up to 100 amps (limited brands)
- Phone landline auto-dialers
- Dedicated pump controllers

Don't see the option you need listed? Let us know!

We may be able to offer it through the **Fusion Plus™** program or we can design a custom engineered solution for you!

Email: techsupport@sjeinc.com



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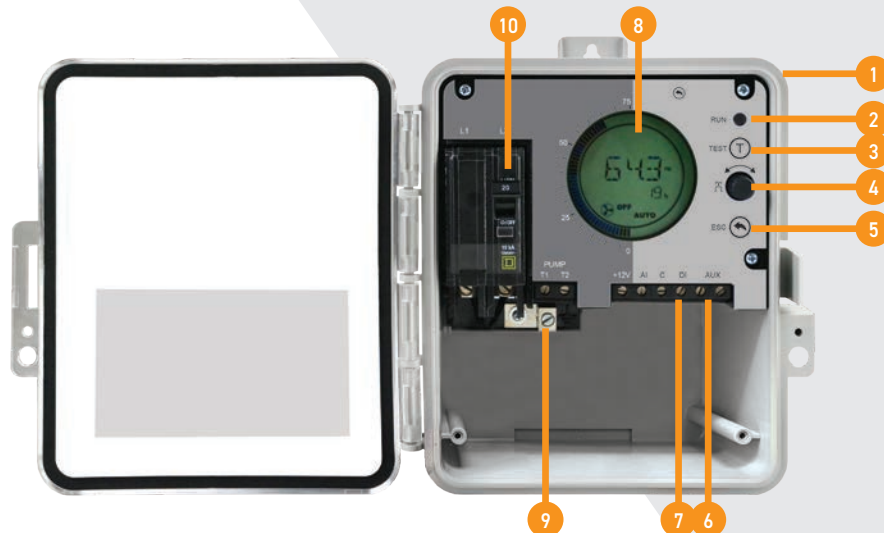
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California Prop 65 requires the following: **WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov**

WellZone® Pressure Controller

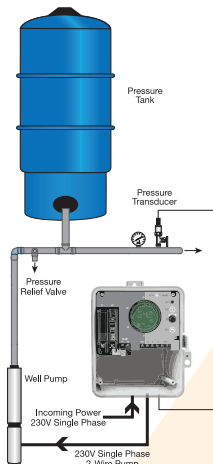
2-Wire Single Phase Well Pump Control Panel



The **WellZone®** digital controller provides pressure control for single phase 2-wire submersible well pump applications. It uses a 0-150 PSI pressure transducer to monitor the discharge pressure and turns the pump ON and OFF according to the Start and Stop setpoints. The LCD display is visible through the clear cover of the enclosure to allow for quick view of the system pressure, run status, hours run and pump cycles. The rotary button provides the user with a simple navigation method through the menu and program settings. It features built in pump protection including rapid cycling and dry run. It is preprogrammed to run the pump as the pressure drops below 40 PSI and stop as the pressure rises above 60 PSI. High & Low pressure settings are available with an auxiliary alarm relay.

FEATURES

- Includes a 0-150 PSI pressure transducer (No pressure switch needed)
- LCD display with bar graph
 - Pressure monitoring
 - Pump amps monitoring
 - Pump on monitoring
 - Pump Run Time
 - Pump Run Cycles
- Adjustable pressure set points
 - Start /Stop pressure set points
 - High /Low pressure alarms
- Advanced functions
 - Dry Run protection
 - Well recharge timer
 - Rapid cycle protection
 - Water filter replacement notification
 - Alarm history
- Five-year limited warranty on panel
- Two-year limited warranty on pressure transducer



COMPONENTS

1. NEMA 4X enclosure 8 x 6 x 4 inches (20.32 x 15.24 x 10.16 cm) for indoor or outdoor use with integral padlockable latch for added safety.
2. Pump run green LED indicator
3. Pump test switch for manual control of the pump
4. Menu rotary encoder/selector switch
5. Menu ESC button
6. Auxiliary alarm contacts
7. Digital input for optional floor sensor or float switch
8. LCD display
9. Ground lug
10. Circuit breaker (20A, 2 pole)



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WELLZONE® 2-WIRE PRESSURE CONTROLLER

Part #	DESCRIPTION
1104528	WellZone® 2W-150, CSI

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

INPUT VOLTAGE: Single phase, 115/230 VAC, 60 Hz

PUMP RATINGS: Single phase, 2-wire (4-14 FLA)

- 0.5 HP at 115 VAC, 60 Hz
- 0.5 HP - 1.5 HP at 230 VAC, 60 Hz

OPERATING TEMPERATURE: 14°F to 122°F (-10°C to 50°C)

ENCLOSURE: 8 x 6 x 4 inch (20.32 x 15.24 x 10.16 cm)

Padlockable NEMA 4X (ultraviolet stabilized thermoplastic with integral mounting feet for outdoor or indoor use)

Includes liquid tight cable strain relief fittings:

- 2 - 1/2" UF cable
- 1 - 1/2" round cable

PRESSURE TRANSDUCER: 0-150 PSI (included) 1/4" NPT Male, NSF 61 rated, 4-20mA, with 5m cable. Two-year limited warranty on pressure transducer.

AUXILIARY ALARM CONTACTS: N.O. 1 amp, 120 VAC Max

NOTE: This digital controller does not provide Variable Speed Pump Control and constant pressure operation

ACCESSORIES (OPTIONAL)

WS360 Water Sensor

The WS360 water sensor, when connected to a WellZone® Pressure Controller, is designed to warn of potential water damage to end users. Place this sensor in any location where there is a risk of water damage: utility room, laundry, kitchen, bathroom, basement, etc. When water reaches any side, top or bottom of the 360° sensor, the WellZone® Pressure Controller will stop the pump and display the alarm fault "WATER SW". One-year limited warranty.

U.S. Patent No.
10,393,687



Part #	Description	Shipping Weight
1078433	360 degree water sensor with 20 ft. cable	0.26 lbs

Transducer Kit

This 0-150 PSI transducer provides continuous level monitoring. It measures the discharge pressure of the water at the sensor and outputs a standard 4-20mA signal proportional to the water pressure.



Part #	Description	Shipping Weight
1077481	Transducer with cable, 4-20mA, 0-150 PSI, bagged	0.5 lbs

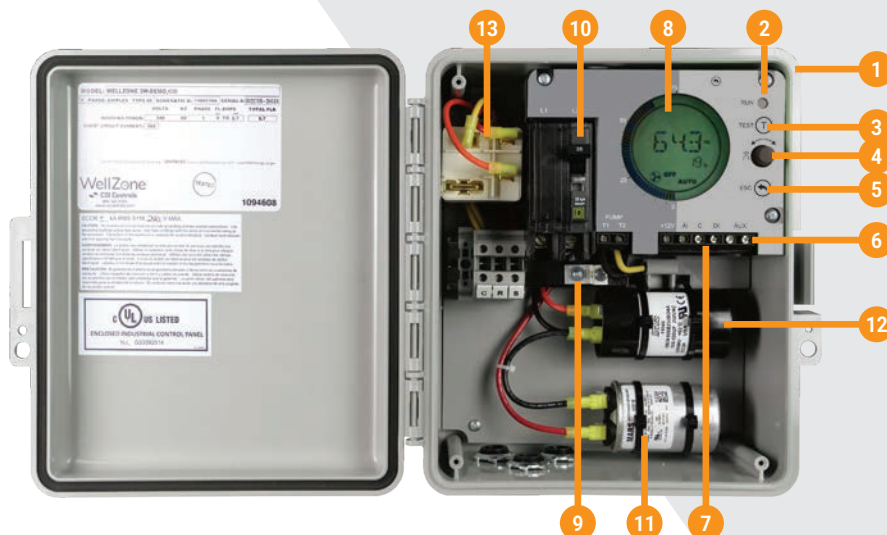


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California Prop 65 requires the following:  WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

WellZone® Pressure Controller

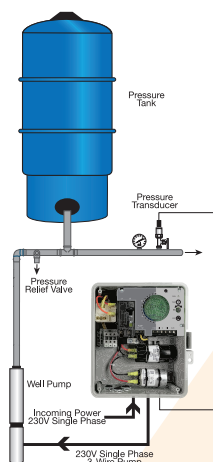
3-Wire Single Phase Well Pump Control Panel



The **WellZone®** digital controller provides pressure control for single phase 3-wire submersible well pump applications. It uses a 0-150 PSI pressure transducer to monitor the discharge pressure and turns the pump ON and OFF according to the adjustable Start and Stop setpoints. The LCD display allows for quick view of the system pressure, run status, hours run and pump cycles. The rotary button provides the user with a simple navigation method through the menu and program settings. It features built in pump protection including rapid cycling and dry run. It is preprogrammed to run the pump as the pressure drops below 40 PSI and stop as the pressure rises above 60 PSI. High & Low pressure settings are available with an auxiliary alarm relay.

FEATURES

- Includes a 0-150 PSI pressure transducer (No pressure switch needed)
- LCD display with bar graph
 - Pressure monitoring
 - Pump amps monitoring
 - Pump on monitoring
 - Pump Run Time
 - Pump Run Cycles
- Adjustable pressure set points
 - Start /Stop pressure set points
 - High /Low pressure alarms
- Advanced functions
 - Dry Run protection
 - Well recharge timer
 - Rapid cycle protection
 - Water filter replacement notification
 - Alarm history
- Five-year limited warranty on panel*
- Two-year limited warranty on pressure transducer



CSI Controls®

COMPONENTS

1. NEMA 4X enclosure 10 x 8 x 4 inches (25.4 x 20.32 x 10.16 cm) for indoor or outdoor use with integral padlockable latch for added safety.
2. Pump run green LED indicator
3. Pump test switch for manual control of the pump
4. Menu rotary encoder/selector switch
5. Menu ESC button
6. Auxiliary alarm contacts
7. Digital input for optional floor sensor or float switch
8. LCD display
9. Ground lug
10. Circuit breaker
11. Run capacitor
12. Start capacitor
13. Start relay

***Note:** CSI Controls will warranty motor start kit components supplied by CSI Controls for one year.

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WELLZONE® 3-WIRE PRESSURE CONTROLLER

Part #	Description	HP	Volts	SFA	Shipping Weight
1105505	WellZone® 3W-050	.5	230	4.3	7.3
1105506	WellZone® 3W-075	.75	230	5.7	7.3
1105507	WellZone® 3W-100	1	230	7.1	7.3
1105508	WellZone® 3W-150	1.5	230	11.5	7.3
1105509	WellZone® 3W-200	2	230	13.2	7.3
1105510	WellZone® 3W-300	3	230	17.0	7.3

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

INPUT VOLTAGE: Single phase, 230 VAC, 60 Hz

PUMP RATINGS: Single phase, 3-wire (4-17 A) max.

OPERATING TEMPERATURE: 14°F to 122°F (-10°C to 50°C)

ENCLOSURE: 10 x 8 x 4 inch (25.4 x 20.32 x 10.16 cm)
Padlockable NEMA 4X (ultraviolet stabilized thermoplastic with integral mounting feet for outdoor or indoor use)

Includes liquid tight cable strain relief fittings:

- 1 x 1/2" + 1 x 3/4" UF cable strain relief
- 1 x 1/2" round cable strain relief

PRESSURE TRANSDUCER: 0-150 PSI (included) 1/4" NPT Male, NSF 61 rated, 4-20mA, with 5m cable. Two-year limited warranty on pressure transducer.

AUXILIARY ALARM CONTACTS: N.O. 1 amp, 120 VAC Max

NOTE: This digital controller does not provide variable speed pump control and constant pressure operation.

ACCESSORIES (OPTIONAL)

WS360 Water Sensor

The WS360 water sensor, when connected to a WellZone® Pressure Controller, is designed to warn of potential water damage to end users. Place this sensor in any location where there is a risk of water damage: utility room, laundry, kitchen, bathroom, basement, etc. When water reaches any side, top or bottom of the 360° sensor, the WellZone® Pressure Controller will stop the pump and display the alarm fault "WATER SW". One-year limited warranty.

U.S. Patent No.
10,393,687



Part #	Description	Shipping Weight
1078433	360 degree water sensor with 20 ft. cable	0.26 lbs

Transducer Kit

This 0-150 PSI transducer provides continuous level monitoring. It measures the discharge pressure of the water at the sensor and outputs a standard 4-20mA signal proportional to the water pressure.



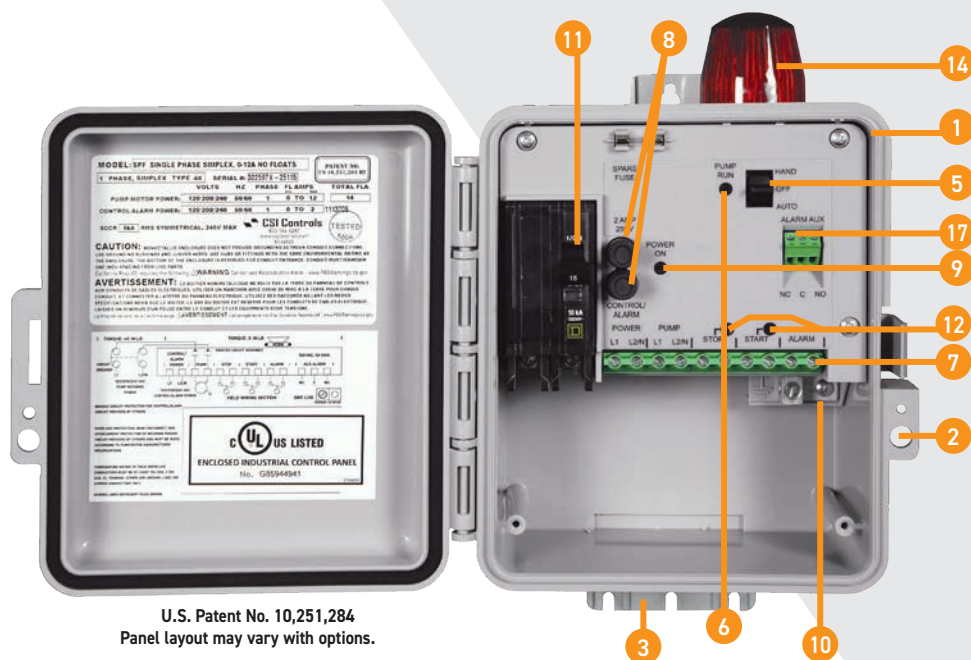
Part #	Description	Shipping Weight
1077481	Transducer with cable, 4-20mA, 0-150 PSI, bagged	0.5 lbs



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SPF Series™ Single Phase Simplex

Single Phase, Simplex Motor Control



U.S. Patent No. 10,251,284
Panel layout may vary with options.

The SPF Series™ simplex panel is designed to control one single phase pump in water and wastewater applications. Two control switches activate a power relay to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audible/visual alarm system. The compact design (8" x 6" x 4") is ideal for residential applications. Universal pump voltage and control/alarm power allow the SPF Series™ panel to handle three voltages (120/208/240V). The innovative internal design of components and integral mounting tabs make installation quick and simple.



COMPONENTS

1. Enclosure measures 8 x 6 x 4 inches (20.32 x 15.24 x 10.16 cm) NEMA 4X (ultraviolet stabilized thermoplastic) for indoor or outdoor use
2. Integral padlockable latch for added safety
3. Integral mounting feet
4. Power relay controls pump by switching electrical lines (Not shown)
5. HOA switch for manual pump control
6. Green Pump Run indicator light
7. Field wiring terminal blocks
8. Control/Alarm fuses
9. Control/Alarm Power indicator (not available with Elapsed Time Meter option)
10. Ground lug
11. Circuit breaker provides pump disconnect and branch circuit protection
12. Float Status indicator lights (Stop and Start float status) (Float/Control Voltage: 12 VDC)
13. Elapsed Time Meter (optional - not shown) provides pump run-time in hours
14. Red LED beacon provides 360° visual check of alarm condition
15. Alarm horn provides audible warning of alarm condition (85 to 90 decibel rating) (Not shown)
16. Exterior alarm Test/Silence push button switch allows horn and light to be tested and horn to be silenced in an alarm condition; alarm automatically resets once alarm condition has been cleared (Not shown)
17. Auxiliary Alarm Contacts are provided for signaling an external device (Form C, 5 amp, 120V max)



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SPF SERIES™ SINGLE PHASE SIMPLEX

Part #	Description (without Elapsed Time Meter)	Amps	Shipping Weight
1113704	SPF Series™ Simplex, 120/208/240V, (3) 20' Mechanical Control Switches	0-12	9 lbs.
1113705	SPF Series™ Simplex, 120/208/240V, No Floats	0-12	5 lbs.
1113706	SPF Series™ Simplex, 120/208/240V, (3) 20' Mechanical Control Switches	9-20	9 lbs.
1113707	SPF Series™ Simplex, 120/208/240V, No Floats	9-20	5 lbs.
Part #	Description (with Elapsed Time Meter)	Amps	Shipping Weight
1113708	SPF Series™ Simplex, 120/208/240V, with ETM, (3) 20' Mechanical Control Switches	0-12	9 lbs.
1113709	SPF Series™ Simplex, 120/208/240V, with ETM, No Floats	0-12	5 lbs.
1113710	SPF Series™ Simplex, 120/208/240V, with ETM, (3) 20' Mechanical Control Switches	9-20	9 lbs.
1113711	SPF Series™ Simplex, 120/208/240V, with ETM, No Floats	9-20	5 lbs.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS**VOLTAGE SUPPLY:**

PUMP: 120/208/240 VAC, 50/60 Hz

CONTROL/ALARM: 120/208/240 VAC, 50/60 Hz

ENCLOSURE: 8 x 6 x 4 inch (20.32 x 15.24 x 10.16 cm)

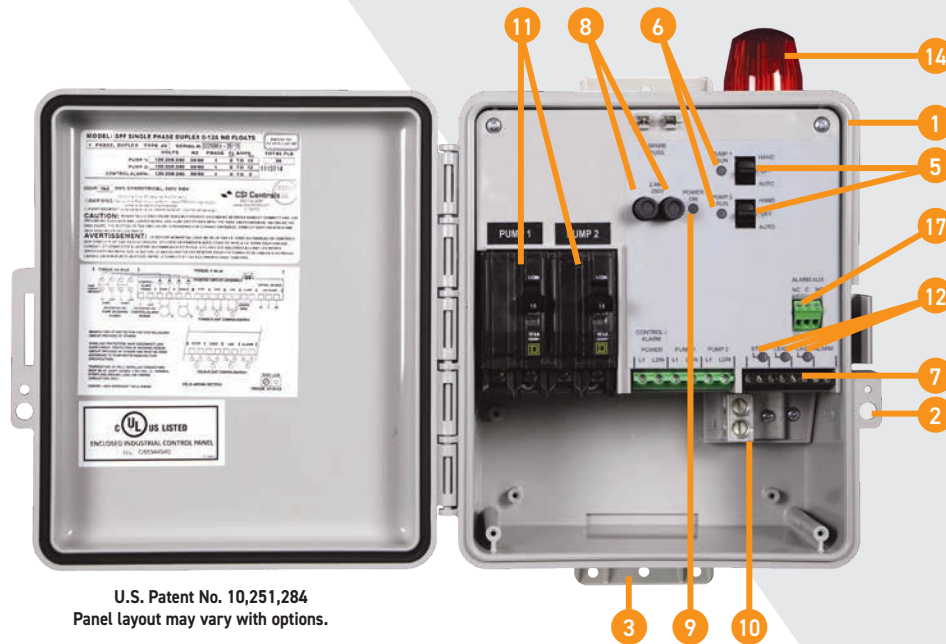
Padlockable NEMA 4X (ultraviolet stabilized
thermoplastic with integral mounting feet for
outdoor or indoor use)

FLOAT CONTROL VOLTAGE: 12 VDC**PUMP AMPS:** 0-12 Amps; 9-20 Amps**AUXILIARY ALARM CONTACTS:** Form C, 5 amp, 120 VAC Max

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SPF Series™ Single Phase Duplex

Single Phase, Duplex Motor Alternating Pump Control with Override



U.S. Patent No. 10,251,284
Panel layout may vary with options.

The SPF Series™ duplex panel is designed to alternately control two 120, 208 or 240 VAC single phase pumps in water and sewage installations. The alternating action equalizes pump wear. In addition to the alternating pump control, this system provides override control should either pump fail. If an alarm condition occurs, an alarm switch activates the audible/visual alarm system. The compact design (10" x 8" x 4") is ideal for residential applications. Universal pump voltage and control/alarm power allow the SPF Series™ panel to handle three voltages (120/208/240V). The innovative internal design of components and integral mounting tabs make installation quick and simple. Includes integral padlockable latch for added safety.



COMPONENTS

1. Enclosure measures 10 x 8 x 4 inches (25 x 20 x 10 cm) NEMA 4X (ultraviolet stabilized thermoplastic) for indoor or outdoor use
2. Integral padlockable latch for added safety
3. Integral mounting feet for indoor or outdoor use
4. Power relays control pumps by switching electrical lines (Not shown)
5. HOA switches for manual pump control
6. Green Pump Run indicator lights
7. Field wiring terminal blocks
8. Control/Alarm fuses
9. Control/Alarm Power indicator
10. Ground lug
11. Circuit breakers provide pump disconnect and branch circuit protection
12. Float Status indicator lights (Stop, Lead and Lag float status) (Float/Control Voltage: 12 VDC)
13. Elapsed Time Meter (optional - not shown) provides individual pump run-time in hours
14. Red LED beacon provides 360° visual check of alarm condition
15. Alarm horn provides audible warning of alarm condition (85 to 90 decibel rating) (Not shown)
16. Exterior alarm Test/Silence push button switch allows horn and light to be tested and horn to be silenced in an alarm condition; alarm automatically resets once alarm condition has been cleared (Not shown)
17. Auxiliary Alarm Contacts are provided for signaling an external device (Form C, 5 amp, 120V max)



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SPF SERIES™ SINGLE PHASE DUPLEX

Part #	Description (without Elapsed Time Meter)	Amps	Shipping Weight
1113712	SPF Series™ Duplex, 120/208/240V, (4) 20' Mechanical Control Switches	0-12	14 lbs.
1113713	SPF Series™ Duplex, 120/208/240V, (3) 20' Mechanical Control Switches	0-12	12 lbs.
1113714	SPF Series™ Duplex, 120/208/240V, No Floats	0-12	9 lbs.
1113715	SPF Series™ Duplex, 120/208/240V, (4) 20' Mechanical Control Switches	9-20	14 lbs.
1113716	SPF Series™ Duplex, 120/208/240V, (3) 20' Mechanical Control Switches	9-20	12 lbs.
1113717	SPF Series™ Duplex, 120/208/240V, No Floats	9-20	9 lbs.
Part #	Description (with Elapsed Time Meter)	Amps	Shipping Weight
1113718	SPF Series™ Duplex, 120/208/240V, with ETM, (4) 20' Mechanical Control Switches	0-12	14 lbs.
1113719	SPF Series™ Duplex, 120/208/240V, with ETM, (3) 20' Mechanical Control Switches	0-12	12 lbs.
1113720	SPF Series™ Duplex, 120/208/240V, with ETM, No Floats	0-12	9 lbs.
1113721	SPF Series™ Duplex, 120/208/240V, with ETM, (4) 20' Mechanical Control Switches	9-20	14 lbs.
1113722	SPF Series™ Duplex, 120/208/240V, with ETM, (3) 20' Mechanical Control Switches	9-20	12 lbs.
1113723	SPF Series™ Duplex, 120/208/240V, with ETM, No Floats	9-20	9 lbs.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS**VOLTAGE SUPPLY:**

PUMP: 120/208/240 VAC, 50/60 Hz

CONTROL/ALARM: 120/208/240 VAC, 50/60 Hz

ENCLOSURE: 10 x 8 x 4 inch (25 x 20 x 10 cm)

Padlockable NEMA 4X (ultraviolet stabilized thermoplastic
with integral mounting feet for outdoor or indoor use)

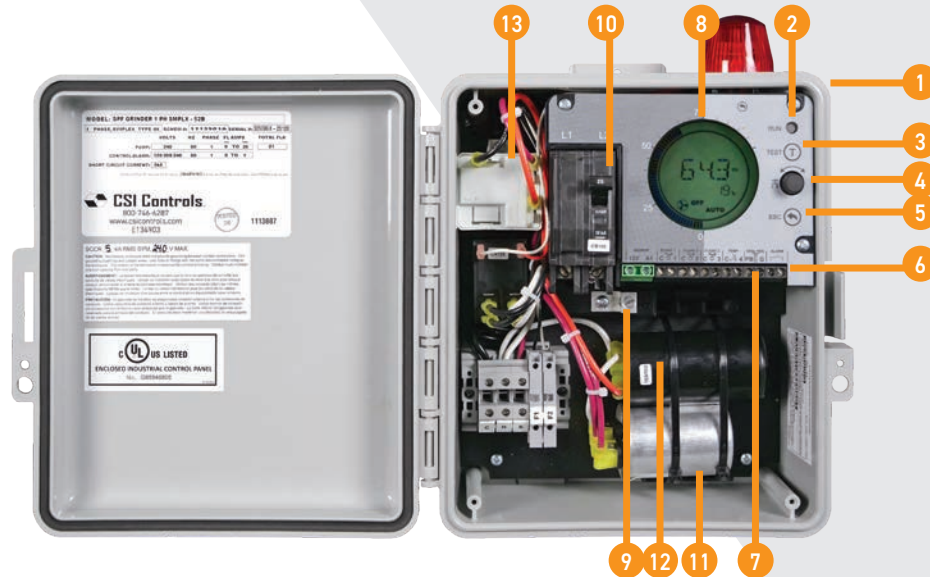
FLOAT CONTROL VOLTAGE: 12 VDC**PUMP AMPS:** 0-12 Amps; 9-20 Amps**AUXILIARY ALARM CONTACTS:** Form C, 5 amp, 120 VAC Max

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SPF Series™ Grinder Simplex Control Panel

Single Phase Grinder Pump Control



The SPF Series™ Grinder simplex control panel is designed to control a single phase 3-wire grinder pump in level control applications. This control panel can be operated using a level transmitter or float switches. The pump will operate based on the level sensor measurement and controller settings. If a high-level alarm condition occurs, it activates the audible/visual alarm. In addition, it can detect high and low amp conditions during pump run and shut the pump off to protect it from damage. This panel has built-in Start and Run capacitors with models available for a variety of pumps or can be ordered without capacitors for 2-wire pump applications.

FEATURES

- Level transmitter or float switch control
- LCD display with bar graph
 - Tank level monitoring
 - Float switch status
 - Pump amps monitoring
 - Run indication
 - Pump run time
 - Pump run cycles
 - Pump GPM flow rate
- Pump protection
 - Seal fail monitoring
 - Thermal cutout
 - Overload
 - Dry run
 - Max run
 - Rapid cycle
- Adjustable level set points
- Gallons per day pumped
- Pump run on high float alarm
- Float out of sequence monitoring



COMPONENTS

1. NEMA 4X enclosure 10 x 8 x 4 inches (25.4 x 20.32 x 10.16 cm) for indoor or outdoor use with integral padlockable latch for added safety.
2. Pump run green LED indicator
3. Pump test switch for manual control of the pump
4. Menu rotary encoder/selector switch
5. Menu ESC button
6. Auxiliary alarm contacts
7. Seal fail and thermal cutout input
8. LCD display
9. Ground lug
10. Circuit breaker
11. Run capacitor
12. Start capacitor
13. Start relay

*Note: CSI Controls will warranty motor start kit components supplied by CSI Controls for one year.



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SPF SERIES™ GRINDER SIMPLEX CONTROL PANEL

Part #	Description	Pump Manufacturer	Pump Model	Pump HP	Pump FLA	Pump VAC	Shipping Weight
1113882	SPF Grinder 1 ph, Simplex - 71B	Ashland Pump	AGP-HC200M2E-35	2	18A	230/240V	7.3 lbs.
1113883	SPF Grinder 1 ph, Simplex - 87A	Champion Pump	CPG2023DSL	2	15A	230/240V	7.3 lbs.
1113884	SPF Grinder 1 ph, Simplex - 53U	Crane Pumps & Systems	ZSGV2072L	2	15A	230/240V	7.3 lbs.
1113885	SPF Grinder 1 ph, Simplex - 58E	Franklin Electric	IGP-M231	2	13.9A	230/240V	7.3 lbs.
1113886	SPF Grinder 1 ph, Simplex - 67C	Liberty Pumps	LSG202M-C	2	15A	230/240V	7.3 lbs.
1113887	SPF Grinder 1 ph, Simplex - 52B	Pentair/Hydromatic	HPG200M2-2	2	15.6A	230/240V	7.3 lbs.
1113893	NEX Grinder 1 ph, Simplex - 54R/72P	Fe Myers/Hydromatic	VS20-21/HVS200M	2	13.5A	230/240V	7.3 lbs.
1113888	SPF Grinder 1 ph, Simplex - 54A	Pentair/Fe Myers	WG20-21	2	12.5A	230/240V	7.3 lbs.
1113889	SPF Grinder 1 ph, Simplex - 57A	Zoeller	E841	2	17.2A	230/240V	7.3 lbs.
1113890	SPF Grinder 1 ph, Simplex - 70A	Wayne/Blue Angel	BARDSGP1-2021	2	14.5A	230/240V	7.3 lbs.
1113891	SPF Grinder 1 ph, Simplex - NC	Any	2-Wire PUMP ¹	1-2	5-20A	230/240V	6 lbs.

¹NC model has no capacitors and no start relay. It is only suitable for 2-wire pumps with built-in capacitors.

Data subject to change. Refer to the user manual for capacitor kit information. Consult pump manufacturer for updated motor data and capacitor kit requirements.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

INPUT VOLTAGE: Single phase, 240 VAC, 60 Hz

PUMP RATINGS: Single phase, 1-2 HP, 3-wire (NC model suitable for 2-wire)

OPERATING TEMPERATURE: 14°F to 122°F (-10°C to 50°C)

ENCLOSURE: 10 x 8 x 4 inch (25.4 x 20.32 x 10.16 cm)
Padlockable NEMA 4X (ultraviolet stabilized thermoplastic with integral mounting feet for outdoor or indoor use)

ELECTRONIC OVERLOAD RANGE: 5-20A

PUMP CIRCUIT BREAKER: 25A

CONTROL/ALARM FUSE RATING: 1A, 250V

AUXILIARY ALARM CONTACTS: N.O. 1 amp, 120 VAC Max

INPUTS: 3 float switches, 4-20mA level transmitter, seal fail, thermal cutout

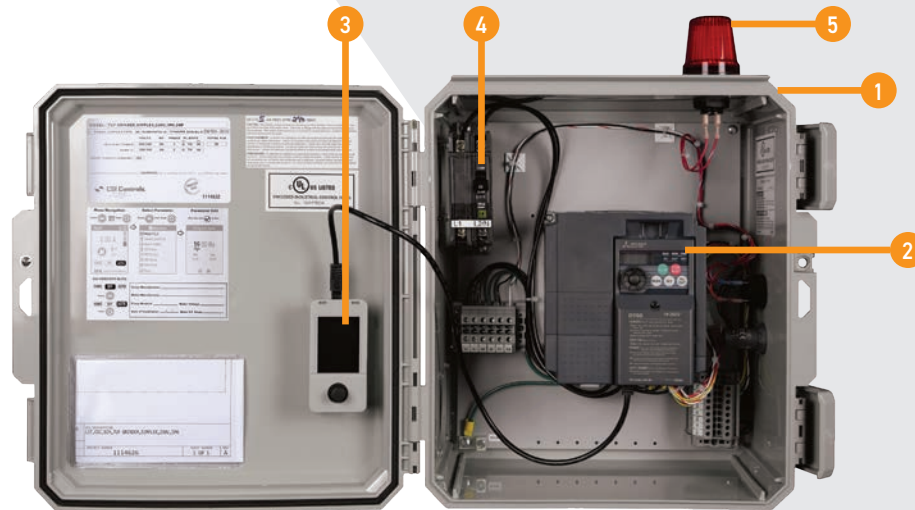
CSI Controls® recommends using the CS4-20 Transmitter for level control. CSI Controls® recommends using the Control Duty Narrow-Angle Low Current Mechanical Control Switch or the Speed-E Connect™ Float Switch Connection System for backup float switches. For ordering information, please see our catalog pages at www.csicontrols.com.



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TUF Grinder™ Simplex Control Panel

Variable Frequency Drive for Grinder Pumps



The TUF Grinder™ Simplex Control Panels are available for single phase or for three phase incoming power. Both versions are designed to control a three phase sewage grinder pump in level control applications. Float switches activate a Variable Frequency Drive (VFD) to turn the pump on and off. If a high level alarm condition occurs, it activates the audible/visual alarm system. The TUF Grinder™ control panel is able to reverse on start to clear any debris in the impeller. In addition, it can detect high-amp conditions during pump run, indicative of clogging and automatically reverse the impeller. This is done momentarily and repeatedly until the binding material has been shredded to a size that can easily pass through the pump. This control method reduces clogging and potential failure resulting from a locked rotor.

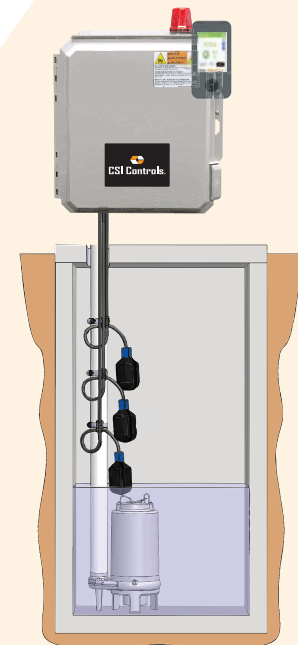
FEATURES

- Quick start wizard for easy setup
 1. Enter motor amps (FLA)
 2. Enter motor horsepower (HP)
 3. Enter motor voltage (V)
 4. Perform motor auto-tuning
- Graphic color display (LCD):
 - High Brightness / Direct sunlight readable
 - Removable/handheld for easy programming
 - Pump run indication (FWD or REV)
 - Pump speed (Hz)
 - Pump current (A)
 - Float switch status
 - Elapse time meter/cycle counter
 - Message bar (Status & Alarm)
 - Alarm history
 - Password protection
 - Rotary button for easy menu navigation
- Quick connect terminals for ease of troubleshooting and service
- Pump dry run alarm
- Thermal cutout protection
- 2 or 3 float switch operation
- Pump motor overload protection
- Pump run high level alarm
- Max pump cycle time limiter
- 3 auto-reverse modes available (multiple modes can be selected)
 - Auto-reverse on start (clears the pump before starting the pump cycle)
 - Auto-reverse on stop (clears the pump after the pump cycle)
 - Auto-reverse on High Amps Detection (during a run cycle)



COMPONENTS

1. Enclosure: NEMA 3R ultraviolet stabilized thermoplastic rated for outdoor use with mounting flanges, padlockable cover
Note: See specifications on back side for sizing.
2. Variable Frequency Drive
3. LCD VFD display
4. Circuit breaker
5. LED beacon
6. Vents for VFD cooling (not shown)
7. Horn with Test/Silence button (not shown)



CSI Controls®

Toll Free: 888-342-5753
customer.service@sjeinc.com
www.csicontrols.com

TUF GRINDER™ SIMPLEX CONTROL PANEL

Part #	Model	Input Voltage	Pump Rating	HP	Max Out. Amps	Enclosure Size	Shipping Weight
1114632	TUFGS-240-1-11	208-240V, 1 Phase	208/230V, 3 Phase	2	11A	14 x 12 x 6	18 lbs.
1114633	TUFGS-240-1-17.8 ¹	208-240V, 1 Phase	208/230V, 3 Phase	3-5	17.8A	18 x 16 x 10	33 lbs.
1114634	TUFGS-240-1-28 ¹	208-240V, 1 Phase	208/230V, 3 Phase	7.5-10	28.0A	28 x 20 x 12	42 lbs.
1114635	TUFGS-240-3-11	208-240V, 3 Phase	208/230V, 3 Phase	2	11A	14 x 12 x 6	18 lbs.
1114636	TUFGS-240-3-16.5	208-240V, 3 Phase	208/230V, 3 Phase	5	16.5A	14 x 12 x 6	26 lbs.
1114637	TUFGS-240-3-31.8	208-240V, 3 Phase	208/230V, 3 Phase	7.5-10	31.8A	18 x 16 x 10	33 lbs.

¹Model not UL Listed

SELECTING THE CORRECT VFD

1. Determine the number of phase and voltage available on site. If three phase is available, use models rated for three phase incoming power.
2. Select a pump with the same voltage rating as the incoming power (motor must be three phase).
3. Check pump motor nameplate Full Load Amps (FLA) for proper VFD sizing.
4. Select a VFD with an output amp rating equal or higher than motor FLA.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

CONTROL: VFD motor control (Sensorless Vector Control)
 3 x Float Switch Inputs (Stop/Start/High Level)
 1 x Thermal Cutout Input
 1 x Aux Alarm Relay Output
 Pump run/direction indication (FWD or REV)
 Pump speed (Hz) and Amps (A) indication
 Pump motor overload protection
 Pump dry run alarm

ENCLOSURE: NEMA 3R ultraviolet stabilized thermoplastic rated for outdoor use with mounting flanges, padlockable cover

ENVIRONMENTAL: Surrounding air temperature: 14°F to 104°F (-10°C to 40°C)
 Panel internal temperature: 14°F to 122°F (-10°C to 50°C)
 Storage temperature: -4°F to 131°F (-20°C to 55°C)
 Altitude: Maximum of 3,280 ft (1,000 m) above sea level

All conduits must be properly sealed to prevent sewer gas from entering the enclosure. Not rated for installation in hazardous locations.

ELECTRICAL: Input voltage: 240V nominal
 208-240V 50Hz/60Hz, single phase for TUFGS-240-1 models
 208-240V 50Hz/60Hz, three phase for TUFGS-240-3 models

Note: The output voltage cannot exceed the input voltage.

CSI Controls® recommends using the Control Duty Narrow-Angle Low Current Mechanical Control Switch or the Speed-E Connect™ Float Switch Connection System for backup float switches. For ordering information, please see our catalog pages at www.csicontrols.com.

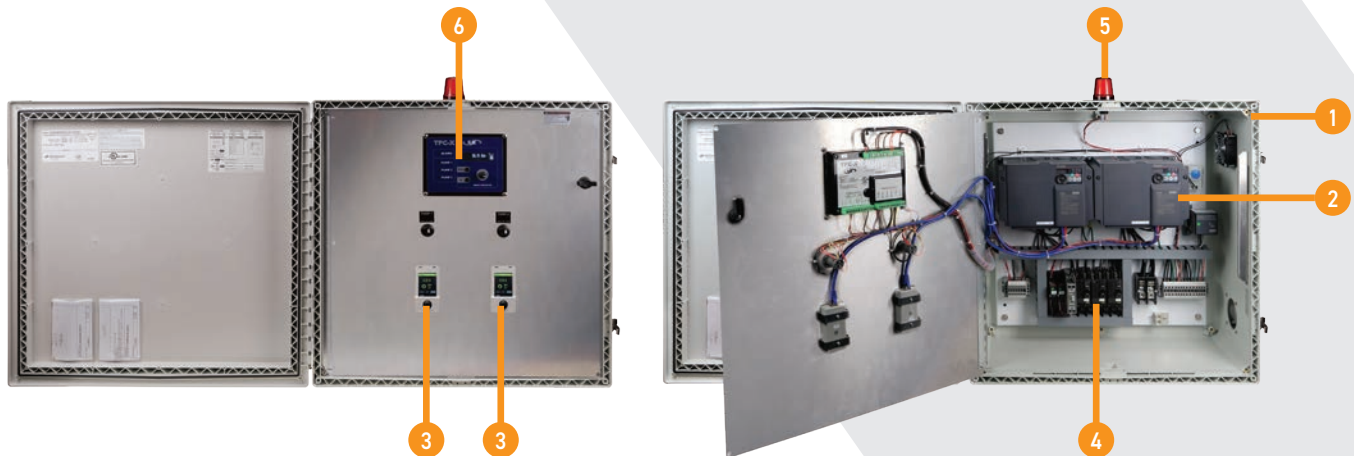


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California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

TUF Grinder™ Duplex Control Panel

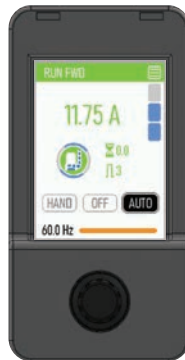
Variable Frequency Drives for Grinder Pumps



The Duplex TUF Grinder™ Control Panels are available for single-phase or for three-phase incoming power. Both versions are designed to control two three-phase sewage grinder pumps in level control applications. The TPC-X level controller is used with a transmitter to monitor the tank level and activate the Variable Frequency Drives (VFDs). The TPC-X controller provides automatic pump alternation, lead/lag operation, high and low level alarms, seal fail and thermal cutoff protection. If a high level alarm condition occurs, it activates the audible/visual alarm system. Each pump is controlled by a TUF Grinder™ VFD and is able to reverse on a pump start and/or pump stop to clear any debris in the impeller. In addition, the panel can detect high-amp conditions during pump run, indicative of clogging, and automatically reverse the impeller. The process is momentarily and repeatedly until the binding material has been shredded to a size that can easily pass through the pump. This control method reduces clogging and potential failure resulting from a locked rotor.

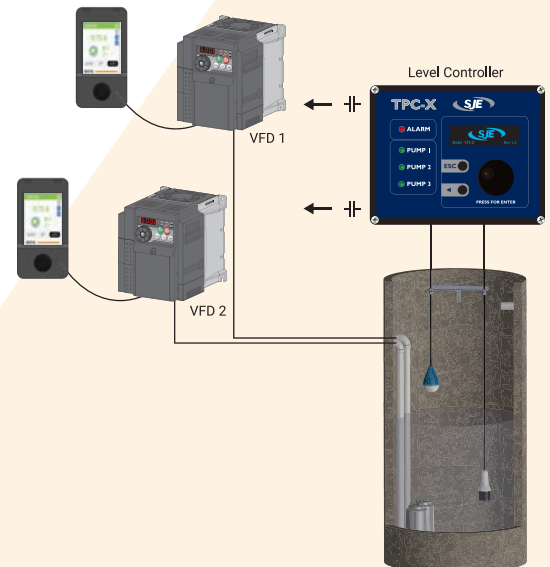
FEATURES

- TPC-X level controller
 - Level transmitter operation with backup high level float switch
 - Thermal cutoff protection
 - Seal Fail protection
 - Automatic pump alternation
 - Lead / Lag operation
- VFD Graphic color display (LCD):
 - High Brightness / Direct sunlight readable
 - Removable/handheld for easy programming
 - Pump run indication (FWD or REV)
 - Pump speed (Hz)
 - Pump current (A)
 - Float switch status
 - Elapse time meter/cycle counter
 - Message bar (Status & Alarm)
 - Alarm history
 - Password protection
 - Rotary button for easy menu navigation
- Quick start wizard for easy setup:
 1. Enter motor amps (FLA)
 2. Enter motor horsepower (HP)
 3. Enter motor voltage (V)
 4. Perform motor auto-tuning
- Quick connect terminals for ease of troubleshooting and service
- Pump dry run alarm (low amps)
- Pump motor overload protection
- Pump run high level alarm
- Max pump cycle time limiter
- 3 auto-reverse modes available (multiple modes can be selected)
 - Auto-reverse on start (clears the pump before starting the pump cycle)
 - Auto-reverse on stop (clears the pump after the pump cycle)
 - Auto-reverse on High Amps Detection (during a run cycle)
- Web-based cellular remote monitoring using SJE Panel Link (optional)



COMPONENTS

1. Enclosure: NEMA 3R ultraviolet stabilized thermoplastic rated for outdoor use with mounting flanges, padlockable cover
Note: See specifications on back side for sizing.
2. Variable Frequency Drive
3. LCD VFD display
4. Circuit breaker
5. LED beacon
6. TPC-X level controller
7. Vents for VFD cooling (not shown)
8. Horn with Test/Silence button (not shown)



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TUF GRINDER™ DUPLEX CONTROL PANEL

Part #	Model	Input Voltage	Pump Rating	HP	Max Out. Amps	Enclosure Size	Shipping Weight
1114638	TUFGD-240-1-11	208-240V, 1 Phase	208/230V, 3 Phase	2	11A	24 x 24 x 10	45 lbs.
1114639	TUFGD-240-1-17.8 ¹	208-240V, 1 Phase	208/230V, 3 Phase	3-5	17.8A	24 x 24 x 10	62 lbs.
1114640	TUFGD-240-3-11	208-240V, 3 Phase	208/230V, 3 Phase	2	11A	24 x 24 x 10	45 lbs.
1114641	TUFGD-240-3-16.5	208-240V, 3 Phase	208/230V, 3 Phase	5	16.5A	24 x 24 x 10	51 lbs.
1114642	TUFGD-240-3-31.8	208-240V, 3 Phase	208/230V, 3 Phase	7.5-10	31.8A	24 x 24 x 10	62 lbs.

¹Model not UL Listed

SELECTING THE CORRECT VFD

1. Determine the number of phase and voltage available on site. If three phase is available, use models rated for three phase incoming power.
2. Select a pump with the same voltage rating as the incoming power (motor must be three phase).
3. Check pump motor nameplate Full Load Amps (FLA) for proper VFD sizing.
4. Select a VFD with an output amp rating higher than motor FLA.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

CONTROL: VFD motor control (Sensorless Vector Control)
TPC-X Controller

- 1 x Transmitter Input
- 1 x Float Switch Input (High Level)
- 2 x Thermal Cutout Inputs
- 2 x Seal Fail Inputs
- 1 x Aux Alarm Relay Output

VFD LCD Display

- Pump run/direction indication (FWD or REV)
- Pump speed (Hz) and Amps (A) indication
- Pump motor overload protection
- Pump dry run alarm

ENVIRONMENTAL: Surrounding air temperature: 14°F to 104°F (-10°C to 40°C)
Panel internal temperature: 14°F to 122°F (-10°C to 50°C)
Storage temperature: -4°F to 131°F (-20°C to 55°C)
Altitude: Maximum of 3,280 ft (1,000 m) above sea level

All conduits must be properly sealed to prevent sewer gas from entering the enclosure. Not rated for installation in hazardous locations.

ELECTRICAL: Input voltage: 240V nominal
208-240V 50Hz/60Hz, single phase for TUFGD-240-1 models
208-240V 50Hz/60Hz, three phase for TUFGD-240-3 models

Note: The output voltage cannot exceed the input voltage.

ENCLOSURE: NEMA 3R ultraviolet stabilized thermoplastic rated for outdoor use with mounting flanges, padlockable cover

CSI Controls® recommends using the SLX Transmitter for level control. CSI Controls recommends using the Control Duty Narrow-Angle Low Current Mechanical Control Switch, Control Duty Extra Large Narrow Angle Mechanical Control Switch or the Speed-E Connect™ Float Switch Connection System for a high level backup float switch. For ordering information, please see our catalog pages at www.csicontrols.com.



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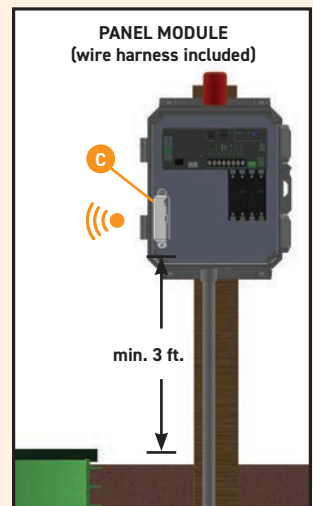
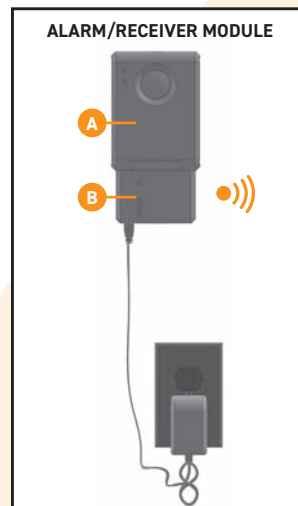
California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Wireless Technology Connecting an Outdoor Control Panel to an Indoor Alarm

The CSION® alarm includes 2 sensor inputs; one is utilized for the RF receiver module; one is available for monitoring a liquid level condition (see the CSION® alarm catalog page for complete alarm specifications).

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The image shows the front of two white, rectangular modules. The top module is the 'CSiON WiFi' unit, featuring a large circular speaker grille with a speaker icon and a mute symbol (X). Above the grille are two small circular ports and a power button. The bottom module is the 'CSiON RF' unit, which has a smaller circular port and a power button at the top, and four small circular ports at the bottom. Both units display the 'CSiON' logo with a house icon inside the 'O', followed by 'WiFi' or 'RF' in orange, and 'CSI Controls.' at the bottom.



CSI Controls®

B.1

CSION® RF ALARM - 120 VAC

Part #	Description	Shipping Weight
1069104	CSION® RF (includes CSION®, receiver module, and panel module)	1.65 lbs.
1069100	CSION® RF, 4X (includes CSION®, receiver module, and panel module in NEMA 4X enclosure)	4.15 lbs.
1069105	CSION® RF WiFi (includes CSION® WiFi, receiver module, and panel module)	1.65 lbs.
1069101	CSION® RF WiFi, 4X (includes CSION® WiFi, receiver module, and panel module in NEMA 4X enclosure)	4.15 lbs.

SPECIFICATIONS

VOLTAGE:

RF RECEIVER MODULE

PRIMARY: 120 VAC, 60 Hz, 5 watts max. (alarm condition)

SECONDARY: 5 VDC

RF PANEL MODULE

PRIMARY: 120 VAC, 60Hz or 12-24VDC or
5VDC (Micro USB powered)

WIRE HARNESS: 24 inches (60.96 cm), 18 gauge

ALARM ENCLOSURE:

INDOOR ALARM WITH RF RECEIVER MODULE:

8.1 x 4 x 1.75 inch (20.57 x 10.16 x 4.45 cm),
NEMA 1 plastic

PANEL MODULE: 4.8 x 2.7 x 1.4 inch (12.2 x 6.86 x 3.56 cm),
NEMA 1 plastic

4X ENCLOSURE: 8 x 6 x 4 inch (20.32 x 15.24 x 10.16 cm),
NEMA 4X plastic

MOUNTING LOCATIONS:

PANEL MODULE: Min. of 3 ft. above ground

NOTE: See CSION® or CSION® WiFi alarm catalog page for product specific specifications.

Alarm includes 6 foot (1.8 meter) MicroUSB power cord.

Float switch sold separately.

Connect to dry auxiliary alarm contacts only.

If power is lost to the indoor alarm, panel alarm conditions will not be communicated to indoor alarm.



Toll Free: 888-342-5753
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CSION® Alarm System

Indoor Alarm System with 2 Alarm Inputs, Temperature Alarm, Auto Reset and Battery Backup

The CSION® indoor alarm system helps protect your home from potentially costly damage due to flooding, pump failure or freezing pipes. The sleek design of the enclosure, with its unique shape, smooth rounded edges, and large push button with LED light ring, makes this attractive alarm ideal for residential applications.

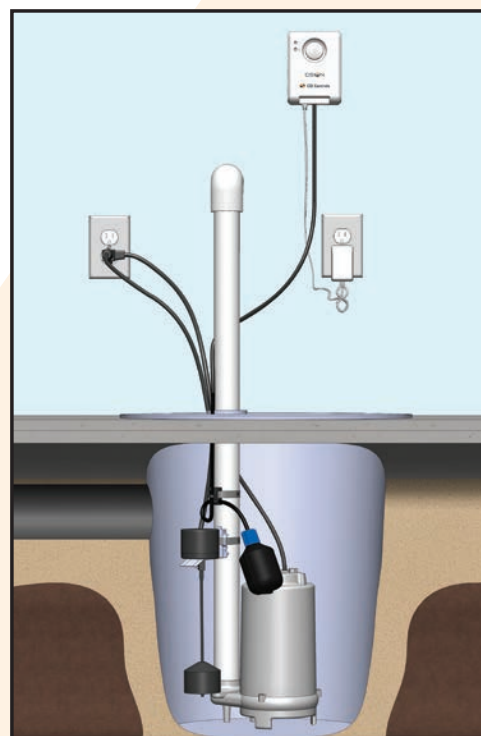
When the tank level rises, the high water float activates the alarm (audible and visual) to alert you of potentially threatening liquid level conditions. The CSION® alarm features an easy-to-see LED alarm light ring that illuminates red for alarm 1 and amber for alarm 2. The alarm horn can be silenced by pressing the large button, but the LED remains on as long as the alarm condition exists. Once the condition is cleared, the alarm automatically resets. A red "Low Temperature" LED activates when the temperature falls below 40°F (4°C) to help protect against freezing pipes; this can be disabled for installations in cold areas.

FEATURES

- Compact NEMA 1 enclosure, designed for ease of installation, rated for indoor use
- Automatic alarm reset
- (2) sensor inputs to monitor (2) separate liquid level conditions
- LED alarm light ring alerts you of alarm status; red for alarm 1, amber for alarm 2
- Audible alarm activates with alarm 1, alarm 2, low temperature and low battery chirp
- LED low temperature indicator activates at 40°F (4°C) to alert of potential freezing conditions (green for temperature normal, red for low temperature), may be deactivated when not required
- LED power on indicator (green for primary power, amber for battery backup, red for low battery)
- Large alarm test/silence push button conveniently located on front of enclosure
- If primary power fails, the alarm system continues to work due to battery backup feature (batteries not included)
- Includes standard Control Duty Narrow Angle Low Current Mechanical control switch with 10 feet (3 meters) of cable (other lengths available) and mounting clamp
- Switching mechanism operates on low voltage and is isolated from the power line to reduce the possibility of shock
- Low battery chirp
- Includes auxiliary alarm contacts for easy attachment of remote devices
- Covered terminal block for easy, secure float switch installation



U.S. Patent No. D874,960



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CSION® ALARM - 120 VAC

Part #	Description	Shipping Weight
1061879	CSION®, 120V, High with 10 ft. Control Duty Narrow Angle Low Current Mechanical Float	1.85 lbs.
1061878	CSION®, 120V, No Float	0.85 lbs.

MASTER CARTON holds 16 boxed units.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE:

Primary: 120 VAC, 60 Hz, 5 watts max. (alarm condition)

Secondary: 5 VDC

BATTERY BACKUP POWER: 4.5 VDC (3 AA batteries not included)

Operates for 24 hrs in alarm condition, one month when no alarm is present

ALARM ENCLOSURE: 5.5 x 4 x 1.75 inch (14 x 10 x 4.5 cm), NEMA 1 plastic.

ALARM HORN: 80 decibels at 10 feet (3 meters)

POWER CORD: 6 foot (1.8 meter) MicroUSB

FLOAT SWITCH CONNECTION TERMINALS:

For float switch connection only - do not apply power. (Voltage across terminals is 3 VDC).

FLOAT SWITCH:

Control Duty Narrow Angle Low Current Mechanical control switch with mounting clamp

Cable: 10 feet (3 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)

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

AUXILIARY ALARM CONTACTS:

Normally open, normally closed (CSA certified)

Voltage: ≤ 30 VAC/VDC (Class 2)

Current: 1 amp maximum

OPTIONS

CONTROL SWITCH OPTIONS

The **CSION®** alarm system comes standard with a 10 ft **Control Duty Narrow Angle Mechanical** control switch with mounting clamp. Other float switches are available. See control switch section of the catalog.

To determine the price of alarm with an alternate float, add the price of the part number with "no float" to the price of the float switch.



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CSION® WiFi Alarm System

Easy-to-install indoor alarm system with WiFi connectivity, remote notification, 2 alarm inputs, temperature alarm, auto reset and battery backup.

The CSION® WiFi indoor alarm system monitors and reports 2 separate alarm conditions for sump pump basins, lift pump chambers, holding tanks, sewage, agricultural and other water applications. The system monitors and reports any residential alarm condition by notifying locally (audible and visual) and remotely (SMS text message and/or email) over a WiFi or Ethernet network to a smartphone, tablet or computer. The sleek design of the enclosure, with its unique shape, smooth rounded edges, and large push button with LED light ring, makes this attractive alarm ideal for residential applications.

When the tank level rises, the high water float activates the alarm to warn of potentially threatening liquid level conditions. The alarm features an easy-to-see LED alarm light ring that illuminates red for alarm 1 and amber for alarm 2. The alarm horn can be silenced by pressing the large button, but the LED remains on as long as the alarm condition exists. Once the condition is cleared, the alarm automatically resets. A red "Low Temperature" LED activates when the temperature falls below 40°F (4°C) to help protect against freezing pipes; this can be disabled for installations in cold areas.

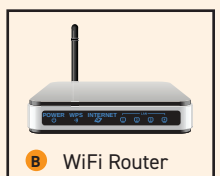
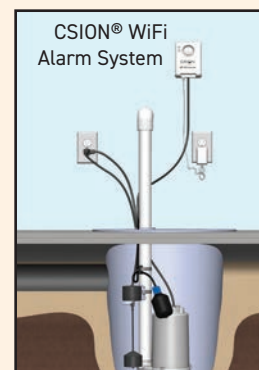
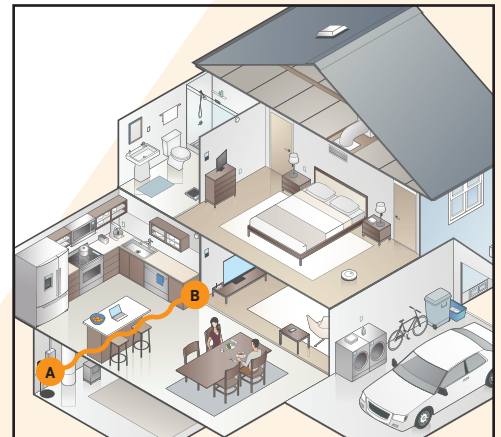
No cellular connection is needed (no monthly fees), but it does require the home owner to have a reliable WiFi network and connection to the internet for the alarm system to send remote notifications. Text messages can be sent to a cell phone with active SMS service.

FEATURES

- Compact NEMA 1 rated indoor enclosure is designed for easy installation
- Automatic alarm reset
- (2) sensor inputs to monitor (2) separate liquid level conditions.
- LED alarm light ring warns of alarm status; red for alarm 1, amber for alarm 2
- Notifies up to 4 contacts (2 email contacts and 2 text, text in country code 1 only, maximum of 10 text messages sent per day)
- Notifies the user via SMS text and/or email notifications of conditions: alarm 1, alarm 2, power lost, power restored, low temperature, low battery and alarm offline
- WiFi connectivity for remote alarm report
 - Simple Access Point Mode push-button connection
 - Manual WiFi setup through Ethernet cable connection to router/modem (cable not included)
 - NOTE: Installation of an Uninterruptible Power Supply (UPS) on internet modem and wireless router is recommended. The internet connection must be maintained to receive notifications
- LED low temperature indicator activates at 40°F (4°C) to alert of potential freezing conditions (green for temp. normal, red for low temp.); may be deactivated when temp. monitoring is not required
- LED power indicators (green = primary power, amber = battery backup, red = low battery)
- LED network status indicators (blue flashing = network connection setup, blue constant = network connection established)
- Alarm horn sounds at 80 decibels at 10 feet (3 meters)
- Large, easy-to-use test/silence push-button located conveniently on front of alarm
- If primary power fails, the alarm system continues to work due to integral rechargeable battery backup feature
- Complete package includes Control Duty Narrow Angle Low Current Mechanical Control Switch with 10 feet (3 meters) of cable (other lengths available) and mounting clamp
- Switching mechanism operates on low voltage and is isolated from the power line to reduce the possibility of shock
- Low battery chirp
- Includes auxiliary alarm contacts for easy attachment of remote devices
- Covered terminal block for easy, secure float switch installation



U.S. Patent No. D874,960



WiFi: Requires a WiFi connection with WPA2 security.

Ethernet: Requires an Ethernet connection.



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CSION® WIFI ALARM - 120 VAC

Part #	Description	Shipping Weight
1061992	CSION® WiFi, 120V, High with 10 ft. Control Duty Narrow Angle Low Current Mechanical Float	1.85 lbs.
1061991	CSION® WiFi, 120V, No Float	0.85 lbs.

MASTER CARTON holds 16 boxed units.
SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE:

Primary: 120 VAC, 60 Hz, 5 watts max. (alarm condition)
Secondary: 5 VDC

BATTERY BACKUP POWER: 3.7 VDC rechargeable lithium

ALARM ENCLOSURE: 5.5 x 4 x 1.75 inch (14 x 10 x 4.5 cm), NEMA 1 plastic.

ALARM HORN: 80 decibels at 10 feet (3 meters)

POWER CORD: 6 foot (1.8 meter) MicroUSB

FLOAT SWITCH CONNECTION TERMINALS:

For float switch connection only - do not apply power. (Voltage across terminals is 3 VDC).

FLOAT SWITCH:

Control Duty Narrow Angle Low Current Mechanical control switch with mounting clamp

Cable: 10 feet (3 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)

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

AUXILIARY ALARM CONTACTS:

Normally open, normally closed (CSA certified)

Voltage: ≤ 30 VAC/VDC (Class 2)

Current: 1 amp maximum

WIFI: Connect using Access Point Mode or manually by using Ethernet connection (ethernet cable not provided). WPA2 security required on wireless router.

ETHERNET: Requires an ethernet connection (ethernet cable not provided).

NOTE: Cellular WiFi hotspots are not recommended for use with this WiFi alarm, as intermittent or unreliable notification service can result.

AUXILIARY ALARM CONTACTS: Normally open, normally closed (CSA certified) Voltage: ≤ 30 VAC/VDC (Class 2) Current: 1 amp maximum

WS360 WATER SENSOR (OPTIONAL)

The WS360 water sensor, when connected to an CSION® WiFi alarm, is designed to warn of potential water damage to end users. Place this sensor in any location where there is a risk of water damage: utility room, laundry, kitchen, bathroom, basement, AC drip pans, etc. When water reaches any side, top or bottom of the 360° sensor, an audible/visual alarm is activated; as well as remote notification sent via email/text to the contact(s) for the smart device set up with WiFi alarm unit. Up to five sensors may be connected in series to monitor multiple locations with one single alarm. One-year limited warranty.



Part #	Description	Shipping Weight
1070659	WS360 Water Sensor & Adapter, with 20 ft. cable (for use with WiFi alarm)	0.33 lbs.
1070875	WS360 Water sensor only, with 20 ft. cable (to connect multiple WS360 units)	0.26 lbs.
1070876	20 ft. extension cable	0.18 lbs.



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CS1200 Alarm System

Indoor Alarm System with Auto Reset and Battery Backup

This alarm system monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications.

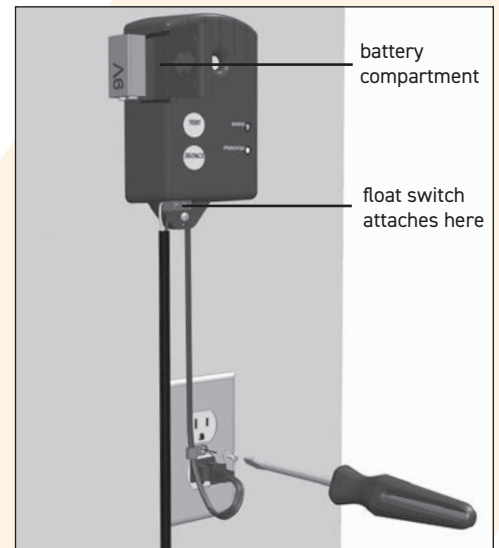
The **CS1200** alarm system can serve as a high or low level alarm depending on the float switch model used.

The alarm horn sounds when a potentially threatening liquid level condition occurs. The horn can be silenced, but the alarm light remains on until the condition is remedied. Once the condition is cleared, the alarm will automatically reset.

A green "Power On" light indicates 115 VAC primary power to the alarm. Low battery chirp feature indicates when battery should be replaced.

FEATURES

- NEMA 1 enclosure, designed for ease of installation, rated for indoor use
- Automatic alarm reset
- Red "alarm" light and green "power on" light, alarm "test" switch, and horn "silence" switch
- Alarm horn sounds at 87 decibels at 10 feet (3 meters)
- Can be used with any UL Listed / Recognized switching mechanism rated to include 1 amp, 9 VDC load
- If primary power fails, the alarm system continues to work due to battery backup feature (battery not included)
- Complete package includes standard Control Duty Narrow Angle Mechanical control switch with 15 feet (4.57 meters) of cable (other lengths available) and mounting clamp
- Switching mechanism operates on low voltage and is isolated from the power line to reduce the possibility of shock
- Low battery chirp
- Easy access battery compartment
- External terminal block for easy float switch installation



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CS1200 ALARM - 115 VAC

Part #	Description	Shipping Weight
1023234	CS1200, NEMA 1 Indoor Alarm	2.73 lbs.
1031585	CS1200-AUX, includes Auxiliary Contacts (CSA certified only unit)	2.75 lbs.
1035724	CS1200-NF, No Float	1.44 lbs.

MASTER CARTON holds 16 boxed units.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE FOR 115 VAC MODEL:

Primary: 115 VAC, 60 Hz, 2.4 watts max. (alarm condition)

Secondary: 9 VDC

BATTERY BACKUP POWER: 9 VDC

ALARM ENCLOSURE: 6 x 4 x 2.25 inch (15.24 x 10.16 x 5.71 cm), NEMA 1 plastic.

ALARM HORN: 87 decibels at 10 feet (3 meters)

POWER CORD: 6 foot (1.8 meter)

FLOAT SWITCH CONNECTION TERMINAL:

For float switch connection only. Do not apply power. (Voltage across terminals is 8-9 VDC).

FLOAT SWITCH: Control Duty Narrow Angle Mechanical control switch with mounting clamp

Cable: 15 feet (4.57 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)

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

AUXILIARY ALARM CONTACTS (OPTIONAL):

(CSA certified only unit)

Voltage: 115 VAC

Current: 5 amps maximum N/O

3 amps maximum N/C

OPTIONS

CONTROL SWITCH OPTIONS

The **CS1200** alarm system comes standard with a 15 ft **Control Duty Narrow Angle Mechanical** control switch with mounting clamp. Other float switches are available. See control switch section of the catalog.

To determine the price of alarm with an alternate float, add the price of the part number with "no float" to the price of the float switch.



CSI Controls.

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CS1000 Alarm System

Easy-to-Install Indoor Alarm System

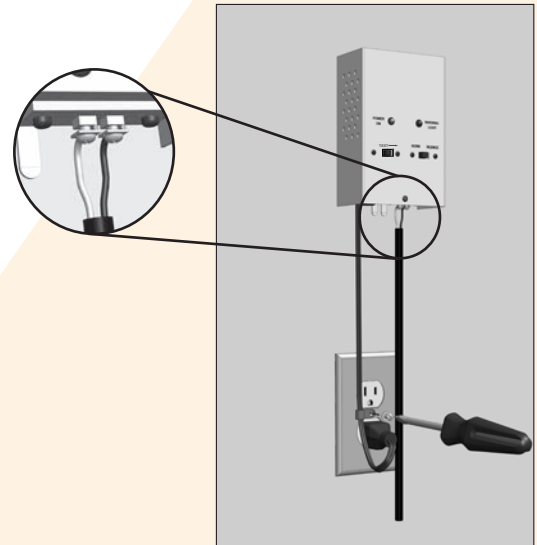
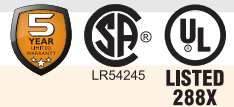
This alarm system monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications.

The **CS1000** alarm system can serve as a high or low level alarm depending on the float switch model used.

The alarm horn sounds when a potentially threatening liquid level condition occurs. The horn can be silenced, but the red warning light remains on until the condition is remedied. A green “power on” light indicates power to the alarm panel.

FEATURES

- NEMA 1 enclosure, designed for ease of installation, rated for indoor use
- Red “alarm” light, green “power on” light, alarm “test” switch, and horn “silence” switch
- Alarm horn sounds at 86 decibels at 10 feet (3 meters)
- Can be use with any UL Listed / Recognized switching mechanism rated to include 1 amp, 12 VAC load
- Alarm system (when installed on separate circuit) operates even if the pump circuit fails
- Complete package includes Control Duty Narrow Angle Mechanical control switch with 15 feet of cable
- Switching mechanism operates on low voltage and is isolated from power line to reduce possibility of shock
- Alternate float switch models for high or low level warning
- 230V models available



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CS1000 ALARM - 115 VAC

Part #	Description	Shipping Weight
1023236	CS1000, NEMA 1 Indoor Alarm with Manual Reset Feature	3.58 lbs.
1035488	CS1000-NF, No Float	2.14 lbs.
1051051	CS1000-SPKT, includes Splice Kit	3.58 lbs.

MASTER CARTON holds 16 boxed units.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

VOLTAGE FOR 115 VAC MODEL:

Primary: 115 VAC, 50/60 Hz, 5 watts max. (alarm condition)

Secondary: 12 VAC

ALARM ENCLOSURE: 6 x 4 x 2.5 inches (15.24 x 10.16 x 6.35 cm), NEMA 1 metal

ALARM HORN: 86 decibels at 10 feet (3 meters)

POWER CORD: 6 feet (1.8 meters)

FLOAT SWITCH CONNECTION TERMINAL: for float switch connection only. Do not apply power.
Voltage across terminals is 12 VAC

FLOAT SWITCH: **Control Duty Narrow Angle Mechanical** control switch with mounting clamp

CABLE: 15 feet (4.57 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)

FLOAT: 2.74 inch diameter x 4.83 inch long (7 cm x 12.3 cm), high impact, corrosion resistant polypropylene housing for use in sewage and non-potable water up to 140°F (60°C)

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

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

OPTIONS

CONTROL SWITCH OPTIONS

The **CS1000** alarm system comes standard with a 15 foot **Control Duty Narrow Angle Mechanical** control switch with mounting clamp. Other float switches are available. See control switch section of the catalog.

To determine the price of alarm with an alternate float, add the price of the part number with "no float" to the price of the float switch.



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CSION® 3R Alarm System

Innovative Indoor/Outdoor Alarm System

This alarm system monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications. The CSION® 3R indoor/outdoor alarm can serve as a high or low level alarm depending on the float switch model used. This easy to install alarm features an innovative, sleek 2-color molded enclosure which integrates the red LED translucent beacon. Optional yellow LED models available.

The alarm sounds and the upper housing half illuminates when a potentially threatening liquid level condition occurs. The audible alarm can be silenced by pressing the Test/Silence button, but the alarm light will remain on until the condition is remedied. Once the condition is cleared, the alarm will automatically reset. A green "Power On" light indicates power to the alarm panel.

FEATURES

- 2-color molded enclosure offers a distinct look; upper translucent half illuminates in alarm condition
- Removable lower cover provides greater access for easier field wiring while the internal circuitry remains protected
- Interlocking enclosure features unique sound chamber to amplify the horn, while helping prevent moisture from entering
- External mounting tabs for easy installation
- Enclosure meets Type 3R water-tight standards
- Enclosure has indicator marks on bottom for easy placement of cord entry locations
- Automatic alarm reset, horn silence switch, and alarm test switch
- Alarm horn sounds at 82 decibels at 10 feet (3 meters)
- Alarm system (when installed on separate circuit) operates even if pump circuit fails
- Green power on indicator
- Includes auxiliary alarm contacts for easy attachment of remote devices

OPTIONS

When ordered with the alarm, the system is available with:

- Alternate float switch models for high or low liquid level warning
- Premounted terminal block so enclosure can also be used as a junction box for splicing pump, pump switch, and pump power; meets NEC standard for junction boxes
- 6 foot (1.8 meter) power cord with 120 VAC plug and liquid tight connector
- Available with red or yellow LED alarm indication



U.S. Patent Nos.
8,737,672 and D695,640



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CSION® 3R ALARM - 120 VAC

WITHOUT POWER CORD		Description	WITH POWER CORD	
Part #	Shipping Weight		Part #	Shipping Weight
1072312	1.50 lbs.	CSION 3R-01XY	1079330	1.90 lbs.
1072313	2.75 lbs.	CSION 3R-01HY, 15 ft. NA Control Switch	1079331	3.15 lbs.
1072314	3.10 lbs.	CSION 3R-01HY, 20 ft. NA Control Switch	1079332	3.50 lbs.
1072315	3.75 lbs.	CSION 3R-01HY, 30 ft. NA Control Switch	1079336	4.15 lbs.
1072316	1.50 lbs.	CSION 3R-01XR	1079340	1.90 lbs.
1072317	2.75 lbs.	CSION 3R-01HR, 15 ft. NA Control Switch	1079341	3.15 lbs.
1072318	3.10 lbs.	CSION 3R-01HR, 20 ft. NA Control Switch	1079343	3.50 lbs.
1072319	3.75 lbs.	CSION 3R-01HR, 30 ft. NA Control Switch	1079344	4.15 lbs.

CSION® 3R ALARM - 120 VAC WITH TERMINAL BLOCK

WITHOUT POWER CORD		Description	WITH POWER CORD	
Part #	Shipping Weight		Part #	Shipping Weight
1072320	1.50 lbs.	CSION 3R-01XYTB	1079347	1.90 lbs.
1072321	2.75 lbs.	CSION 3R-01HYTB, 15 ft. NA Control Switch	1079348	3.15 lbs.
1072322	3.10 lbs.	CSION 3R-01HYTB, 20 ft. NA Control Switch	1079349	3.50 lbs.
1072323	3.75 lbs.	CSION 3R-01HYTB, 30 ft. NA Control Switch	1079350	4.15 lbs.
1072324	1.50 lbs.	CSION 3R-01XRTB	1079351	1.90 lbs.
1072326	2.75 lbs.	CSION 3R-01HRTB, 15 ft. NA Control Switch	1079352	3.15 lbs.
1072327	3.10 lbs.	CSION 3R-01HRTB, 20 ft. NA Control Switch	1079317	3.50 lbs.
1072328	3.75 lbs.	CSION 3R-01HRTB, 30 ft. NA Control Switch	1079353	4.15 lbs.
Option PC	6 ft. Power Cord with Two RCC8 1/2" Liquid Tight Connectors			

H = High Level, X = No Float, Y = Yellow LED, R = Red LED, TB = Includes Terminal Block, NA = Narrow Angle

MASTER CARTON holds 12 boxed units.

SEE PRICE BOOK FOR LIST PRICE.

CONTROL SWITCH OPTIONS

The CSION® 3R alarm system comes standard with a 15 foot Control Duty Narrow Angle control switch with mounting clamp. Other float switches are available. See control switch section of the catalog. To determine the price of alarm with an alternate float, add the price of the part number with "no float" to the price of the float switch.

SPECIFICATIONS

VOLTAGE:

PRIMARY: 120 VAC, 50/60 Hz, 3.8 watts max. (alarm condition)

SECONDARY: 9 VDC

ALARM ENCLOSURE: 6.7 x 5.3 x 2.5 inch (17.02 x 13.46 x 6.35 cm), indoor-outdoor, weatherproof, thermoplastic meets Type 3R water-tight standard

ALARM HORN: 82 decibels at 10 feet (3 meters)

AUXILIARY ALARM CONTACTS: 240 VAC / 30 VDC, 1.5 amps max., 50/60 Hz (circuit not supervised)

PRE-MOUNTED TERMINAL BLOCK (OPTIONAL): 20 amps, 120/240 VAC

POWER CORD (OPTIONAL): 6 foot (1.8 meter) cord with 120 VAC plug and two RCC8 1/2 inch liquid-tight connectors

FLOAT SWITCH: Control Duty Narrow Angle control switch with mounting clamp

CABLE: 15 feet (4.57 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)

FLOAT: 2.74 inch diameter x 4.83 inch long (7 cm x 12.3 cm), high impact, corrosion resistant polypropylene housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 PSI

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



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CSION® 4X

Indoor/Outdoor Alarm System with Auto Reset

The CSION® 4X alarm, with its unique front cover design, looks like no other alarm on the market today!

This indoor/outdoor alarm monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications. When the tank level rises, the high water float activates the alarm (audible and visual) to alert you of potentially threatening liquid level conditions. The innovative c-style red flashing beacon is powered by super bright LEDs for excellent visibility – even in direct sunlight. The horn can be silenced but the beacon remains active until the condition is remedied. Once the condition is cleared, the alarm will automatically reset.

The CSION® 4X alarm system can serve as a high or low level alarm depending on the float switch used.



FEATURES

- NEMA 4X enclosure, designed for ease of installation, rated for indoor and outdoor use
- Automatic alarm reset
- Unique C-style red flashing beacon powered by super bright LEDs for 180° visibility, even in direct sunlight



- External Alarm Test / Silence switch
- Alarm horn sounds at 90 decibels at 24 inches
- Latching lockable cover
- External mounting feet
- Battery Backup Input Terminals
- Auxiliary contacts (Form C, 1A@ 120V max.)
- Complete package includes Control Duty Narrow Angle Mechanical control switch with 15 feet of cable

U.S. Patents: D1,092,268,
D1,092,267, D1,092,266



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CSION® 4X ALARM - 120 VAC

Part #	Description	Shipping Weight
1077366	CSION 4X, 120 VAC, 15 ft. Control Duty Narrow Angle Control Switch	5.5 lbs.
1077367	CSION 4X, 120 VAC, 20 ft. Control Duty Narrow Angle Control Switch	6 lbs.
1077368	CSION 4X, 120 VAC, 30 ft. Control Duty Narrow Angle Control Switch	6.5 lbs.
1077198	CSION 4X 120V HIGH NO FLOAT	4 lbs.
Option	Description	
H	Exchanges the cord grips and power cord for a 2" hub adapter mount over 2" electrical conduit	

SEE PRICE BOOK FOR LIST PRICE.

CONTROL SWITCH OPTIONS

The CSION® 4X alarm system comes standard with a 15 foot Control Duty Narrow Angle control switch with mounting clamp. Other float switches are available. See control switch section of the catalog. To determine the price of alarm with an alternate float, add the price of the part number with "no float" to the price of the float switch.

SPECIFICATIONS

VOLTAGE FOR 120 VAC MODEL:

120 VAC, 60 Hz, 2.4 watts max. (alarm condition)

ALARM ENCLOSURE: 8 x 6 x 4 inch (20.32 x 15.24 x 10.16 cm) Padlockable NEMA 4X (ultraviolet stabilized thermoplastic with integral mounting feet for outdoor or indoor use)

ALARM HORN: 90 decibels at 24 inches

POWER CORD: 6 foot (1.8 meter)

FLOAT SWITCH CONNECTION TERMINAL:

Float switch is pre-wired to internal terminal block.

FLOAT SWITCH: Control Duty Narrow Angle Mechanical control switch with mounting clamp

Cable: 15 feet (4.57 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)
Other float cable lengths available.

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



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Pump Switch Overview

Wide-angle pump switches directly control pumps up to 3 HP at 250 VAC. Each switch features an adjustable pumping range.

Pump Switch	Type of Activation	Pump Control	Max Pump Run Current	Max Pump Start Current	Pumping Range
 Medium Duty Wide-Angle Mechanical	Mechanically Activated	Use pump run and start current	13A, 125V 12A, 250V	78A, 125V 72A, 250V	8 - 36 in (20 - 91 cm)
 Heavy Duty Wide-Angle Mechanical	Mechanically Activated	3/4 HP, 115V 2 HP, 230V	15A, 115V 15A, 230V	85A, 115V 85A, 230V	7 - 36 in (18 - 91 cm)
 Medium Duty Wide-Angle Dual	Mechanically Activated	15 FLA, 90LRA 115V or 230V	15A, 115V 15A, 230V	90A, 115V 90A, 230V	3 - 48 in (7.6 - 122 cm)
 High Temperature Pump Switch	Mechanically Activated	Use pump run and start current	13A, 125V 12A, 250V	78A, 125V 72A, 250V	8 - 36 in (20 - 91 cm)



CSI Controls®



California Prop 65 requires the following:  WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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Medium Duty Wide-Angle Mechanical

Mechanically-Activated, Wide-Angle Pump Switch

Mechanically-activated, wide-angle switch specifically designed as a mechanical alternative to the mercury-activated Medium Duty Wide Angle Mini Mercury pump switch.

This mechanically-activated, wide-angle pump switch provides automatic control of pumps in:

- Water
- Sewage applications

This pump switch is not sensitive to rotation or turbulence allowing it to be used in both calm and turbulent applications.

FEATURES

- Mechanically-activated, snap action contacts
- High impact, corrosion resistant, polypropylene float housing
- Adjustable pump range of 8 to 36 inches (20 to 91 cm)

OPTIONS

This switch is available:

- for pump down or pump applications as specified by part number
- with a 125 VAC or 250 VAC piggy back plug
- without a plug for direct wiring in 125 VAC or 250 VAC applications
- in standard cable lengths of 15, 20, or 30 feet and 5, 6, or 10 meters (longer lengths available)



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MEDIUM DUTY WIDE-ANGLE MECHANICAL PUMP SWITCH

Pump Down 		Pump Up 		Shipping Weight
Part #	Description	Part #	Description	
1031516	15PSD1WP	1031517	15PSU1WP	1.81 lbs.
1031518	15PSDWOP	1031519	15PSUWOP	1.37 lbs.
1031520	20PSD1WP	1031521	20PSU1WP	2.14 lbs.
1031522	20PSDWOP	1031523	20PSUWOP	1.69 lbs.
1031524	30PSD1WP	1031525	30PSU1WP	2.86 lbs.
1031526	30PSDWOP	1031527	30PSUWOP	2.34 lbs.

PS = Pump Switch D = Pump Down U = Pump Up 1 = 125 VAC WP = With Plug WOP = With Out Plug

NOTE: Descriptions are grouped by cable length measured in feet (15, 20, 30).

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

PUMPING RANGE: 8 to 36 inches (20 cm to 91 cm).

CABLE : flexible 16 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

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

MAXIMUM WATER DEPTH: 33 feet (10 meters) or 13 psi (90 kPa)

ELECTRICAL:

Voltage 50Hz/60Hz Single Phase	Max. Pump Run Current	Max. Pump Start Current
125 VAC	13 amps	78 amps
250 VAC	12 amps	72 amps

NOTE: This switch is not recommended for controlling:

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

NOTE: This switch must be used with pumps that provide integral thermal overload protection.

A Pump Switch is designed for Horsepower (HP) rated loads and is not suitable for control (pilot duty) applications. It will fail prematurely when switching loads less than 1 Amp at 120 VAC. Select a float switch from our Control Switch offering for control applications.

OPTIONS

MOUNTING CLAMP

is standard - deduct optional

PACKAGING

Boxed - standard

Bagged - optional

Bulk - optional; must be ordered in master carton quantities.

Please contact customer service for details/pricing.

ADDITIONAL CABLE

Longer cable lengths available. Please call for details.

OTHER INFORMATION

PUMP DOWN is normally open contacts for emptying in water or sewage applications.

PUMP UP is normally closed contacts for filling in water or sewage applications.

DIRECT WIRING

Units used for direct wiring (without plug) may be used in 125 VAC or 250 VAC applications within specified amp ratings.



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Heavy Duty Wide-Angle Mechanical

Mechanically-Activated, Wide-Angle Pump Switch

Mechanically-activated, wide-angle switch designed for direct control of pumps up to 3/4 HP at 115 VAC and 2 HP at 230 VAC.

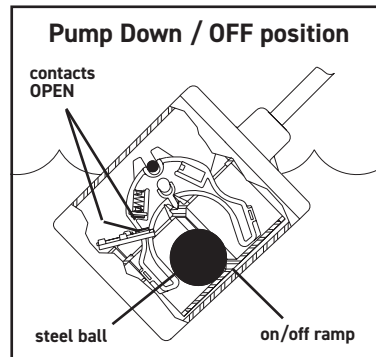
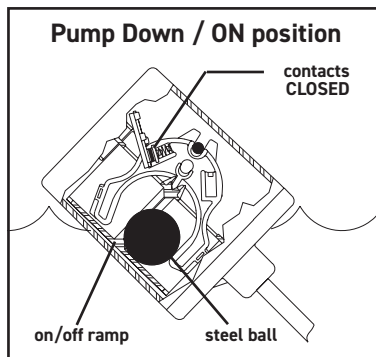
This mechanically-activated, wide-angle pump switch provides automatic control of pumps in:

- water
- sewage applications

The **Heavy Duty Wide-Angle Mechanical** pump switch is not sensitive to rotation or turbulence allowing it to be used in both calm and turbulent applications.

FEATURES

- Heavy-duty contacts
- Controls pumps up to 3/4 HP at 115 VAC and 2 HP at 230 VAC
- Adjustable pumping range of 7 to 36 inches (18 to 91 cm)
- Includes standard mounting clamp and boxed packaging



OPTIONS

This switch is available:

- for pump down or pump up applications as specified by part number
- with a 115 VAC or 230 VAC piggy-back plug
- without a plug for direct wiring in 115 VAC or 230 VAC applications
- in standard cable lengths of 15, 20, or 30 feet and 5, 6, or 10 meters (longer lengths available)



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HEAVY DUTY WIDE-ANGLE MECHANICAL PUMP SWITCH

Pump Down 		Pump Up 		Shipping Weight
Part #	Description	Part #	Description	
1031534	15PSPD1WP	1031537	15PSPU1WP	2.23 lbs.
1031535	15PSPD2WP	1031538	15PSPU2WP	2.23 lbs.
1031536	15PSPDWOP	1031539	15PSPUWOP	2.13 lbs.
1031540	20PSPD1WP	1031543	20PSPU1WP	2.57 lbs.
1031541	20PSPD2WP	1031544	20PSPU2WP	2.61 lbs.
1031542	20PSPDWOP	1031545	20PSPUWOP	2.49 lbs.
1031546	30PSPD1WP	1031549	30PSPU1WP	3.38 lbs.
1031547	30PSPD2WP	1031550	30PSPU2WP	3.41 lbs.
1031548	30PSPDWOP	1031551	30PSPUWOP	3.30 lbs.

PS = Pump Switch D = Pump Down U = Pump Up 1 = 115 VAC 2 = 230 VAC WP = With Plug WOP = With Out Plug

NOTE: Descriptions are grouped by cable length measured in feet (15, 20, 30).

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

PUMPING RANGE: 7 to 36 inches (18 cm to 91 cm)

CABLE: flexible 14 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

FLOAT: 3.05 inch diameter x 3.56 inch long (7.75 cm x 9.04 cm), high impact, corrosion resistant, PVC housing for use in sewage and water up to 140°F (60°C)

ELECTRICAL:

Voltage 50Hz/60Hz Single Phase	Max. Pump Run Current	Max. Pump Start Current	Recommended Pump HP
115 VAC 230 VAC	15 amps 15 amps	85 amps 85 amps	3/4 HP or less 2 HP or less

NOTE: This switch must be used with pumps that provide integral thermal overload protection.

A Pump Switch is designed for Horsepower (HP) rated loads and is not suitable for control (pilot duty) applications. It will fail prematurely when switching loads less than 1 Amp at 120 VAC. Select a float switch from our Control Switch offering for control applications.

OPTIONS

MOUNTING CLAMP

is standard - deduct optional

CABLE WEIGHT MOUNTING

Is also available.

PACKAGING

Boxed - standard

Bagged - optional

Bulk - optional; must be ordered in master carton quantities.

Please contact customer service for details/pricing.

ADDITIONAL CABLE

Longer cable lengths available. Please call for details.

OTHER INFORMATION

PUMP DOWN is normally open contacts for emptying in water or sewage applications.

PUMP UP is normally closed contacts for filling in water or sewage applications.

DIRECT WIRING

Units used for direct wiring (without plug) may be used in either 115 VAC or 230 VAC applications within specified amp ratings.



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Medium Duty Wide-Angle Dual

Mechanically-Activated, Wide-Angle Pump Switch

Mechanically-activated switch designed to control pumps up to 15 FLA, 90 LRA, 115 VAC or 230 VAC.

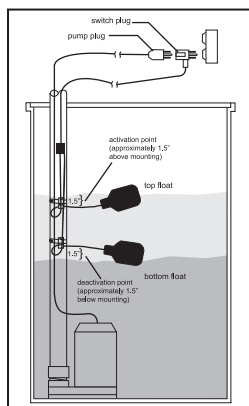
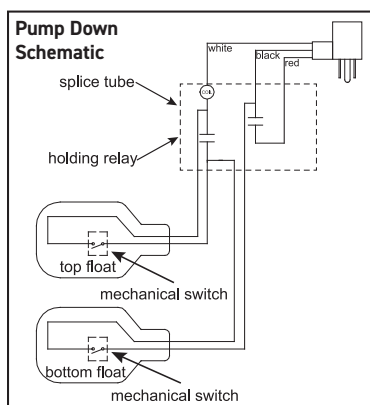
This mechanically-activated, pump switch provides automatic control of pumps in non-potable water and sewage applications. It is well-suited for confined applications requiring an accurate pumping range. It is not sensitive to rotation or turbulence. This switch is voltage sensitive - use with correct voltage.

The **Medium Duty Wide-Angle Dual** pump switch consists of two mechanical floats and a splice tube. The splice tube contains a holding relay which enables the floats to function in series.

The holding relay eliminates pump chatter in turbulent conditions allowing the **Medium Duty Wide-Angle Dual** pump switch to operate relay control panels for larger pump applications.

FEATURES

- Controls pumps up to 15 FLA, 90 LRA, 115 VAC or 230 VAC
- Adjustable pumping range of 3 to 48 inches (7.6 to 122 cm) with increased pumping range up to 6 feet (1.8 meters) available
- Includes standard mounting clamps and boxed packaging



OPTIONS

This switch is available:

- for pump down or pump up applications as specified by part number
- with a 115 VAC or 230 VAC piggy-back plug
- without a plug for direct wiring (115 VAC units can only be used with 115 VAC applications within specified amp ratings, 230 VAC units can only be used with 230 VAC applications within specified amp ratings)
- in standard cable lengths of 15, 20, or 30 feet and 5, 6 or 10 meters (longer lengths available)



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MEDIUM DUTY WIDE-ANGLE DUAL PUMP SWITCH

Pump Down 		Pump Up 		Shipping Weight
Part #	Description	Part #	Description	
1033129	15PSDFD1WP	1033133	15PSDFU1WP	3.63 lbs.
1033130	15PSDFD2WP	1033134	15PSDFU2WP	3.64 lbs.
1033131	15PSDFD1WOP	1033135	15PSDFU1WOP	3.55 lbs.
1033132	15PSDFD2WOP	1033136	15PSDFU2WOP	3.51 lbs.
1033137	20PSDFD1WP	1033141	20PSDFU1WP	4.04 lbs.
1033138	20PSDFD2WP	1033142	20PSDFU2WP	4.08 lbs.
1033139	20PSDFD1WOP	1033143	20PSDFU1WOP	3.97 lbs.
1033140	20PSDFD2WOP	1033144	20PSDFU2WOP	4.01 lbs.
1033145	30PSDFD1WP	1033149	30PSDFU1WP	4.95 lbs.
1033146	30PSDFD2WP	1033150	30PSDFU2WP	4.99 lbs.
1033147	30PSDFD1WOP	1033151	30PSDFU1WOP	4.86 lbs.
1033148	30PSDFD2WOP	1033152	30PSDFU2WOP	4.87 lbs.

PS = Pump Switch DF = Dual Float D = Pump Down U = Pump Up 1 = 115 VAC 2 = 230 VAC

P = With Plug WOP = With Out Plug

NOTE: Descriptions are by cable length measured in feet.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

PUMPING RANGE: 3 to 48 inches (7.6 cm to 122 cm), increased pumping range available. Call factory for quote.

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

CABLE ABOVE SPLICE: flexible 14 gauge, 3 conductor (UL, CSA) SJTW, water-resistant thermoplastic

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

ELECTRICAL:

Voltage 50Hz/60Hz Single Phase	Max. Pump Run Current	Max. Pump Start Current
115 VAC	15 amps	90 amps
230 VAC	15 amps	90 amps

NOTE: This switch must be used with pumps that provide integral thermal overload protection.

A Pump Switch is designed for Horsepower (HP) rated loads and is not suitable for control (pilot duty) applications. It will fail prematurely when switching loads less than 1 Amp at 120 VAC.

Select a float switch from our Control Switch offering for control applications.

OPTIONS

PACKAGING

Boxed - standard

Bagged - optional

Bulk - optional; must be ordered in master carton quantities.

Please contact customer service for details/pricing.

ADDITIONAL CABLE

Longer cable lengths available. Please call for details.

OTHER INFORMATION

PUMP DOWN is normally open contacts for emptying.

PUMP UP is normally closed contacts for filling.

DIRECT WIRING

115 VAC units used for direct wiring (without plug) can **only** be used with **115 VAC** applications within specified amp ratings.

230 VAC units used for direct wiring (without plug) can **only** be used with **230 VAC** applications within specified amp ratings.



Toll Free: 888-342-5753
customer.service@sjeinc.com
www.csicontrols.com

High Temperature Pump Switch

Mechanically-Activated, Wide-Angle Pump Switch for High Temperature Applications

Mechanically-activated, wide-angle switch specifically designed for performance and dependability in high temperature sump applications up to 200°F (93°C).

This mechanically-activated, wide-angle pump switch provides automatic control of pumps in:

- Water
- Sewage applications

This **High Temperature** pump switch is not sensitive to rotation or turbulence allowing it to be used in both calm and turbulent applications.

FEATURES

- Mechanically-activated, snap action contacts
- High impact, corrosion resistant, polypropylene float housing
- Adjustable pump range of 8 to 36 inches (20 to 91 cm)
- Twin wall design of float housing (patent pending) protects internal components from heat and moisture

OPTIONS

This switch is available:

- for pump down applications
- with a 125 VAC or 250 VAC piggy back plug
- without a plug for direct wiring in 125 VAC or 250 VAC applications
- in standard cable lengths of 10, 20, or 30 feet and 3, 6, or 10 meters



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HIGH TEMPERATURE PUMP SWITCH

Pump Down Only 		Shipping Weight
Part#	Description	
1046749	10 ft. HTM with plug, 115 V	1.72 lbs.
1046750	10 ft. HTM with plug, 230 V	1.76 lbs.
1046751	10 ft. HTM without plug	1.64 lbs.
1046752	20 ft. HTM with plug, 115 V	2.36 lbs.
1046753	20 ft. HTM with plug, 230 V	2.40 lbs.
1046754	20 ft. HTM without plug	2.28 lbs.

NOTE: Descriptions are by cable length measured in feet.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

PUMPING RANGE: 8 to 36 inches (20 cm to 91 cm).

CABLE : flexible 16 gauge, 2 conductor (UL, CSA) SJ00W, water-resistant (CPE)

FLOAT: 3.18 inch diameter x 5.58 inch long (8.1 cm x 14.2 cm), high impact, corrosion resistant, polypropylene housing for use in water up to 200°F (93°C)

MAXIMUM WATER DEPTH: 33 feet (10 meters) or 13 psi (90 kPa)

ELECTRICAL:

Voltage 50Hz/60Hz Single Phase	Max. Pump Run Current	Max. Pump Start Current
125 VAC 250 VAC	13 amps 12 amps	78 amps 72 amps

NOTE: This switch is not recommended for controlling:

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

NOTE: This switch must be used with pumps that provide integral thermal overload protection.

A Pump Switch is designed for Horsepower (HP) rated loads and is not suitable for control (pilot duty) applications. It will fail prematurely when switching loads less than 1 Amp at 120 VAC. Select a float switch from our Control Switch offering for control applications.

OPTIONS

MOUNTING CLAMP
is standard.

PACKAGING
Boxed - Standard

OTHER INFORMATION

PUMP DOWN is normally open contacts for emptying in water or sewage applications up to 200°F (93°C).

DIRECT WIRING

Units used for direct wiring (without plug) may be used in 125 VAC or 250 VAC applications within specified amp ratings.



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Control Switch Overview

Narrow-angle control switches accurately monitor high (normally open) or low (normally closed) liquid level conditions in water and sewage applications to activate control panels and alarms. Select models have colored caps for easy identification.

Pump Switch	Type of Activation	Control Differential	Electrical Rating	Mounting Options
 Speed-E Connect™ Float Switch Blue Cap = Normally Open (Narrow or Wide Angle) Red Cap = Normally Closed (Narrow or Wide Angle)	Mechanically Activated	Narrow 1.5 inch (4 cm) Wide 4 in (10 cm) above or below horizontal	125 VAC/30 VDC 0.160mA - 1A, 5 VDC 1mA min.	Mounting clamp or cable weight
 Control Duty Narrow Angle Extra Large Mechanical	Mechanically Activated	Approx 10° above or below horizontal	1mA - 1A 4 VDC - 125 VAC	Internal weight
 Control Duty Narrow Angle Mechanical	Mechanically Activated	Approx 1.5 in (4 cm) above or below horizontal	5 amp 125V or 250V	Mounting clamp or cable weight
 Control Duty Narrow Angle Low Current Mechanical	Mechanically Activated	Narrow 1.5 inch (4 cm) Wide 4 in (10 cm) above or below horizontal	125 VAC/30 VDC 0.160mA - 1A, 5 VDC 1mA min.	Mounting clamp or cable weight



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California Prop 65 requires the following:  WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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Speed-E Connect™ 3-Port System

Revolutionary Manifold/Float Switch Connection System

The Speed-E Connect™ float connection system is a revolutionary new way to install float switches in a wet well for level control applications.

Installation is as easy as 1, 2, 3... Simply install the manifold, plug in the floats, and wire the manifold cable to the control panel. The color-coded cable makes for a quick, clean installation! The quick release float switch connections allow for easy maintenance and replacement of floats, saving installers time and money.

The Speed-E Connect™ system includes: **(a)** manifold and **(b)** mounting bracket with hardware. Ordered separately: **(c)** sealing plug with rubber boot and **(d)** Speed-E Connect™ low current float switch. Many float switch options and 4-port manifold available to suit your needs!

FEATURES

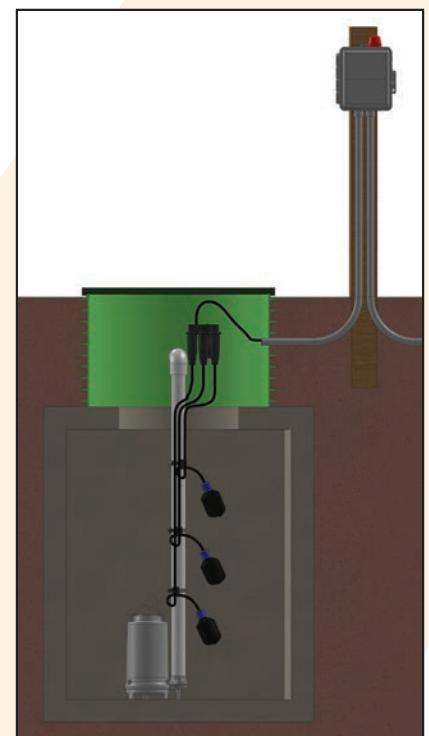
- (3) Quick release float connections for easy maintenance in the wet well
- A single 6-conductor direct burial cable with colored wire pairs for easy and clean field wiring of control panel
- Manifold housing includes R-B-Y imprints that match Red-Blue-Yellow wire pairs in manifold cable for easy field wiring
- Rubber boot provides a dual seal design for an extra layer of protection to keep connection clean and dry
- Rated for short term submersion in water
- Can be used with 1, 2, or 3 float switches; sealing plug available for unused manifold port(s)*
- Speed-E Connect™ mechanically-activated float switch is rated at 125 VAC, 1 mA to 1 amp for low current applications (must be ordered separately)
- Includes mounting bracket with hardware
- Optional 6 hook bracket available



*Do not install manifold with open port(s).



US Patent No.
9,559,455 and 9,583,867
Foreign Patents Pending



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SPEED-E CONNECT™ 3-Port Manifold				
Part #	Description			Shipping Weight
1052769	Speed-E Connect™, 3-Port, 25FT, with mounting bracket			3.33 lbs.
1052770	Speed-E Connect™, 3-Port, 50FT, with mounting bracket			5.22 lbs.
1052771	Speed-E Connect™, 3-Port, 100FT, with mounting bracket			9.28 lbs.
SPEED-E CONNECT™ Float Switch Narrow-Angled Versions				
Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1053341	5MAPNPCNOSC	1053346	5MAPNPCNCSC	0.86 lbs.
1052773	10MAPNPCNOSC	1053348	10MAPNPCNCSC	1.14 lbs.
1053344	20MAPNPCNOSC	1053350	20MAPNPCNCSC	1.79 lbs.
1054154	5MAPNCWNOSC	1054155	5MAPNCWNCSC	2.16 lbs
1053836	10MAPNCWNOSC	1053837	10MAPNCWNCSC	2.44 lbs
1053564	20MAPNCWNOSC	1053561	20MAPNCWNCSC	3.09 lbs
SPEED-E CONNECT™ Float Switch Wide-Angled Versions				
Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1053342	5MAPWPCNOSC	1053347	5MAPWPCNCSC	0.86 lbs.
1053343	10MAPWPCNOSC	1053349	10MAPWPCNCSC	1.14 lbs.
1053345	20MAPWPCNOSC	1053351	20MAPWPCNCSC	1.79 lbs.
1054156	5MAPWCWNOSC	1054157	5MAPWCWNCSC	2.16 lbs
1054158	10MAPWCWNOSC	1054159	10MAPWCWNCSC	2.44 lbs
1054160	20MAPWCWNOSC	1054161	20MAPWCWNCSC	3.09 lbs
SPEED-E CONNECT™ Control Duty Extra Large Versions				
Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1059050	10MGMNOSC	1059051	10MGMNCSC	2.6 lbs.
1059052	25MGMNOSC	1059053	25MGMNCSC	3.6 lbs.
1059054	50MGMNOSC	1059055	50MGMNCSC	5.1 lbs.
OPTIONS				
Part #	Description			Shipping Weight
1052772	Speed-E Connect™ Sealing Plug (includes rubber boot)			0.16 lbs.
1052813	6 Hook Bracket			2.0 lbs.

*One sealing plug must be ordered for each unused port. Do not install manifold with open port(s).

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

MANIFOLD SPECIFICATIONS:

CABLE: direct burial shielded PVC Type TC-ER TFFN (UL) 600V 18 gauge, 6 conductor

HOUSING: ABS plastic

ELECTRICAL: 125 VAC Maximum Electrical Load: 1 amp per connection port

FLOAT 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 cm 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 (90kPa)

ELECTRICAL: 125 VAC Maximum Electrical Load: 1 amp, Minimum Electrical Load: 1 mA
30 VDC Maximum Electrical Load: 1 amp, Minimum Electrical Load: 1 mA

4 VDC Minimum Electrical Load: 1 mA

California Prop 65 requires the following:  WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

D.2

OPTIONS

PACKAGING

Manifold:

Boxed - standard

Float Switches:

Bagged - standard

OTHER INFORMATION

NORMALLY OPEN

(HIGH LEVEL) OPERATION

Blue colored cap, the control switch turns on (closes) when the switch tips above horizontal signaling a high level, and turns off (opens) when the switch drops below horizontal.

NORMALLY CLOSED

(LOW LEVEL) OPERATION

Red colored cap, the control switch turns on (closes) when the switch drops below horizontal signaling a low level, and turns off (opens) when the switch tips above horizontal.

N = Narrow Angle

W = Wide Angle

PC = Pipe Clamp

CW = Cable Weight

NO = Normally Open

NC = Normally Closed

SC = Speed-E Connect

NOTE: Descriptions are by cable length measured in feet.



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Speed-E Connect™ 4-Port System

Revolutionary Manifold/Float Switch Connection System

The Speed-E Connect™ float connection system is a revolutionary new way to install float switches in a wet well for level control applications.

Installation is as easy as 1, 2, 3... Simply install the manifold, plug in the floats, and wire the manifold cable to the control panel. The color-coded cable makes for a quick, clean installation! The quick release float switch connections allow for easy maintenance and replacement of floats, saving installers time and money.

The Speed-E Connect™ system includes:
(a) manifold and **(b)** mounting bracket. Ordered separately: **(c)** sealing plug with rubber boot and **(d)** Speed-E Connect™ low current float switch. Many float switch options and 3-port manifold available to suit your needs!

FEATURES

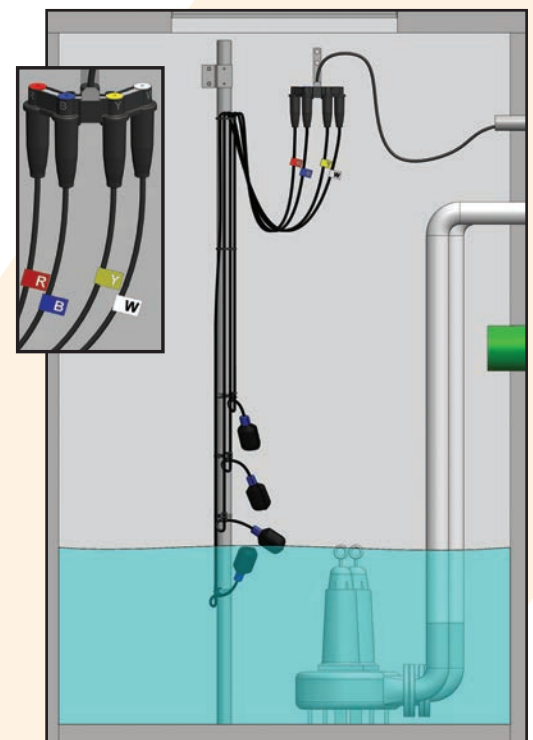
- (4) Quick release float connections for easy maintenance in the wet well
- A single multi-conductor direct burial cable with colored wire pairs for easy and clean field wiring of control panel
- Manifold housing includes colored caps that match Red-Blue-Yellow-White wire pairs in manifold cable for easy field wiring
- Rubber boot provides a dual seal design for an extra layer of protection to keep connection clean and dry
- Rated for short term submersion in water
- Can be used with 1, 2, 3, or 4 float switches; sealing plug available for unused manifold port(s)*
- Speed-E Connect™ mechanically-activated float switch is rated at 125 VAC, 1 mA to 1 amp for low current applications (must be ordered separately)
- Includes mounting bracket with hardware



*Do not install manifold with open port(s).



US Patent No.
 9,559,455 and 9,583,867
 Foreign Patents Pending



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SPEED-E CONNECT™ 4-Port Manifold				
Part #	Description			Shipping Weight
1053981	Speed-E Connect™, 4-Port, 25FT, with mounting bracket			4.57 lbs.
1053982	Speed-E Connect™, 4-Port, 50FT, with mounting bracket			7.04 lbs.
1053983	Speed-E Connect™, 4-Port, 100FT, with mounting bracket			11.98 lbs.
SPEED-E CONNECT™ Float Switch Narrow-Angled Versions				
Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1053341	5MAPNPCNOSC	1053346	5MAPNPCNCSC	0.86 lbs.
1052773	10MAPNPCNOSC	1053348	10MAPNPCNCSC	1.14 lbs.
1053344	20MAPNPCNOSC	1053350	20MAPNPCNCSC	1.79 lbs.
1054154	5MAPNCWNOSC	1054155	5MAPNCWNCSC	2.16 lbs
1053836	10MAPNCWNOSC	1053837	10MAPNCWNCSC	2.44 lbs
1053564	20MAPNCWNOSC	1053561	20MAPNCWNCSC	3.09 lbs
SPEED-E CONNECT™ Float Switch Wide-Angled Versions				
Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1053342	5MAPWPCNOSC	1053347	5MAPWPCNCSC	0.86 lbs.
1053343	10MAPWPCNOSC	1053349	10MAPWPCNCSC	1.14 lbs.
1053345	20MAPWPCNOSC	1053351	20MAPWPCNCSC	1.79 lbs.
1054156	5MAPWCWNOSC	1054157	5MAPWCWNCSC	2.16 lbs
1054158	10MAPWCWNOSC	1054159	10MAPWCWNCSC	2.44 lbs
1054160	20MAPWCWNOSC	1054161	20MAPWCWNCSC	3.09 lbs
SPEED-E CONNECT™ Control Duty Extra Large Versions				
Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1059050	10MGMNOSC	1059051	10MGMNCSC	2.6 lbs.
1059052	25MGMNOSC	1059053	25MGMNCSC	3.6 lbs.
1059054	50MGMNOSC	1059055	50MGMNCSC	5.1 lbs.
OPTIONS				
Part #	Description			Shipping Weight
1052772	Speed-E Connect™ Sealing Plug (includes rubber boot)			0.16 lbs.
1052813	6 Hook Bracket			2.0 lbs.

*One sealing plug must be ordered for each unused port. Do not install manifold with open port(s).

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

HOUSING: ABS plastic

ELECTRICAL: 125 VAC Maximum Electrical Load: 1 amp per connection port

MOUNTING BRACKET SPECIFICATIONS:

BRACKET: 304 stainless steel

FLOAT 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 cm 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 (90kPa)

ELECTRICAL: 125 VAC Maximum Electrical Load: 1 amp, Minimum Electrical Load: 1 mA
30 VDC Maximum Electrical Load: 1 amp, Minimum Electrical Load: 1 mA

4 VDC Minimum Electrical Load: 1 mA

OPTIONS

PACKAGING

Manifold:

Boxed - standard

Float Switches:

Bagged - standard

OTHER INFORMATION

NORMALLY OPEN

(HIGH LEVEL) OPERATION

Blue colored cap, the control switch turns on (closes) when the switch tips above horizontal signaling a high level, and turns off (opens) when the switch drops below horizontal.

NORMALLY CLOSED

(LOW LEVEL) OPERATION

Red colored cap, the control switch turns on (closes) when the switch drops below horizontal signaling a low level, and turns off (opens) when the switch tips above horizontal.

N = Narrow Angle

W = Wide Angle

PC = Pipe Clamp

CW = Cable Weight

NO = Normally Open

NC = Normally Closed

SC = Speed-E Connect

NOTE: Descriptions are by cable length measured in feet.



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Control Duty Extra Large

Narrow Angle Mechanical Control Switch

Mechanically-activated, narrow-angle float switch designed for level control of municipal wastewater pumping stations.

Mechanically-activated, narrow-angle, internally weighted municipal float switch designed for level control in municipal sewage pumping stations. The internal switching mechanism contains unique gold cross-point contacts, providing precision and reliable control signals up to 1 amp.

The **Control Duty Extra Large** control switch can be wired to work in either normally open or normally closed applications. It is not sensitive to rotation.

When wired as Normally Open (high level)

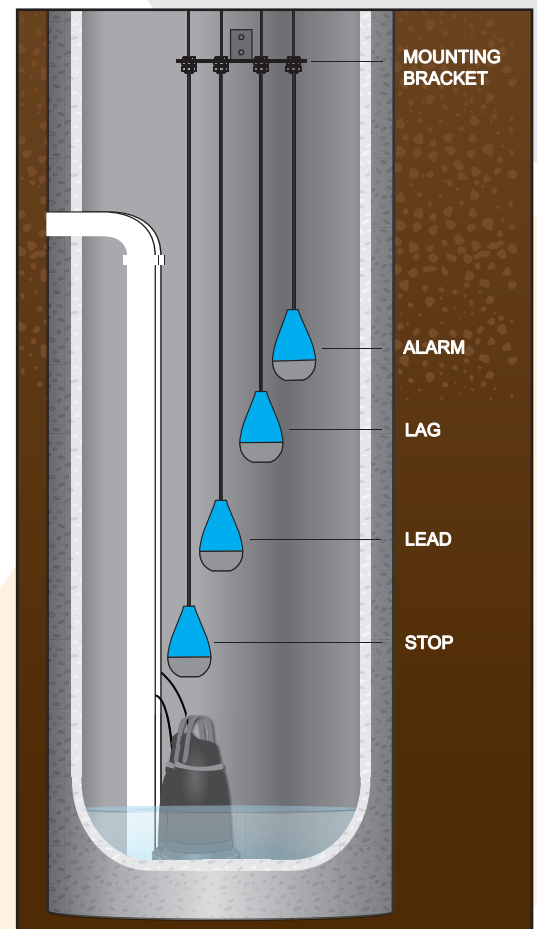
The control switch turns on (closes) when the switch tips slightly **above** horizontal signaling a high level, and turns off (opens) when the switch drops slightly below horizontal.

When wired as Normally Closed (low level)

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

FEATURES

- Internally weighted mechanical control switch designed for applications up to 1 Amp
- Large twin wall tear drop shape design offers increased buoyancy
- Two-color float housing for easy identification of float position
- Gold cross-point contacts provide precision and reliable control signals up to 1 Amp
- 3 wire cable - SPDT (Single Pole, Double Throw) can be wired as normally open or normally closed. Wire color: Common (white); N.O. (black); N.C. (red)
- Common applications include lift stations, non-potable water, PLC (programmable logic controllers), intrinsically safe, and applications with high grease content



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CONTROL DUTY EXTRA LARGE CONTROL SWITCH

Normally Open or Normally Closed		Shipping Weight
Part#	Description	
1046504	MGM, 25 ft. bag	3.53 lbs.
1046505	MGM, 50 ft. bag	5.06 lbs.
1046506	MGM, 75 ft. bag	6.65 lbs.
1046507	MGM, 100 ft. bag	8.21 lbs.

Options		Shipping Weight
Part#	Description	
1027647	Stainless Steel 4 Float Bracket	2.22 lbs.

Can be wired to work in either pump down (normally open) or pump up (normally closed) applications.

NOTE: Descriptions are by cable length measured in feet.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

CABLE: flexible 18 gauge, 3 conductor (UL) SJOW, water-resistant (CPE)

FLOAT: 4.03 inch diameter x 6.62 inch long (10.2 x 16.8 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:

Maximum Electrical Load: 1 Amp, 125 VAC

Minimum Electrical Load: 1 mA, 4 VDC

OPTIONS

PACKAGING

Bagged - standard

OTHER INFORMATION

NORMALLY OPEN (high level) OPERATION

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

NORMALLY CLOSED (low level) OPERATION

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



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Control Duty Narrow-Angle Mechanical

Mechanically-Activated, Narrow-Angle Float Switch

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

- water
- sewage applications

The **Control Duty Narrow-Angle Mechanical** control switch is not sensitive to rotation.

Normally Open Model (high level)

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

Normally Closed Model (low level)

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

FEATURES

- 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

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 15, 20, or 30 feet and 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



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CONTROL DUTY NARROW-ANGLE MECHANICAL CONTROL SWITCH

Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1031484	15CSPCNO	1031485	15CSPCNC	1.37 lbs.
1031486	15CSWENO	1031487	15CSWENC	2.45 lbs.
1031488	20CSPCNO	1031489	20CSPCNC	1.69 lbs.
1031490	20CSWENO	1031491	20CSWENC	2.70 lbs.
1031492	30CSPCNO	1031493	30CSPCNC	2.34 lbs.
1031494	30CSWENO	1031495	30CSWENC	3.43 lbs.

CS = Control Switch **PC** = Pipe Clamp **WE** = Weighted Externally **NO** = Normally Open **NC** = Normally Closed

NOTE: Descriptions are grouped by cable length measured in feet (15, 20, 30).

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

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

FLOAT: 2.74 inch diameter x 4.83 inch long (7 x 12.3 cm), high impact, corrosion resistant polypropylene for use in sewage and water up to 140° F (60° C)

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

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

This switch is not recommended for controlling:

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

OPTIONS

PACKAGING

Bagged - standard

Boxed - optional

Bulk - optional; must be ordered in master carton quantities.

Please contact customer service for details/pricing.

ADDITIONAL CABLE

Longer cable lengths available. Please call for details.

OTHER INFORMATION

NORMALLY OPEN (HIGH LEVEL) OPERATION

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

NORMALLY CLOSED (LOW LEVEL) OPERATION

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



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Control Duty Narrow-Angle Low Current Mechanical

Low Current Mechanically-Activated, Narrow-Angle Float Switch

Mechanically-activated control switch designed to activate low current control panels and alarms.

This wide-angle or narrow-angle control switch offers reliable low current control for AC and DC applications in water, wastewater, and sewage. The internal switching mechanism has sealed gold cross-point contacts for reliable low current operation. Common applications include PLC (programmable logic controller) panels, IS panels with intrinsically safe barriers, low current solar applications, and other low current control panels and alarms applications.

The wide-angle version activates/deactivates approximately 4" (10.16 cm) above and below horizontal with a 3.5" (9 cm) tether. The narrow angle version activates/deactivates at approximately 1.5" (3.81 cm) above and below horizontal with a 3.5" (9 cm) tether. It is not sensitive to rotation.

Normally Open Model (high level)

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

Normally Closed Model (low level)

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

FEATURES

- Low current, non-arching applications down to 1 mA at 125 VAC
- Mechanically-activated, snap action contacts
- High impact, corrosion resistant polypropylene float housing
- Not sensitive to rotation
- Blue colored cap for easy identification of control switch

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications
- with narrow or wide-angle pumping ranges
- in standard cable lengths of 15, 20, or 30 feet and 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



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CONTROL DUTY NARROW-ANGLE LOW CURRENT MECHANICAL CONTROL SWITCH

Normally Open		Normally Closed		Shipping Weight
Part #	Description	Part #	Description	
1031500	15CSLPCPCNO	1031501	15CSLPCPCNC	1.37 lbs.
1031502	15CSLCWENO	1031503	15CSLCWENC	2.45 lbs.
1031504	20CSLPCPCNO	1031505	20CSLPCPCNC	1.69 lbs.
1031506	20CSLCWENO	1031507	20CSLCWENC	2.70 lbs.
1031508	30CSLPCPCNO	1031509	30CSLPCPCNC	2.34 lbs.
1031510	30CSLCWENO	1031511	30CSLCWENC	3.43 lbs.

CS = Control Switch LC = Low Current PC = Pipe Clamp WE = Weighted Externally NO = Normally Open NC = Normally Closed

NOTE: Descriptions are grouped by cable length measured in feet (15, 20, 30).

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

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

FLOAT: 2.74 inch diameter x 4.83 inch long (7.0 cm 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

ELECTRICAL:

125 VAC

Maximum Electrical Load:

1 amp

Minimum Electrical Load:

1 milliamp

30 VDC

Maximum Electrical Load:

0.1 amps

Minimum Electrical Load:

1 milliamp

4 VDC

Minimum Electrical Load:

1 milliamp

OPTIONS

PACKAGING

Bagged - standard

Boxed - optional

Bulk - optional; must be ordered in master carton quantities.

Please contact customer service for details/pricing.

ADDITIONAL CABLE

Longer cable lengths available. Please call for details.

OTHER INFORMATION

NORMALLY OPEN (HIGH LEVEL) OPERATION

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

NORMALLY CLOSED (LOW LEVEL) OPERATION

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



CSI Controls

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Junction Boxes

Seals Electrical Connections from Moisture and Other Elements



These junction boxes provide a convenient location to connect all wiring required for a typical pumping station, on-site system or other electrical installation.

FEATURES

- NEMA 4X enclosure rated for outdoor use
- External mounting feet included
- UL Listed and CSA Certified Hub for incoming power/control wires through conduit
 - 1" hub available
 - 1.5" standard with simplex version
 - 2" standard with duplex version
- UL Listed, CSA Certified cable connectors provide strain relief and a liquid tight seal (RCC8, RCC12, RCC16, UFCC8, UFCC12)



OPTIONS

- 1/2" (1.27 cm), 3/4" (1.90 cm) or 1" (2.54 cm) UL Listed, CSA Certified round cable liquid-tight strain relief connectors (installed).
- 1/2" (1.27 cm) or 3/4" (1.90 cm) UL Listed, CSA Certified flat UF cable liquid-tight strain relief connectors (installed).
- 1" (2.54 cm), 1 1/2" (3.81 cm), or 2" (5.08 cm) terminal adapter hub (installed).



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JUNCTION BOXES

Part #	Description	Ship Weight
1067470	JB444 (No Connectors or Hub Installed)	2 lbs.
1067471	JB444-1.5H-3R8 Simplex	3 lbs.
1067472	JB444-1.5H-4R8 Simplex	3 lbs.
1067473	JB664 (No Connectors or Hub Installed)	3 lbs.
1067474	JB664-1.5H-4R8 Simplex (Small HP Pump)	4 lbs.
1067475	JB664-2H-5R8 Duplex (Small HP Pump)	4 lbs.
1067476	JB664-1.5H-3R8-1R12 Simplex (Large HP Pump)	4 lbs.
1067477	JB664-2H-3R8-2R12 Duplex (Large HP Pump)	5 lbs.
1067478	JB884 (No Connectors or Hub Installed)	5 lbs.

NOTE: Descriptions grouped by enclosure size. All enclosure dimensions are in inches. Number before R8 or R12 equals the number of connectors of that size installed. 444 = 4 x 4 x 4, 664 = 6 x 6 x 4, 884 = 8 x 8 x 4.

1.5H = 1 1/2" HUB, 2H = 2" HUB. R8 = RCC8, R12 = RCC12.

Small HP pump = Pump cable 18/2 to 14/3 gauge.

Large HP pump = Pump cable 14/4 to 10/3 gauge.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

LID AND BOX: UL Listed and CSA Certified made from high impact, corrosion resistant, weatherproof thermoplastic

GASKET: flexible PVC or neoprene

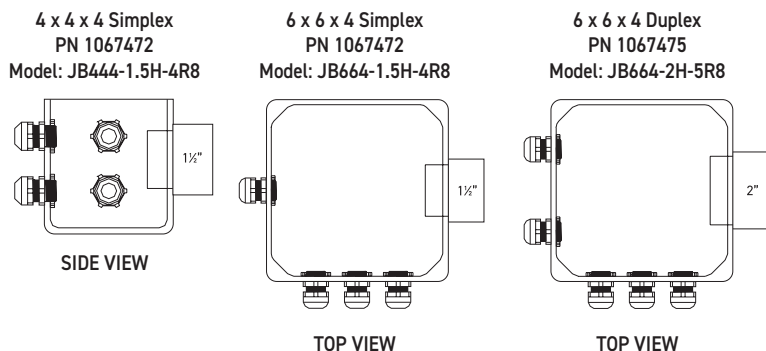
SCREWS: brass or stainless steel

INTERNAL VOLUME:

- 4" x 4" x 4" is 50.65 cubic inches (830 cubic cm)
- 6" x 6" x 4" is 125 cubic inches (2048 cubic cm)
- 8" x 8" x 4" is 261.14 cubic inches (4280 cubic cm)

EXTERNAL ENCLOSURE SIZE:

- 4 x 4 x 4 inches (10.16 x 10.16 x 10.16 cm)
- 6 x 6 x 4 inches (15.24 x 15.24 x 10.16 cm)
- 8 x 8 x 4 inches (20.32 x 20.32 x 10.16 cm)



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CS4-20 Transmitter

For Continuous Level Monitoring Applications

The CS4-20 submersible level transmitter is designed for continuous level monitoring. It measures the hydrostatic pressure of the water above the sensor and outputs a standard 4-20 mA signal proportional to the water level. The robust design of the CS4-20 transmitter provides a reliable and low maintenance solution for level control applications, including sewage/effluent lift stations, storm water pump stations, non-potable water systems, tanks, wet wells, and reservoirs.

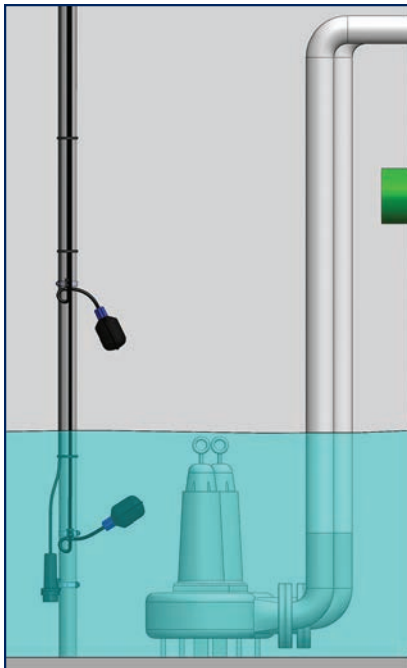
The transmitter wetted components are designed with nonconductive materials to provide an electrical isolation barrier. The pressure sensor is isolated from process material by a protective VITON® diaphragm. A stainless steel hose clamp is included for mounting the transmitter to a pipe towards the bottom of the tank. The CS4-20 transmitter must be clamped. For free hanging installations, use the SLX transmitter.

FEATURES

- Provides continuous level monitoring
- Industry standard 4-20mA, 2-wire loop powered
- 22/2 shielded cable with vent tube
- Provided with a hose clamp for pipe mounting
- Reverse polarity protected
- Multiple cable lengths available



US Patent 8,336,385



Typical installation shown with 2 backup float switches. Always include a backup high level alarm float switch in your system at a minimum. The transmitter must be clamped to a pipe or chain and cannot be free hanging.



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CS4-20 TRANSMITTER

Part #	Description	Shipping Weight
1059780	CS4-20 100 inWC with 25 ft. Cable	1.34 lbs.
1059781	CS4-20 100 inWC with 50 ft. Cable	2.08 lbs.
1113653	CS4-20 100 inWC with 100 ft. Cable	3.64 lbs.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

MEASURING RANGE: 3.62 PSI (0-100 inWC)

ACCURACY: 2% full scale

OPERATING TEMPERATURE: 32°F to 122°F (0°C to 50°C)

OUTPUT: 4-20 mA, loop powered

EXCITATION VOLTAGE: 8-30 VDC reverse polarity protected

OVERPRESSURE PROTECTION: 7.26 PSI (200 inWC)

IP RATING: IP 68 for permanent submersion

WETTED MATERIALS:

Sensor Housing: PVC, 2.00" diameter x 5.35" length
(51mm x 136mm)

Diaphragm: VITON®, 1.25" diameter (32mm)

Cable: TPE, 22 AWG - 2 wire shielded with vent tube,
0.24" diameter (6mm)

Hose Clamp: 18-8 stainless steel (included)



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Control Panel Accessories

Panel Mounting Post, SLX Transmitter, Cord Seals, 4-20 mA Simulator, Simplex Installation Kit, Duplex Installation Kit, Hub Assembly, Cable Connectors, and Riser Mounting Kit

PANEL MOUNTING POST

Provides easy installation of control panels.

- Removable front access door for easy wiring
- Can be mounted directly into ground, over a 4x4 post, or conduit for a quick, clean, easy installation
- Includes 2 stainless steel mounting bolts
- Includes drilling template
- Accommodates enclosures up to 14 x 12 x 6 inches (35.6 x 30.5 x 15.2 cm)



SLX TRANSMITTER

- Reliable long-life operation with low to no maintenance
- Rugged non-conductive transmitter housing
- Industry standard 4-20mA, 2-wire loop powered
- 18/2 shielded cable with vent tube
- Built-in internal stabilizing weight
- Reverse polarity protected
- Colored cord seals for easy range identification
- Multiple ranges and cable lengths available



CORD SEALS

Provides strain relief and a liquid-tight seal.

- Seals 1-4 cables in 2" terminal adapters
- Seals 1-6 cables in 2½" terminal adapters
- PVC plugs included (for unused cable positions)
- Ground wire



4-20mA SIMULATOR

- Easy-to-use, hand-held test instrument designed to generate an adjustable 4-20mA signal from loop power



SIMPLEX INSTALLATION KIT

Provides easy weather-proof wire installation for simplex control panels.

Includes:

- 2" hub assembly
- 2" cord seal (seals 1-4 cables)
- 3/4" hub assembly



DUPLEX INSTALLATION KIT

Provides easy weather-proof wire installation for duplex control panels.

Includes:

- 2.5" hub assembly
- 2.5" cord seal (seals 1-6 cables)
- 3/4" hub assembly



HUB ASSEMBLY

Provides liquid-tight conduit attachment location.

- Available in 3/4, 1, 1.5, 2 and 2.5 inch sizes.
- UL Listed and CSA Certified terminal adapter



CABLE CONNECTORS

Provides strain relief and a liquid-tight seal.

- UL Listed and CSA Certified
- VDE Approved

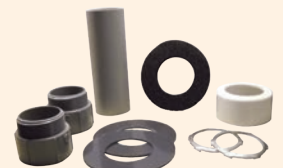


RISER MOUNTING KIT

Secures panel mounting post to tank riser.

Includes:

- (2) hub assemblies
- PVC pipe and connecting hardware
- Conduit for routing pump and float from tank riser to post



unassembled



assembled



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CONTROL PANEL ACCESSORIES

Panel Mounting Post

Part#	Description
1038027	Panel Post Assembly

POST: Polyethylene (34 x 7 x 6 inches)

BOLTS: 4X rated stainless steel with gaskets

SLX Transmitter

Part#	Description
1108321	SLX, 8.3 ftWC, 25 ft. cable
1108322	SLX, 8.3 ftWC, 50 ft. cable
1108323	SLX, 8.3 ftWC, 100 ft. cable
1108333	SLX, 16.7 ftWC, 25 ft. cable
1108334	SLX, 16.7 ftWC, 50 ft. cable
1108336	SLX, 16.7 ftWC, 100 ft. cable
1108345	SLX, 33.4 ftWC, 25 ft. cable
1108346	SLX, 33.4 ftWC, 50 ft. cable
1108348	SLX, 33.4 ftWC, 100 ft. cable
1052813	6 hook bracket (optional)

Cord Seals

Part#	Description
1008517	2 inch Cord Seal (1-4 Cables)
1037126	2.5 inch Cord Seal (1-6 Cables)

SEAL: neoprene

WASHERS: stainless steel

NUT AND BOLT: stainless steel

WIRE/CABLE ACCOMMODATED: SJOW, SJTW, 18/2, 18/3, 16/2, 16/3, 14/2 and 14/3

4-20mA Simulator

Part#	Description
1039199	4-20mA Simulator

Simplex Installation Kit

Part#	Description
1038029	Installation Kit, Simplex

Duplex Installation Kit

Part#	Description
1038030	Installation Kit, Duplex

Hub Assembly

Part#	Description
1030564	.75 inch Hub Assembly
1009305	1 inch Hub Assembly
1008848	1.5 inch Hub Assembly
1008849	2 inch Hub Assembly
1037128	2.5 inch Hub Assembly

TERMINAL ADAPTER (HUB): PVC

GASKET: neoprene

LOCK NUT: metal

Cable Connectors

Part#	Description
1002574	1/2 inch Round Cable Connector (RCC-8)
1002575	3/4 inch Round Cable Connector (RCC-12)
1009868	1 inch Round Cable Connector (RCC-16)
1002576	1/2 inch Flat UF Cable Connector (UFCC-8)
1002577	3/4 inch Flat UF Cable Connector (UFCC-12)

ROUND CABLE SPECIFICATIONS

MATERIAL: polyimide flame-resisting, self-extinguishing plastic

O RING: neoprene plastic

HOLE REQUIREMENT: NPT threaded OR clearance holes (jam nut included)

RCC-8

NPT Hub: .5 inch (1.27 cm)

Maximum Diameter: .480 inch (1.22 cm)

Minimum Diameter: .270 inch (.68 cm)

Wire/Cable (AWG) Accommodated: 18/2, 18/3, 18/4, 16/2, 16/3, 16/4, 14/2, and 14/3

RCC-12

NPT Hub: .75 inch (1.90 cm)

Maximum Diameter: .709 inch (1.80 cm)

Minimum Diameter: .545 inch (1.38 cm)

Wire/Cable (AWG) Accommodated: 14/2, 14/3, 14/4, 12/2, 12/3, 12/4, 10/2, and 10/3

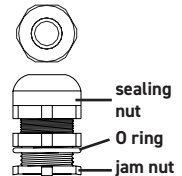
RCC-16

NPT Hub: 1.0 inch (2.54 cm)

Maximum Diameter: .98 inch (2.49 cm)

Minimum Diameter: .71 inch (1.80 cm)

Wire/Cable (AWG) Accommodated: Round cable with outside diameter within range identified above.



FLAT UF CABLE SPECIFICATIONS

MATERIAL: weather-stabilized thermo plastic

O RING: neoprene plastic

HOLE REQUIREMENT: NPT threaded OR clearance holes (jam nut included)

UFCC-8

NPT Hub: .50 inch (1.27 cm)

Maximum: .26 x .56 inch (.66 - 1.42 cm) slot

Wire/Cable (AWG) Accommodated: 14/2, 12/2, 10/2

UFCC-12

NPT Hub: .75 inch (1.90 cm)

Maximum: .26 x .60 inch (.66 - 1.52 cm) slot

Wire/Cable (AWG) Accommodated: 14/3, 12/3

Riser Mounting Kit

Part#	Description
1038262	Riser Mounting Kit (2 inch)
1053756	Riser Mounting Kit (2.5 inch)



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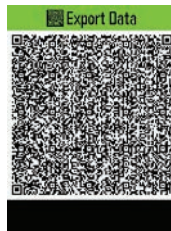
DPM-240

Dual Channel Seal Failure & Over Temperature Alarm Relay

The DPM-240 dual channel module pump monitor is designed to protect two submersible pumps against damage resulting from seal failure and over temperature. In Modes 1 & 2, the resistance of the seal sensor and temp sensor in each pump is continuously monitored and alarms when the seal sensor resistance drops below the adjustable trip level and alarms on a temp failure when the sensor is open. In Modes 3 & 4, the resistance of combined seal/temp sensor in each pump is continuously monitored and faults on a temp failure when the sensor is open and faults on a seal fail when the resistance drops below 400 Ohms. The measured resistance in the pump seal chamber drops as the seal leaks and contaminants enter. Each input has a corresponding output relay and indicating LED which are activated during a fault condition. The module is equipped with a Seal Trip Adjustment dial, a manual reset button, and a 4-position mode selector switch.

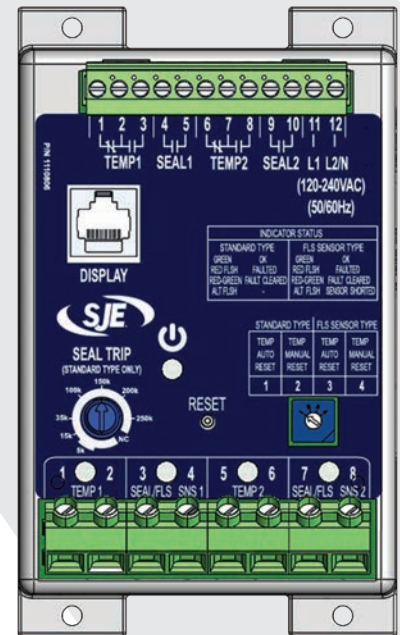
OPTIONAL DISPLAY: DPM-LCD

The optional display can be mounted on the inner door and connected to the RJ45 port on the DPM-240 module using an ethernet cable. The display is used to visualize the status of the Seal and Over Temp switch. It can be configured to show 1 or 2 pumps. Alarms are data logged with date and time stamps. The alarm log can be retrieved onto a smart phone via QR code technology.



MODES OF OPERATION

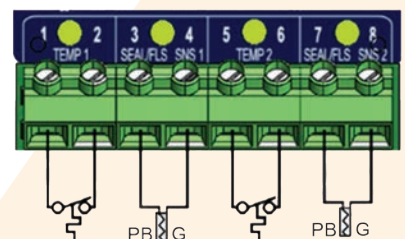
- MODE 1** - Over Temp & Seal Fail: 2-wire each / Auto Reset
- MODE 2** - Over Temp & Seal Fail: 2-wire each / Manual Reset
- MODE 3** - Over Temp & Seal Fail: 2-wire combined – FLS Type / Auto Reset
- MODE 4** - Over Temp & Seal Fail: 2-wire combined – FLS Type / Manual Reset



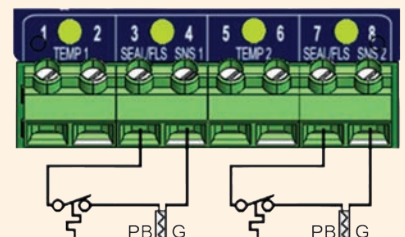
Patent Pending



Sensor Wiring Modes 1 & 2



Sensor Wiring Modes 3 & 4



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DPM-240 - DUAL CHANNEL SEAL FAILURE & OVER TEMPERATURE ALARM RELAY

Part #	Description	Shipping Weight
1118777	DPM-240 Module	0.8 lbs.
1113287	DPM-240 Module w/LCD Display, includes 3 ft. RJ45 display cable*	1.1 lbs.

*For additional display cable lengths, please contact Technical Support at techsupport@sjeinc.com.

SEE PRICE BOOK FOR LIST PRICE.

SPECIFICATIONS

INPUT VOLTAGE: 120~240 VAC (50/60 Hz)

TRANSIENT PROTECTION: 30kV air/contact

INPUT/OUTPUT ISOLATION VOLTAGE: 4,300VAC

SENSOR VOLTAGE: 24VDC, 5mA (TEMP), 24VDC, 0.5mA (SEAL)

MAX SENSOR CABLE LENGTH: 328 feet (100m)

POWER CONSUMPTION: 2 VA

SEAL FAIL SENSITIVITY: 5K Ω to 250K Ω (Adjustable – Modes 1&2)

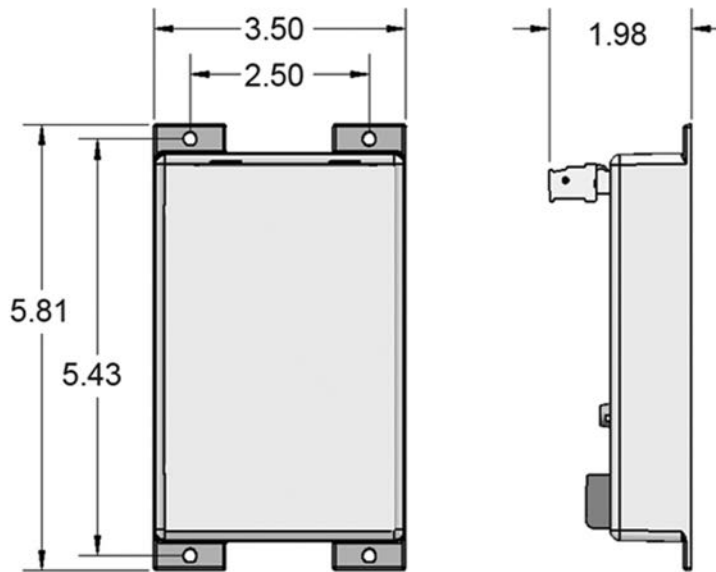
RELAY RATING: 5A, 240VAC max. 10M operation (Mechanical)

INDICATORS: Green / Flashing red LED for each input

OPERATING TEMPERATURE: -18°F ~ 140°F (-28°C ~ 60°C)

STORAGE TEMPERATURE: -40°F ~185°F (-40°C ~ 85°C)

WEIGHT: 7.5 oz (213 g)



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Float Accessories

Cable Weight, Cable Clamp Assembly, Float Bracket, Pipe Mounting Bracket, Vertical Reed Switch, Elapsed Time Meter

CABLE WEIGHT

- Provides accurate pivot point for suspended float switches
- Clips to cable



CABLE CLAMP ASSEMBLY

- Includes cable clamp and stainless hose clamp for anchoring float cable.
- Secures 18/16 gauge, 14 gauge and 12 gauge cable in vertical direction



FLOAT BRACKET

- Six Float Bracket supports 1-6 floats
- Four Float Bracket supports 1-4 floats
- Can be directly mounted to wall or used with wall mounting device
- Provides convenient location to stow excess float cord
- Supplied with cord strain relief connectors



PIPE MOUNTING BRACKET

- Secures discharge pipe to basin wall
- Clamps directly to 2" PVC discharge pipe



VERTICAL REED SWITCH

- Control differential: .375 inch (1 cm)
- Maximum angle from vertical: 5°
- Electrical:
250 mAmps, 12-125 VAC, 50/60 Hz
500 mAmps, 6-12 VDC, 50/60 Hz



ELAPSED TIME METER

- Plugs into switched outlet or piggy-back switch of plugger control panel. Unit must be placed inside an enclosure
- Screws and mounting adhesive included



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FLOAT ACCESSORIES

Cable Weight

Part#	Description
1002230	Cable Weight

HOUSING: 1 pound, 5 ounce (0.6 kgs.), 2.8 inch diameter x 3.3 inch long (7.1 cm diameter x 8.4 cm), impact resistant, non-corrosive, PVC housing for use in liquids up to 140°F (60°C).

CLIP: injection molded acetal plastic

WIRE/CABLE ACCOMMODATED: SJOW, SJTW, 18/2, 18/3, 16/2, 16/3, 14/2 and 14/3

SHIP WEIGHT: 1.6 lbs. (.726 kgs)

Cable Clamp Assembly

Part#	Description
1008569	18 & 16 Gauge Cable Clamp Assembly
1008574	14 Gauge Cable Clamp Assembly
1008575	12 Gauge Cable Clamp Assembly

MOUNTING CLAMP: ABS Nylon blend

HOSE CLAMP: Highly corrosion resistant stainless steel

Float Bracket

Part#	Description
1009432	4 Float Bracket with Mounting Device
1009433	4 Float Bracket without Mounting Device
1009434	6 Float Bracket with Mounting Device
1009435	6 Float Bracket without Mounting Device
1009436	Float Bracket Mounting Device
1027830	304 Stainless Steel Float Bracket with 3 Black Cord Snubbers
1027647	304 Stainless Steel Float Bracket with 4 Black Cord Snubbers

METAL COMPONENTS: all metal components are made of 300 series stainless steel

STRAIN RELIEF CONNECTORS: which accommodate 18/2, 18/3, 16/2, 16/3 SJOW and SJTW cords

Pipe Mounting Bracket

Part#	Description
1109826	Pipe Mounting Bracket

Vertical Reed Switch

Part#	Description
1032426	15CSRS1

HOUSING AND FLOAT: 1.60 inch diameter x 6.7 inch long (4.06 cm X 17.01 cm), high impact, corrosion resistant PVC for use in sewage and non-potable water up to 120°F (50°C)

Elapsed Time Meter

Part#	Description
1022846	ETM with 120V Piggy-Back Plug
1032834	ETM with 230V Piggy-Back Plug



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